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A MULTIDIMENSIONAL INVESTIGATION  
OF THE NICHE: GEOGRAPHIC  
DISTRIBUTIONS, BODY SIZE, AND  
INTERSPECIFIC INTERACTIONS OF LATE  
QUATERNARY NORTH AMERICAN  
CANIDAE

Melissa Pardi

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Melissa Irene Pardi

*Candidate*

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Biology

*Department*

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This dissertation is approved, and it is acceptable in quality and form for publication:

*Approved by the Dissertation Committee:*

Felisa A. Smith , Chairperson

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Seth Newsome

---

Sherry Nelson

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Sara K. Lyons

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**A MULTIDIMENSIONAL INVESTIGATION OF THE NICHE:  
GEOGRAPHIC DISTRIBUTIONS, BODY SIZE, AND  
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NORTH AMERICAN CANIDAE**

by

**MELISSA IRENE PARDI**

Bachelor of Science in Geosciences  
The Pennsylvania State University  
2006

Master of Science in Geosciences  
The Pennsylvania State University  
2010

DISSERTATION

Submitted in Partial Fulfillment of the  
Requirements for the Degree of

**Doctor of Philosophy in Biology**  
**July, 2016**

The University of New Mexico  
Albuquerque, New Mexico

## DEDICATION

For my mom, dad, and everyone who has believed in me; thank you.

## ACKNOWLEDGEMENTS

This entire project would not have been possible without the support of friends, family, loved ones, academic mentors, and my committee. I would also like to acknowledge the financial support of the University of New Mexico, the Department of Biology, Biology Department donors, and the professional societies that have helped me along the way, in particular: the American Society of Mammalogists and the Society of Vertebrate Paleontologists.

**A MULTIDIMENSIONAL INVESTIGATION OF THE NICHE: GEOGRAPHIC DISTRIBUTIONS, BODY SIZE, AND INTERSPECIFIC INTERACTIONS OF LATE QUATERNARY NORTH AMERICAN CANIDAE**

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**Melissa Irene Pardi**

**Bachelor of Science in Geological Sciences**

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**Doctor of Philosophy in Biology**

**ABSTRACT**

A pressing conservation challenge is understanding how organisms will be impacted by climate change. From the paleontological record, we know organisms have options when facing change: they can do nothing, move, or adapt. These responses shape an organism's niche (a foundational concept in biology) that is abiotically constrained, but modified by biotic interactions.

The greatest disturbances in recent North American geologic history is the human mediated extinction of megafauna ~11,700 years B.P. and climate change following the last glacial period. We used the fossil record to address ecological questions concerning conservationists; our focus was on Canidae and humans.

Species distribution modeling and body size analyses revealed changing guild interactions with humans. At the continental scale, range shifts were independent of climate, and guild cohesion decreased through time. Canids in our study coped with ecological challenges by changing their ranges and interspecific interactions, but not body size.

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# Chapter 1

## **Biotic responses of canids to the terminal Pleistocene megafauna extinction**

Pardi, M. I. and Smith, F. A. 2016. Biotic responses of canids to the terminal Pleistocene megafauna extinction. - *Ecography* 39: 141–151.

Supplementary material (Appendix ECOG-01596 at  
<[www.ecography.org/appendix/ecog-01596](http://www.ecography.org/appendix/ecog-01596)>). Appendix 1–2.



## Abstract

Trophic downgrading is a major concern for conservation scientists. The largest consumers in many ecosystems have become either rare or extirpated, leading to worry over the loss of their ecosystem function. However, trophic downgrading is not a uniquely modern phenomenon. The extinction of 34 genera of megafauna from North America ~13,000 years ago must have led to widespread changes in terrestrial ecosystem function. Studies that have examined the event address impacts on vegetative structure, small mammal communities, nutrient cycling, and fire regimes. Relatively little attention has been paid to community changes at the top of the food chain. Here, we examine the response of carnivores in North America to the Pleistocene extinction. We employ fossil data to model the climatic niche of endemic canids, including the extinct dire wolf, *Canis dirus*, over the last 20,000 years. Quantifying the abiotic niche allows us to account for expected changes due to climate fluctuations over the late Quaternary; deviations from expected responses likely reveal influences of competition and/or resource availability. We quantify the degree of niche conservatism and interspecific overlap to assess species and community responses among canids. We also include in our analyses a novel introduced predator, the domestic dog, *Canis lupus familiaris*, which accompanied humans into the New World. We find that endemic canid species display low fidelity to their climatic niche through time, We find that survivors increasingly partition their climatic niche throughout the Holocene and, surprisingly, do not expand into niche space presumably vacated by the extinction of very large carnivores. These results suggest that loss of megaherbivores and competition with humans likely outweighed advantages

conferred from the loss of very large predators. We also find that wolves and dogs decrease their niche overlap throughout the Holocene, suggesting a distinctive relationship between dogs and man.

## Introduction

Late Pleistocene ecosystems in North America were vastly different from today. Tens of millions of large-bodied mammals, including species such as mammoths, mastodons, camels, horses, giant ground sloths, cheetahs, lions and massive carnivorous bears were widespread across the landscape. Their loss, around 13 ka, during a time transgressive extinction that occurred on multiple continents, resulted in an ecologically depauperate world (Martin and Szuter 1999, Hadly and Barnosky 2009).

The Pleistocene extinction has long captivated scientists and the public alike because it has all the characteristics of a classic "*Who Done It?*" murder mystery. In North America alone, some 34 genera and ~75 species of megafauna went extinct; similar numbers were lost in South America (Lyons et al. 2004). The event was highly size selective; indeed, the average mass of mammals that went extinct in the Americas was ~900 kg (Smith et al. 2003b, Lyons et al. 2004), Fig. 1.1). Attribution has been a subject of heated debate, and has largely settled on two competing causes: humans (Martin 1984, Martin and Szuter 1999, Alroy 2001, Lyons et al. 2004, Surovell et al. 2005, Sandom et al. 2014) or climate (Guthrie 1984, Graham et al. 1996, Grayson 2001, 2007, Grayson and Meltzer 2002). While both factors undoubtedly contributed to ecological changes at the end of the Pleistocene, humans appear to be especially culpable in North America (Koch and Barnosky 2006).

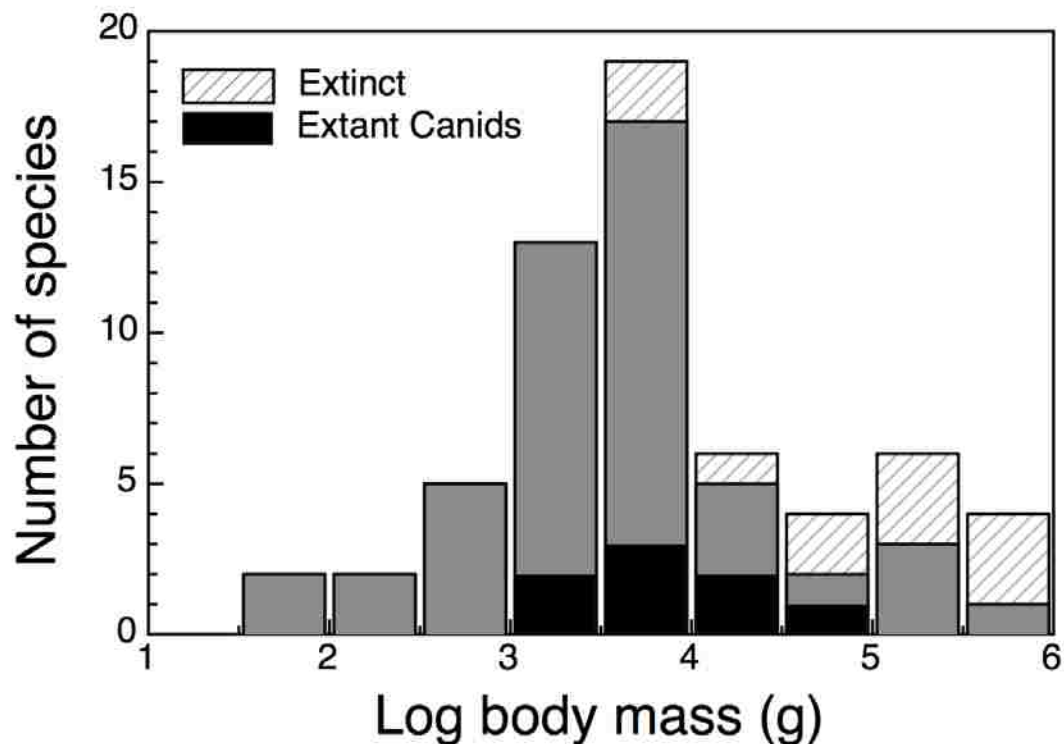


Figure 1.1. Body size distribution of North American carnivores. All extant carnivores are shown in grey; species that went extinct in the terminal Pleistocene are indicated by hatch marks, extant canids in black. Data from MOM v5.0 (updated version of Smith et al. 2003). Note the distinctive size signature of the extinction. Within each carnivore family, the largest species were extirpated (Lyons et al. 2004).

Paleoecology has the potential to provide temporal and spatial insights into modern ecological studies. However, most analyses of the terminal Pleistocene extinction have focused on the cause, not the *consequences* of the loss of tens of millions of large-bodied animals from the landscape. Understanding how North American ecosystems were altered is of more than historic interest; today, most large-bodied animals are imperiled. Yet, few bridges exist between paleontologists, who study the terminal Pleistocene extinction, and conservation biologists interested in the role of extant megafauna.

Extant megaherbivores in Africa have a disproportionate impact on vegetation and trophic interactions (Owen-Smith 1987) and considerable effort is underway to understand the role of megafauna in contemporary ecosystems. As such, recent work has begun addressing the effect of the Pleistocene megaherbivore extinction on vegetation communities (Johnson 2009, Gill et al. 2009, 2012, Gill 2014), fire regimes (Burney et al. 2003, Robinson et al. 2005, Rule et al. 2012) and nutrient cycling (Doughty et al. 2013). Notably absent, however, from the research of the last decade are studies investigating the impacts at the top of the food chain in the carnivore community. Yet, the loss of large consumers from ecological systems, particularly carnivores, is a significant and growing modern conservation concern across all ecosystem types (Estes et al. 2011).

The removal of large consumers, called trophic downgrading, occurred across all trophic levels during the Pleistocene extinction, including among carnivores. Indeed, most of the largest carnivores, including the short-faced bear (720 kg), American cave lion (433 kg), saber-tooth cat (400 kg), scimitar cat (190 kg), Florida spectacled bear (150 kg) and the dire wolf (65 kg) went extinct (Fig. 1.1), leaving only medium-sized predators, or 'mesocarnivores' (Smith et al. 2003b). With the exception of the surviving bears, modern terrestrial carnivores in North America all weigh less than 100 kg, and most considerably less (Smith et al. 2003b). Mesocarnivores do not fulfill the same ecological functions as larger species; they tend to be less carnivorous and less threatening to both prey and competitors (Gittleman 1985, Simberloff and Dayan 1991, Roemer et al. 2009, Prugh et al. 2009). Moreover, because hierarchies within the carnivore guild are largely structured by body size (Hairston et al. 1960, Koehler and Hornocker 1991, Ripple et al. 2001, Ripple and Beschta 2003, Van Valkenburgh et al.

2004), it is likely that trophic downgrading significantly alters intra-guild interactions. For example, in addition to mediating herbivory, large carnivores regulate smaller predators (Soulé et al. 1988). Such intra-guild predation imparts a disproportionately high benefit to the winner and cost to the loser (Ritchie and Johnson 2009). Without regulation by ‘top carnivores’, the increased abundance of smaller species can be ecologically devastating. Their loss can also lead to shortening of food chains, a reduction in the number of interspecific interactions, and ‘simpler’ ecosystems with less functional redundancy and resilience (Elmhagen et al. 2010, Letnic et al. 2012, Ritchie et al. 2012). Thus, the disappearance of top carnivores resulting from the late Pleistocene extinction may have had considerable impacts on ecosystems.

Here, we characterize how trophic downgrading at the end of the Pleistocene altered interactions and structure within surviving Canidae, which includes species varying in size from 1.9 kg - 65 kg (Smith et al. 2003b). We selected this group for several reasons. Species from within this family have similar life histories, good representation as fossils, and exhibit high degrees of intrafamilial mortality and strong competitive interactions in modern ecosystems (Palomares and Caro 1999, Smith et al. 2003a, Berger and Gese 2007, Atwood and Gese 2008, 2010, Merkle et al. 2009). In addition to the five endemic North American canid species, we include in our analyses a new predator that invaded North American ecosystems in the terminal Pleistocene, the domestic dog. Dogs may represent a competitor in their own right, a proxy for competitive interactions with humans, or some combination of both; we cannot differentiate here between these alternatives.

Although the number of very large carnivores decreased at the end of the Pleistocene, the extinction of megaherbivores was proportionally greater: for species over 100 kg, 5 out of 12 carnivores survived (a reduction of 58%) but only 15 out of 61 herbivores avoided extinction (a reduction of about 75%) (Kurtén and Anderson 1980). The loss of very large competitors, on the one hand, could have opened up available niche space to surviving carnivores. On the other hand, massive losses of very large herbivores may have resulted in prey switching and increased competition between remaining large carnivores over reduced resources. Moreover, the colonization of the Americas by humans may have been especially problematic because they were accompanied by domestic dogs, an invasive mesocarnivore competitor, and hunted prey from a variety of size categories.

Our study aims to identify changes in the spatial distribution of canids in response to the Pleistocene extinction, within the context of Late Quaternary climate change. Specifically, we ask: 1) How well do canid species track their environmental niche over time?, 2) How much niche separation occurs between canid species and is this related to their body size and trophic status?, 3) Does the degree of niche separation change over time after the largest carnivore in the guild (*Canis dirus*) goes extinct?, and, finally, 4) how do domestic dogs fit into the broader context of interspecific interactions within the guild?

## **Methods**

### **Project Framework**

Because climate also shifted at the terminal Pleistocene, we employ maximum entropy niche modeling (Maxent, (Phillips and Dudík 2008) to model the changing abiotic niche over time. A niche modeling framework allows us to describe broad continent wide changes and develop predictions for where animals should occur based solely on abiotic factors. Deviations from the abiotic niche suggest the influence of biotic factors – most likely prey availability or competition. We quantify both the degree of niche conservatism for each canid species and the degree of interspecific overlap to assess community responses within the community, which we hypothesize will be size-related. To test for niche separation, we correlated observed spatial likelihoods between species within a time interval.

### **Study Area and Fossil Species Occurrences**

Our study area encompasses much of the North American continent, excluding Mexico. A minimum convex polygon was constructed enclosing all fossil mammal localities to define the study area, and represents the maximum area in which effort has been made to collect fossil samples by previous investigators (FAUNMAP Working Group 1994) (Fig. 1.2, gray polygon). Fossil occurrences for all carnivores were obtained from FAUNMAP (FAUNMAP Working Group 1994) using the Neotoma Paleobiological Database portal ([www.neotomadb.org](http://www.neotomadb.org); Fig. 1.2). Data with non-specific or ambiguous species identifications were eliminated and subspecies, except for *C. lupus familiaris*, were grouped together at the species level. Records with poor temporal control (e.g., their



age range exceeded 3000 years) were eliminated . Each occurrence was binned into a temporal window: late Pleistocene (20 - 10 ka), Early-Middle Holocene (10 - 5 ka), and late Holocene (4 - 1 ka). The mean age of each occurrence was then associated with a paleoclimate simulation that was closest to its mean age. Finer temporal resolutions were not possible because many fossils were not more precisely dated.

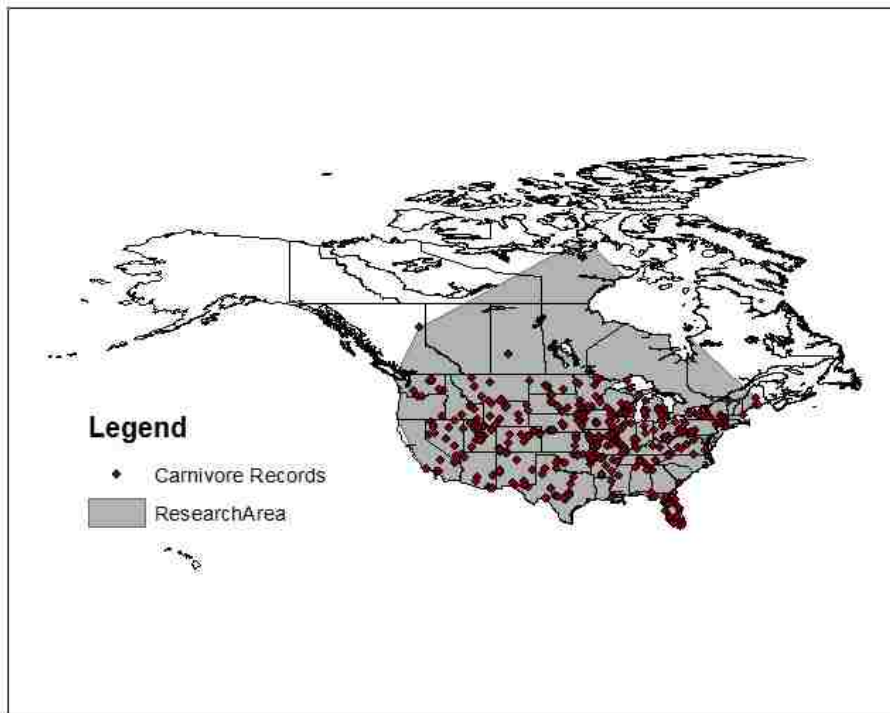


Figure 1.2. All FAUNMAP sites that contain carnivore records within the time period of this study. The gray area is the research area as defined by the minimum convex hull that contains all mammal records in FAUNMAP.

### **Paleoclimate data**

We employed 35 spatially downscaled paleoclimate variables derived from the National Center for Atmospheric Research Community Climate System Model version 3 (CCSM3) (Liu et al. 2009, Veloz et al. 2012), Supplementary material Appendix 1, Table A1). Climate reconstructions were at 1,000 yr intervals, with 0.5 x 0.5 degree spatial resolution, from 1-20 ka. Environmental variables from each simulation were associated with species occurrences using a geographic information system. Each time interval contained several species occurrences of different ages and the associated environmental variables simulated for those ages. Therefore, each occurrence was given environmental

data from a location-time coordinate (latitude, longitude, simulation age). Ice sheet surface data were obtained from the Paleoclimate Modelling Intercomparison Project Phase II (PMIP 2) ICE-5G (v1.2) datasets (Peltier 2004), and were used to mask areas where glaciers were present prior to niche modeling.

### **Ecological Niche Modeling (ENM) In Maxent**

Models were trained and analyzed from data confined within the geographic extent of the study area. Species' niches were modeled using the maximum entropy method and projected for each time interval in Maxent (Phillips et al. 2004, 2006). Maxent is the most appropriate tool for our analyses because it is a presence-only method, and records from FAUNMAP are inherently presence-only data sets (Phillips et al. 2004, Phillips and Dudík 2008, Elith et al. 2011). The logistic output of this model, although not an explicit probability of occurrence, provides habitat suitability values, or likelihoods of occurrence given the environmental variables of the model.

Background data for each species model were taken from 10,000 random location-time coordinates within the time interval. To account for simulation ages where no fossils for a given species occurred, the environmental data for those ages were omitted from data used to populate the background dataset. The background data, therefore, provide an estimate of the environmental conditions a species could have potentially used over the duration of a time interval.

Niche models were produced using the logistic output in Maxent, using a bootstrap resampling method with 100 replicates and random starting points. We used 25% of occurrences for testing and "auto features" for algorithm selection. Models were

initially run with all 35 climatic variables to determine which variables contributed most to the model for each species at each time interval. We retained the top three contributing variables for each individual model as indicated from the Maxent output (Supplementary material Appendix 1, Table A2) and reran the models a second time to produce likelihoods of occurrence given this smaller subset of the climate variables. The average of the 100 replicates from these models were used for all further mapping, statistical, and spatial analyses.

Two types of ecological niche models (ENM) were created for each species at each time interval. An observed ENM for a species was created using location and background data for the time interval in question (e.g., Pleistocene, Early-Middle Holocene or Late Holocene); this was projected onto a climatic reconstruction for that time interval (20 ka, 10 ka, or 4 ka, respectively). An expected ENM for a species was also created by projecting the ENM from the previous time interval forward in time onto the climatic template used for the observed ENM. This resulted in five potential ENMs for each species (Supplementary material Appendix 2): i) an observed ENM for each species during the late Pleistocene, ii) an observed during the Early-Middle Holocene, iii) an expected for the Early-Middle Holocene that was projected from the Pleistocene model, iv) an observed for the Late Holocene, and v) an expected for the Late Holocene that was projected from the Early-Middle Holocene model. For the purpose of statistical analyses outside of the Maxent environment, ENMs were rasterized to 0.5 x 0.5 degree grids within the research area.

## **Hypothesis Testing**

Intra-guild predation is prevalent among carnivores, especially canids (Polis et al. 1989, Palomares and Caro 1999, Fedriani et al. 2000). Thus, the extinction of large competitors may have increased available niche space. To test for niche conservation or expansion we correlated the observed likelihoods from a rasterized ecological niche model for a given time interval with the expected likelihoods derived from the previous time interval. If the niche is conserved, then we predict the expected niche and observed niche should be significantly positively correlated. If, however, the niche is not conserved, the expected should be a poor predictor for the observed niche.

To examine the extent of niche conservation following the extinction, we calculated the Pearson's coefficient of correlation between paired observed and expected likelihood values of each raster cell from ENMs for the Early-Middle Holocene and the Late Holocene. Rasters were of equal dimensionality and spatial extent and were constrained to the research area defined in training the model. Grid cells where both the observed and expected likelihood values were below 0.10 were omitted from these analyses. The correlation between observed and expected likelihood values were tested for statistical significance and we evaluated significant correlation changes between time periods by comparing 95% confidence intervals.

To evaluate the degree of observed niche separation, we calculated the Pearson's coefficient of correlation of gridded observed likelihood values between pairs of species for each time interval. Rasters were of equal dimensionality and spatial extent and were constrained to the research area defined in training the model. Grid cells where both species were unlikely to occur (likelihood values below 0.10) were omitted from these

analyses. A significant positive correlation indicates that the niche of two species overlaps, whereas a negative correlation indicates that the niches are partitioned. Zero correlation indicates no relationship. Interspecific overlap may also be influenced by abiotic factors; therefore, expected interspecific overlap was similarly calculated for each species pair using expected likelihood values. We then compared observed and expected interspecific correlations across time intervals.

If surviving canids moved into open niches, thereby increasing niche separation following the Pleistocene extinction, then observed interspecific correlation values will decrease more than expected between species through time. If biotic interactions increased niche overlap, then observed correlation values will increase more than expected through time. If biotic interactions remained constant, then the expected interaction should predict the observed.

## **Results**

### **Model Evaluation**

All of our niche models for all time intervals performed better than random. Table 1.1 provides the average area under the curve (AUC) for 100 model replicates calculated by Maxent to evaluate performance, as well as the number of randomly chosen training and testing samples used for each model. An AUC of 0.5 corresponds to a random model, while values over 0.75 are considered potentially useful (Phillips and Dudík 2008). For our study most of the models performed on average with AUC values greater than 0.8, however the 20kyr B.P. model for *Canis lupus* had an average value of 0.773 +/- 0.067.



Table 1.1. Average AUC values calculated from 100 model replicates. All models performed better than random, most averaged greater than 0.8. The 20 kyr B.P. model for *Canis lupus* performed worst, with an AUC of 0.773 +/- 0.067. The number of random points used to train and test the model are given in parentheses, respectively. No data is indicated by a dash.

	20 kyr B.P.	10 kyr B.P.	4 kyr B.P.
<b>Canis dirus</b>	0.828 +/- 0.058 (9, 3)	--	--
<b>Canis lupus</b>	0.7730 +/- 0.067 (7, 2)	0.857 +/- 0.039 (11, 3)	0.854 +/- 0.017 (52, 17)
<b>Canis lupus familiaris</b>	--	0.806 +/- 0.054 (6, 1)	0.931 +/- 0.010 (98, 32)
<b>Canis latrans</b>	0.820 +/- 0.073 (10, 3)	0.903 +/- 0.034 (15, 5)	0.869 +/- 0.015 (56, 18)
<b>Vulpes vulpes</b>	0.814 +/- 0.063 (6, 1)	0.810 +/- 0.058 (9, 3)	0.864 +/- 0.025 (30, 10)



## Ecological Niche Conservation

Across all models and species we find a mismatch between expected occurrences and observed patterns. We calculated differences between the expected (Online Supplementary material Appendix 2, Fig. A2 and Fig. A4) and observed (Online Supplementary material Appendix 2, Fig. A1, Fig. A3, and Fig A5.) likelihoods of occurrence by subtracting the expected raster values from the observed (Fig. 1.3-6). We were able to calculate differences between the observed and expected for 10 ka and 4 ka for *Canis lupus* (Fig. 1.3), *C. latrans* (Fig. 1.5), and *Vulpes vulpes* (Fig. 1.6); however, data were only available to calculate a difference at 4 ka. for *Canis lupus familiaris* (Fig. 1.4). Positive values (blue shading) indicate areas where species had a high observed value, but a low likely expectation. Negative values (in red) indicate areas where a species had a low observed value, yet was expected to occur. Light colors or white indicates regions where the expected and observed were in concordance. Across all species, differences between the observed and expected niche differ significantly throughout the Holocene.

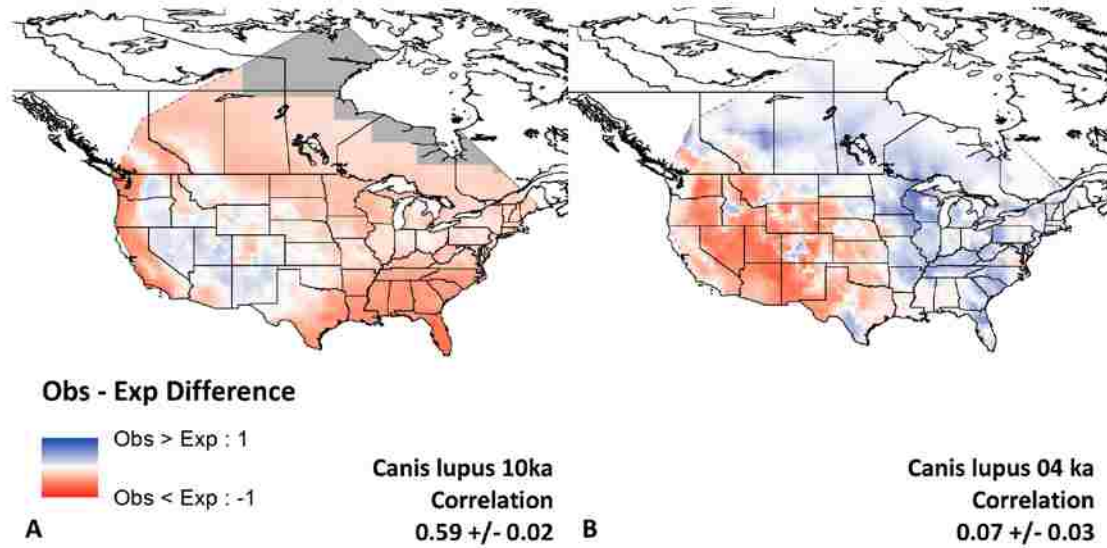


Figure 1.3. Differences between expected and observed likelihood values for *Canis lupus*. A) the Early-Middle Holocene (10 kyr B.P.) and B) the Late Holocene (4 kyr B.P.). The expected model was subtracted from the observed: positive values, blue, indicate that the expected underpredicted the observed likelihoods (niche expansion), negative values, red, indicate that the expected overpredicted the observed likelihoods (niche contraction). Pearson correlation coefficients are given in each panel between the observed and the expected, with 95% confidence intervals.

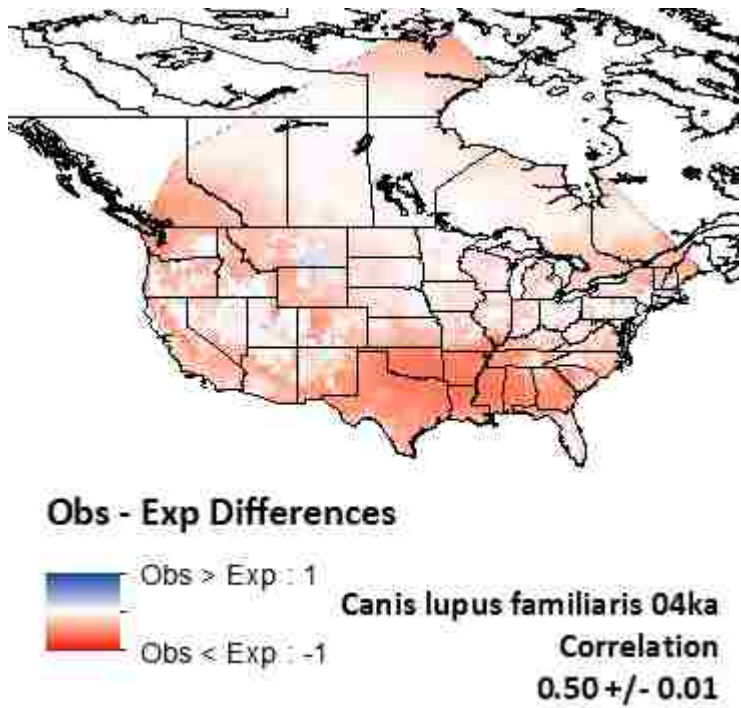


Figure 1.4. Differences between expected and observed likelihood values for *Canis lupus familiaris* for the Late Holocene (4 kyr B.P.). The expected model was subtracted from the observed: positive values, blue, indicate that the expected underpredicted the observed likelihoods (niche expansion), negative values, red, indicate that the expected overpredicted the observed likelihoods (niche contraction). Pearson correlation coefficients are given in each panel between the observed and the expected, with 95% confidence intervals.

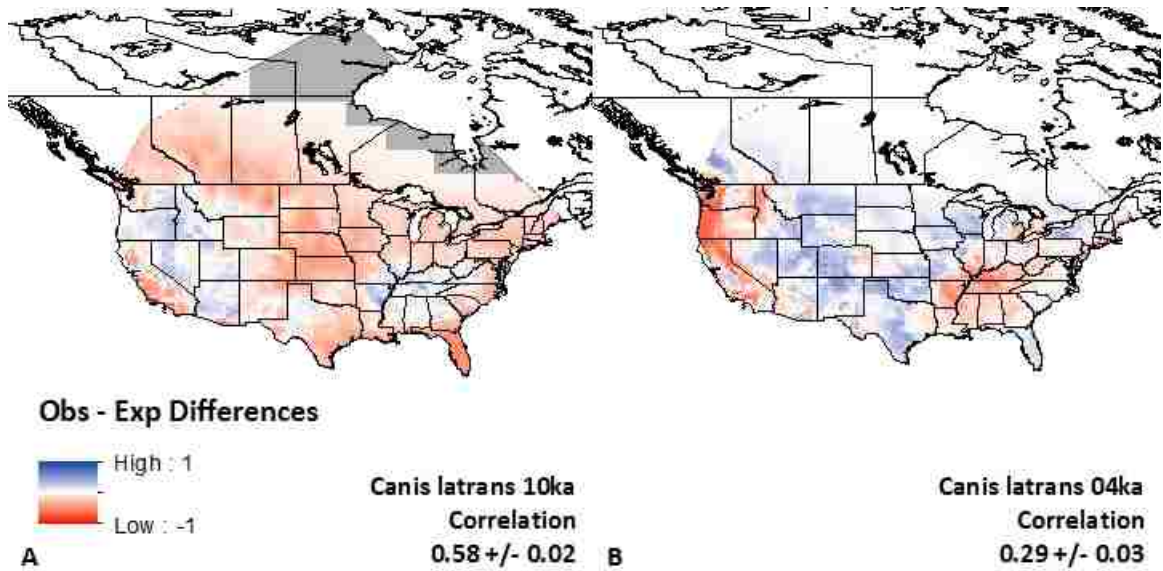


Figure 1.5. Differences between expected and observed likelihood values for *Canis latrans*. A) the Early-Middle Holocene (10 kyr B.P.) and B) the Late Holocene (4 kyr B.P.). The expected model was subtracted from the observed: positive values, blue, indicate that the expected underpredicted the observed likelihoods (niche expansion), negative values, red, indicate that the expected overpredicted the observed likelihoods (niche contraction). Pearson correlation coefficients are given in each panel between the observed and the expected, with 95% confidence intervals.

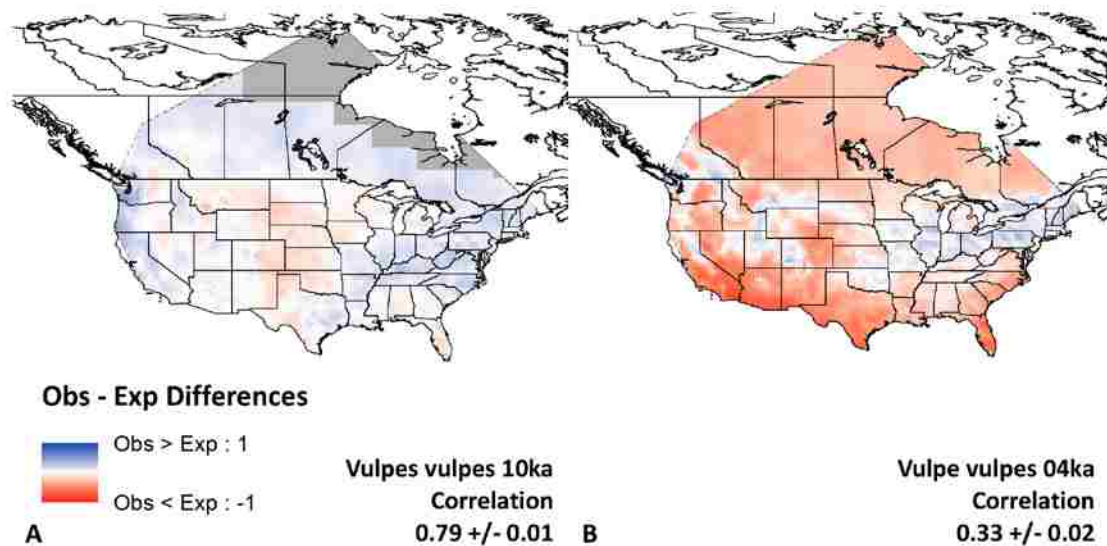


Figure 1.6. Differences between expected and observed likelihood values for *Vulpes vulpes*. A) the Early-Middle Holocene (10 kyr B.P.) and B) the Late Holocene (4 kyr B.P.). The expected model was subtracted from the observed: positive values, blue, indicate that the expected underpredicted the observed likelihoods (niche expansion), negative values, red, indicate that the expected overpredicted the observed likelihoods (niche contraction). Pearson correlation coefficients are given in each panel between the observed and the expected, with 95% confidence intervals.

We find a strong signal of a changing climatic niche for each species over time; correlations between expected and observed occupancy *decrease* through time for all endemic species in the Early-Middle Holocene (Fig. 1.3-6; Pearson correlation for the expected and observed models are given for each time period with 95% confidence intervals). The expected and observed models for *Canis lupus* and *Canis latrans* are moderately correlated in the Early-Middle Holocene (Fig. 1.3A, 0.59 +/- 0.02 and Fig. 1.5A, 0.58 +/- 0.02, respectively), but lowly correlated in the late Holocene (Fig. 1.3B, 0.07 +/- 0.03 and Fig. 1.5B, 0.29 +/- 0.03, respectively). Lastly, *Vulpes vulpes* is fairly

well predicted in the Early-Middle Holocene (Fig. 1.6A,  $0.79 \pm 0.01$ ), but this relationship falls apart in the late Holocene (Fig. 1.6B,  $0.33 \pm 0.02$ ).

The difference between the observed versus the expected niche is qualitatively different throughout the guild. In the Early-Middle Holocene, the observed extent of the niche for *Vulpes vulpes* is somewhat larger than expected (Fig. 1.6A, blue regions), but the observed niches for *Canis lupus* and *Canis latrans* are smaller than expected (Fig. 1.3A and Fig. 1.5A, red regions). However, in the Late Holocene *Vulpes vulpes* has an observed niche that is much smaller than expected (Fig. 1.6B, red regions) and an observed niche that is poorly correlated with the expected (Fig. 1.6B,  $0.33 \pm 0.02$ ). *Canis lupus familiaris* had an observed niche that was more reduced than expected, resulting in an observed niche that was poorly correlated with the expected (Fig. 1.4,  $0.50 \pm 0.01$ ).

We conclude that the Canidae are not showing fidelity to their climatic niche through time. The observed niche in the late Holocene is less predictable than in the Early-Middle Holocene, for all species modeled. We find this pattern despite a relatively more stable climate throughout the Holocene than across the Pleistocene-Holocene boundary.

### **Interspecific Correlations**

Observed interspecific overlap decreases for species pairs throughout the Holocene, with a few exceptions. In several cases abiotic conditions alone would predict increased overlap, but the observed value trends in the opposite direction than expected. However, in the Early-Middle Holocene, the correlation between *Canis lupus* and *Vulpes*

*vulpes* is expected at  $0.63 \pm 0.02$  and observed at  $0.64 \pm 0.02$  (Fig. 1.7, middle column). Likewise, during this same time, the correlation between *Canis latrans* and *Vulpes vulpes* is expected at  $0.57 \pm 0.02$  and is observed at  $0.58 \pm 0.02$ . By the Late Holocene, all species pairs are observed at lower correlations than expected.

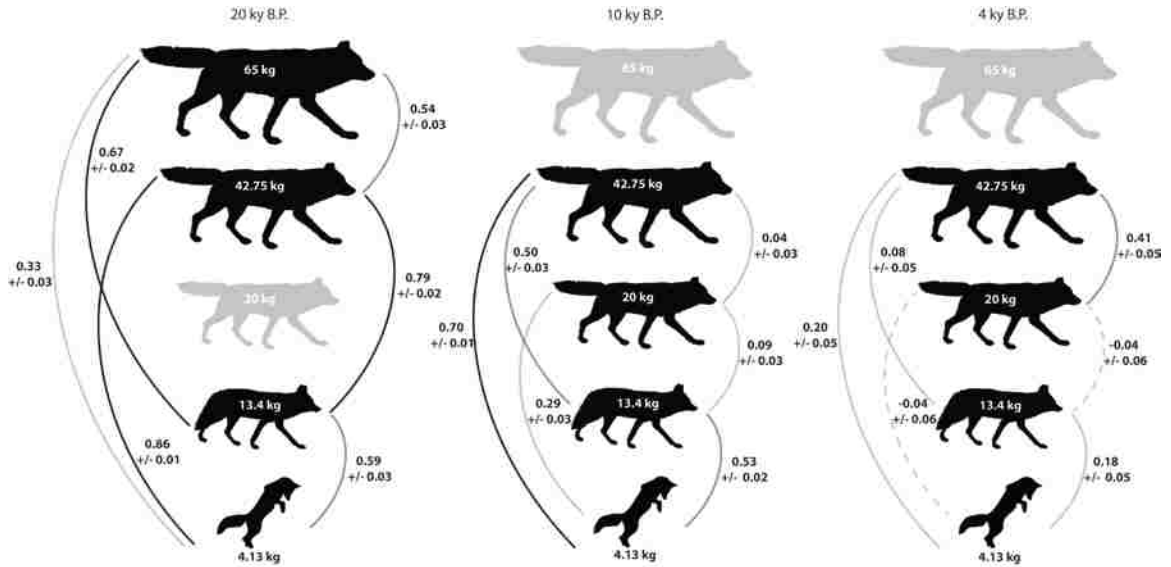


Figure 1.7. Interspecific correlations across study periods. Pearson correlation coefficients are given. For clarity, 95% confidence intervals are omitted but are included where referenced in the text. All correlation values are significant unless otherwise specified. Lines are shaded and bolded according to the strength of the observed correlation; observed values not statistically different from zero are dashed. \* indicates that the observed and expected overlap are not statistically different. Body size estimates for endemic species come from Smith et al. 2003. Estimates for domestic dog, averaged around 20 kg, are based on that of the Dingo (Allen et al. 2013) and is included as a point of reference, not as a definitive assessment of size. Shaded figures indicate that a species was not present for a given analysis.

## Discussion

Our findings indicate that interactions among survivors within the canid community dramatically changed after the end Pleistocene event. Overall, species changed their spatial distribution, but did not track climatic niche space (Fig. 1.3-6),

which suggests a role for changing biotic interactions within the community.

Additionally, we identify a net increase in niche partitioning among surviving canids after the Pleistocene that is independent of climate (Fig. 1.7), following the extirpation of their largest competitors.

Niche changes occurred individualistically across species, with the timing of changes varying across body size of endemics. The two larger species, *Canis lupus* and *Canis latrans*, decreased their observed niche in the Early-Middle Holocene (Fig. 1.3A and Fig. 1.5A, larger red area), whereas *Vulpes vulpes* exhibited a niche that was somewhat larger than expected (Fig. 1.6A, larger blue area), suggesting the immediate effects of the extinction provided slight niche release for foxes. In the Late Holocene, *Canis lupus* and *Canis latrans* shifted their niches, but the overall extent of the observed was similar to the expected (Fig. 1.3B and 5B). *Vulpes vulpes*, on the other hand, dramatically reduced the extent of the observed niche by (Fig. 1.6B, red regions). The immediate effects of the End Pleistocene event appear to have greater impacts on larger species, but over the long term impacted smaller bodied species as well.

We are confident that the lack of niche conservatism we find across species is a real biological pattern and not a quirk of the climatic variables used in our niche models. The CCSM3 was also employed in the species distribution models constructed by Veloz *et al.* 2012; similar to our findings, they observed a lack of niche conservatism in several Late Quaternary North American plant genera. The conclusions of their study were statistically robust to both the transient version of the CCSM3 (Liu *et al.* 2009) and the Hadley Center general circulation model (HadCM3) (Singarayer and Valdes 2010). Our results are, therefore, consistent with other niche models for species of differing



taxonomic and trophic groups, as well as a broader scope of literature which has concluded carnivores may be more strongly impacted by biotic interactions than abiotic factors (McNab 1971, Geist 1987, Meachen and Samuels 2012, Veloz et al. 2012).

Our results may appear to be at odds with previous studies which have concluded that niches are stable over ecological time periods (Ricklefs and Latham 1992, Holt 1996, Holt and Gomulkiewicz 1997, Peterson et al. 1999, Martínez-Meyer et al. 2004, Huntley et al. 2010), however this is not the case. We have modeled a small subset of the entire vertebrate fauna: just the Canidae. Prior work attempting to test for niche conservatism, likewise, has tested for conservatism in subsets of taxa. For example, Martínez-Meyer et al. 2004 concluded that niches were stable throughout the Late Quaternary via an analysis of 23 extant mammal species, with the following exceptions: *Ochotona princeps*, *Castor canadensis*, *Canis latrans*, *Ursus americanus*, and *Lynx rufus* (Martínez-Meyer et al. 2004). Three out of the five of these species are both 1. species with broad ranges and 2. carnivores. Furthermore, Martínez-Meyer et al. 2004 used a different metric for niche stability, but they too found a lack of conservatism in *Canis latrans*. Unlike our study, they did not analyze *Canis lupus* or *Vulpes vulpes*. Our results are therefore not at odds with other studies, because we make no claim about the niche stability of species we did not analyze. However, our study is part of a growing body of research that suggests care should be taken in making assumptions of niche conservatism, especially while making predictions about the future distribution of species in the face of global climate change (Davis et al. 1998, Veloz et al. 2012).

The differing biogeographic histories of the three largest canids in our study system may help explain the patterns we observe from our niche modeling approach.

Unlike *Canis dirus* and *Canis latrans*, which are long time endemics in North America with a history of interaction, *Canis lupus* was a relative newcomer to the scene in the Late Pleistocene (Merriam 1912, Dundas 1999). *C. lupus* occurred in low densities relative to *C. dirus* during the Late Pleistocene, and their numbers increase following the extinction of *C. dirus* (Merriam 1912). *C. latrans* was larger during the Pleistocene and would have been similar in size to *C. lupus* when it initially expanded into North America (Meachen and Samuels 2012, Meachen et al. 2014), so these two species may have initially been competing more directly for resources. The increased abundance of a competitor with a similar dietary niche may have promoted partitioning of resources by *C. latrans* and induced a shift in its niche during the Holocene. This hypothesis is consistent with other studies that identify body size reduction and morphological changes towards omnivory in coyotes in the Holocene (Meachen and Samuels 2012, Meachen et al. 2014). These are physical responses that might be expected in a species that is drastically changing its niche and ecological function.

In this study we asked whether the niches of endemic North American canids were conserved following the end Pleistocene event. We find that niches were not conserved for any of the species we analyzed. Correlation values between the expected and observed likelihoods of occurrence decreased through time, indicating that the climatic niche became less predictable through the Holocene. In particular, wolves dramatically changed their niche during the Holocene and hence, the likelihood of occupancy became highly unpredictable. There is a weak but significant negative correlation between where wolves are expected in the Late Holocene and where they actually occur (Fig. 1.3B). This differs significantly from the Early-Middle Holocene,

where the occurrence of wolves is more predictable despite significant global climatic changes (Fig. 1.3A). The wolf niche changed between the end of the Pleistocene and the Late Holocene in a manner that is not explained by climate alone, and this species had high likelihoods of occurrence in places it was predicted to be rare or absent.

Overall guild structure changed over time after the largest carnivore in our study, *Canis dirus*, went extinct, along with the other megafauna. Interestingly, most endemic canids were highly intercorrelated in the Pleistocene, except for the relationship between *Canis dirus* and *Vulpes vulpes* (Fig. 1.7, left column). These species may simply have been too ecologically dissimilar in resource use or body size to be interacting significantly. Correlation values between all species decreased in the Early-Middle Holocene. Linkages between trophic levels disintegrated by the Late Holocene and overall structure within the guild changed. These findings suggest an overall restructuring of guild from the top down.

The relationship with domestic dogs was not uniform across the canid community throughout the Holocene. Niche correlations in the Early-Middle Holocene were lowest between wolves and domestic dog. By the Late Holocene both coyotes and red fox further separated their niches from wolves, but niche overlap between foxes and domestic dogs had not changed since the Early Holocene. The correlation between wolves and dogs is not statistically different from zero for the Late Holocene, which suggests that they were not interacting. This is interesting considering domestic dogs and wolves are, technically speaking, the same species.

Domestic dogs were likely very successful invaders of the North American landscape. Despite being newcomers to the carnivore community, they established a

widespread niche by the Early-Middle Holocene (Online Supplemental material Appendix 2, Fig. A3). The complete lack of Late Holocene interaction between wolves and dogs is distinct from the relationship between dogs and the other endemic canids (Fig. 1.7, right column). This relationship developed over the course of the Holocene. Interestingly, much like the rest of the endemic canid species, dogs failed to have a Late Holocene observed niche that was of the extent expected (Fig. 1.4). Despite favorable abiotic conditions and their relationship with humans, they are also limited by biotic interactions.

The modeled distribution of *Canis lupus familiaris* may be reflecting spatial patterns of human presence on the North American landscape. Indeed, previous investigators have utilized domestic dog fossils as a proxy for humans (Witt et al. 2015). Observed likelihoods of *Canis lupus familiaris* are greatest in the northeastern and northwestern regions of the United States (Online Supplemental material Appendix 2, Fig. A3). This pattern is qualitatively similar to the apparent presence of humans; the greatest densities of archaeological radiocarbon dates also occur in greater abundance in the northeastern and northwestern regions of the continent (Peros et al. 2010). If this is indeed a true pattern, our analyses indicate domestic dogs in a sense "defected" from the wolf niche in favor of what may be described as the human niche. This may also explain why the observed and expected niche of Late Holocene domestic dogs are not highly correlated.

The lack of association we find between wolves and domestic dogs may speak to the intense competition between humans and larger endemic carnivores. It may also reflect the rapid rate in which dog domestication may have occurred, as new research

suggests there may have been multiple crosses between dogs and wolves, as well as a possible second domestication in North America (Witt et al. 2015). These observations are not at all surprising given that packs of wolves and hunter gatherer societies obtain similar prey in an analogous fashion, and similarity in group social structure may have facilitated wolf domestication (Hall and Sharp 1978, Olsen 1985).

One of our most surprising outcomes from our analyses was the relatively greater interconnectedness we found within the late Pleistocene canid community relative to the Holocene. This is, however, consistent with findings presented by other authors. Several carnivore species in the late Pleistocene exhibit high frequencies of tooth breakage (Van Valkenburgh and Hertel 1993, Binder and Van Valkenburgh 2010), implying a greater utilization of large prey, carcasses, and bones. Such findings have been interpreted as evidence for overall greater competition for food resources in the past. Megaherbivore carcasses may have also been an important source of food for smaller carnivores in Pleistocene communities, facilitating scavenging by smaller carnivores and promoting spatial overlap of multiple species (Pereira et al. 2014). Even in modern community ecology, the importance of scavenging is often overlooked and underappreciated (Selva et al. 2005, Wilson and Wolkovich 2011). Furthermore, the presence of megafauna, as in modern African communities, may have promoted the coexistence of a more diverse megacarnivore fauna (Sandom et al. 2013). The hunting of megafauna explains adaptive jaw structures and size in some Pleistocene carnivores (Van Valkenburgh and Koepfli 1993, Biknevicius and Van Valkenburgh 1996, Meachen-Samuels and Van Valkenburgh 2009, Meachen et al. 2014), and megaherbivore extinction explains the decrease we find in Early-Middle Holocene canid niche overlap.

Our models, like all niche models, only account for those aspects of the niche for which data are available. We have modeled only the abiotic aspect, but biotic interactions may be particularly important for defining the carnivore niche. They are no doubt responding to their own physiological tolerances, the location and availability of prey, as well as competition with other carnivores. The end of the Pleistocene caused major upheavals in both biotic and abiotic systems (Graham and Lundelius Jr 1984, Graham et al. 1996, Burney et al. 2003, Robinson et al. 2005, Gill et al. 2009, Rule et al. 2012, Doughty et al. 2013, Gill 2014). We do not, however, view this as a confounding issue for our study. Quantifying the environmental niche allows us to account for the expected changes due to climate fluctuations over the late Quaternary; deviations from expected responses likely reveal the influence of competition and/or resource availability. Where our models fail to predict a species' occurrence with only abiotic variables, we have identified potentially interesting changes with the biotic aspect of the niche.

## **Conclusions**

Carnivores responded to both changes in climate and the megafauna extinction, but the biotic factors had a stronger net impact. Our modeling suggests that climatic change should have led to an increase in the overall area of suitable habitat, and potentially greater co occurrence of species if biotic interactions had remained constant. The removal of large carnivores should have reduced intraguild competition and also potentially led to range expansions. We find that the response was more complex and that shifts occurred across the canid guild, but the timing of the changes was species specific and probably related to body size or trophic level. Future stable isotope analyses of

dietary niches could help resolve whether canids made these spatial shifts while maintaining their dietary habits, or if prey utilization changed. Stable isotopes would also reveal changing degrees of biotic overlap by quantifying interspecific resource use and overlap among sympatric carnivore species.

The end Pleistocene event changed both individual species' niches as well as interspecific relationships among species in the Canidae. Biotic changes likely played a large role in determining the geographic occurrences of these carnivores in the Holocene. This is supported by changes in the climatic niche of individual species. Greater niche separation during the Holocene changed overall guild connectivity between trophic levels, and likely altered ecological function in the carnivore community.

The Holocene was characterized by the presence of introduced and novel competitors: humans and their domesticated dogs. The presence of humans on the landscape potentially impacted the realized niche and spatial distribution of endemic canid species. The apparent divergence between wolves and dogs occurred early on in the Holocene and intensified in the Late Holocene, during a time when the human population was rapidly increasing (Peros et al. 2010). Further study is needed to elucidate the nature of this relationship between man, dog, and wolf.

### **Acknowledgements**

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## **Chapter 2**

**Not everything's bigger in Texas: Canidae body size was stable during  
the late Quaternary across the Edward's Plateau**

## **Abstract**

Most members of the North American Canidae survived the Pleistocene megafauna extinction. Given that carnivore body size is closely linked to interspecific interactions, did canid species change body size to adapt to Holocene ecological communities without megafauna? To address this question we focused on the Edwards Plateau in south central Texas, an area with a good Canidae fossil record. We characterized canid species' body sizes before and after the extinction. Because existing allometries relating fossil features to body size were limited to a few elements found in fossil assemblages, we developed a suite of allometries utilizing partial and fragmented remains in the paleontological study of body size. We measured modern skeletons to establish these new relationships between mass and 24 skeletal measurements across the Canidae.

Our suite of allometric relationships include equations for dental, cranial, as well as limb bones and partial epiphyses. All had high r-squared values of the log standardized data, and yielded robust relationships. We used our newly established allometric relationships to calculate regional average masses for each canid species of late Pleistocene (Rancholabrean) and Holocene age on the Edwards Plateau. We found that body size of extant species did not change significantly between time periods. However, we did find that the Holocene community was characterized by a reduction in the abundance of small canids following the extinction of dire wolves and trophic release of gray wolves. We suspect that interspecific pressure may not have changed sufficiently to impart selective pressure on intraspecific body size. Overall community structure did shift in favor of intermediate body sizes.

## **Introduction**

A common colloquialism is that "everything's bigger in Texas"; but, during the last ice age charismatic mammals of impressive size, most weighing up to several tons, were widespread and existed across the entirety of North America (Kurtén and Anderson 1980). At the end Pleistocene, 34 genera (~75 species) of megafauna had become extinct, resulting in the loss of tens of millions of large bodied individuals from North American ecological communities (Martin 1967, Lyons et al. 2004, Smith et al. 2016). This intense and widespread occurrence of Pleistocene trophic downgrading provides a good analogue to the ongoing global disappearance of large consumers across all modern systems (Estes et al. 2011).

The end Pleistocene megafauna extinction resulted in depauperate ecosystems in the Americas, both in terms of the diversity of species and their body sizes (Martin and Wright 1967, Lyons et al. 2004, Hadly and Barnosky 2009, Smith et al. 2016). Megafauna are still found in Africa where they play particularly significant roles in ecosystems (Owen-Smith 1987, 1992). Their large size results in substantial to modification the environment and impacts the distribution of resources as ecosystem engineers (Jones et al. 1994). For example, rhino help maintain short grass ecosystems and impact fuel loads for fire in South African savannas (Waldram et al. 2007). Other large animals, such as elephants, maintain open environments that would otherwise be encroached upon by woody browse (Naiman 1988, Jones et al. 1994); smaller herbivores do not have the same impact on vegetation (Waldram et al. 2007). Thus, it should come as no surprise that the loss of megaherbivores and carnivores at the end of the Pleistocene likely had far

reaching impacts on resulting communities (Johnson 2009, Rule et al. 2012, Doughty et al. 2013, Gill 2014, Smith et al. 2015, 2016, Pardi and Smith 2016).

The end Pleistocene extinction certainly impacted community structure and function, as well as the biogeography and evolutionary trajectories of organisms that survived. Species can respond to environmental or ecological change in a number of ways: through physical, phenological, or behavioral adaptations (Bergmann 1848, Smith et al. 1995), by changing their geographic range (Graham and Grimm 1990, Graham et al. 1996, Williams et al. 2001, Lyons 2003, Blois et al. 2010), or they may become locally extirpated or go extinct (Payne and Finnegan 2007). Here, we focus on shifts in body size, because it imposes important constraints on characteristics such as metabolism, range size and dispersal, and life history (Gittleman and Harvey 1982, Gittleman 1985, Sutherland et al. 2000, Brown et al. 2004, Tucker et al. 2014). In the case of carnivores, body size is hugely important to survival; the size of a carnivore places constraints on its optimal prey size (Gittleman 1985, Carbone et al. 1999, 2007), and within the carnivore guild, the outcome of interspecific competition, intraguild mortality, and trophic release are highly predicted by body size (Palomares and Caro 1999, Prugh et al. 2009).

The end Pleistocene extinction dramatically impacted the overall body size composition of the carnivore guild, and Texas is an ideal place to study the long term effects of trophic downgrading and trophic release at the regional scale. In particular, the Edwards Plateau (EP) ecoregion, in southern Great Plains of west central Texas, is underlain by expansive limestone formations that contain numerous caves containing a rich and spatially extensive late Quaternary fossil record. These caves serve as

accumulation centers of vertebrate fossils, recording the ecological changes of the late Quaternary and spanning the Pleistocene-Holocene boundary in the southern Great Plains.

We focus on the family Canidae across the Edward's Plateau, which has living and extinct members occupying a range of body sizes spanning an order of magnitude. This group is reasonably well represented in the fossil record, making them an ideal group to study the impacts of ecological change at the familial scale. Species within this family have been shown to exhibit the full suite of responses we might expect to the end of the Pleistocene: extinction in the case of the dire wolf (*Canis dirus*), movement of geographic ranges and adjustment of niche breadth (Pardi and Smith 2016), adaptation of body sizes at locations such as Rancho La Brea (Meachen and Samuels 2012, Meachen et al. 2014), and broad persistence in many different habitats. Finally, intrafamilial competition and killing is common in this group, with the outcome reliably determined by size (Palomares and Caro 1999); therefore, changes in body size and community structure in response to changes in competition or trophic release should be detectable.

While the late Pleistocene megafauna extinction resulted in the loss of many charismatic carnivores, such as saber-toothed cats and short-faced bears, within the canids only the dire wolf went extinct. Survivors in the Canidae have persisted on the Edward's Plateau as a diverse group of large to medium sized carnivores; today, very small species such as the swift fox (*Vulpes velox*), medium size species such as coyotes (*Canis latrans*), and larger species such as wolves (*Canis lupus*) can be found there. We asked if the loss of the largest competitors resulted in mesocarnivore trophic release, and if EP canids adapted their body size in response to the changes at the end of the Pleistocene. Namely,

surviving carnivores would be dealing with a prey base consisting of smaller herbivores, smaller endemic competitors, and the presence of humans on the landscape.

We analyzed the late Quaternary fossil remains of 17 cave localities (7 Pleistocene and 11 Holocene records) from the Edward's Plateau. We hypothesize that canids optimized their body size to the capture of smaller prey and coping with smaller competitors. We predict that canids should become smaller over time and that trophic release should allow mesocarnivores to gain a competitive advantage (Gittleman and Harvey 1982, Crooks and Soulé 1999, Roemer et al. 2009, Ritchie and Johnson 2009, Prugh et al. 2009). Our study provides insights into the impacts of trophic downgrading across a family of organisms, at a regional scale, over thousands of years.

## **Methods**

Allometric relationships between mass and skeletal measurements have long been used to estimate the masses of extinct and fossil species to gain insights into their ecology (Ruff 1989, Ruff et al. 1989, Van Valkenburgh 1990, Alexander 1991, Anyonge 1993, Kaufman and Smith 2002). However, most established allometric skeletal and cranial relationships for quadrupedal mammals require measurements that can be rare or difficult to obtain from the fossil record, such as particular tooth dimensions or overall skull length (Legendre and Roth 1988, Van Valkenburgh 1990). More often fossil assemblages yield isolated teeth and bone fragments; therefore, we first sought to establish a means to estimate body size within the family Canidae from a variety of skeletal elements common as fossil remains.

### *Allometric Relationships*

We measured 24 different features from the canid skeleton using modern osteological collections (Fig. 2.1). We measured easily identifiable features from the ends of limb bones, as well as foot and ankle bone dimensions, because these are elements of the skeleton that are commonly found in fragmented assemblages. We included length and mid shaft measurements of long bones, because these dimensions have physiological significance and have been shown to relate to mass in quadrupedal and bipedal animals (Biewener 1982, Jungers 1988, 1990, Van Valkenburgh 1990, Meachen and Samuels 2012) We also included skull and carnassial lengths, because isolated teeth are often found preserved and are the most taxonomically diagnostic fossils (Van Valkenburgh 1990). Modern samples were restricted to adults with a recorded body mass. We used digital calipers to record linear measurements in millimeters. Specimens came from the Museum of Southwestern Biology and the New Mexico Museum and Natural History and Science (Table S2.1).

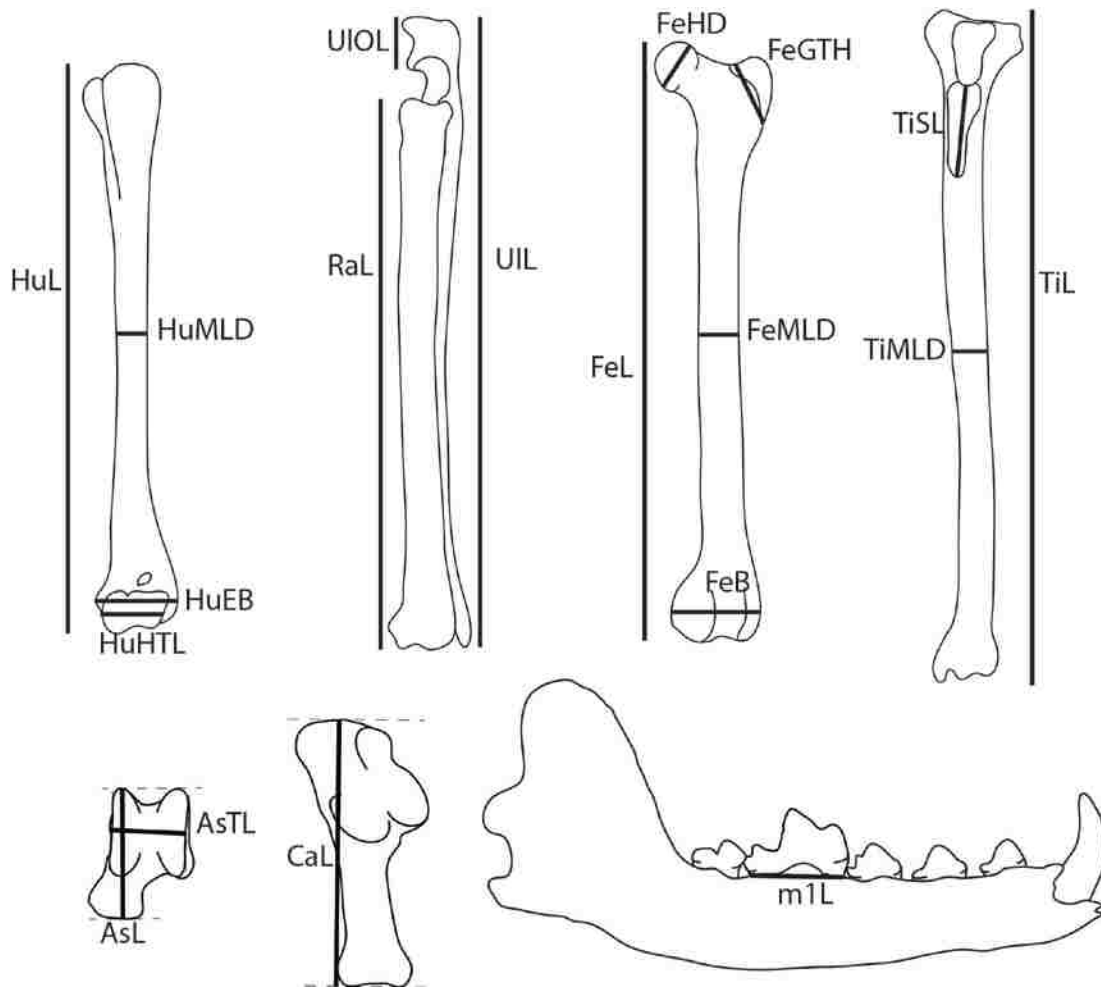


Figure 2.1. Skeletal measurements used in this study that are commonly found as fossils. Limb bones are shown to relative scale; foot bones are scaled relative to each other, but not to other elements depicted. The lower first molar length, m1L, is measured at the alveolar opening; although not depicted, the upper fourth premolar length, P4L, is obtained in the same fashion. Skull length is not depicted, but is measured as the largest dimension between the occipital condyles and the nasal bones.

We regressed the log-normalized data for body size and each body measurement separately across all species (Fig. S2.1-S2.5, Table 2.1). Male, female, and specimens of unknown sex were combined for each model, although an attempt was made to have a mix of sexes represented for each species. We did not produce sex-specific regressions; rather, we pooled males and females because fossil assemblages consist of a mix of



individuals of unknown sex. The percent standard error of the estimate (%SEE) and the mean absolute value of the percent prediction error (%PE) were also calculated for each body measurement; these values provide a better measure of the predictive ability of a relationship than the r-squared alone (Smith 1984) (Table 2.1).

Table 2.2. Body size regressions. The slope, intercept (Int.), and  $r^2$  were calculated from log normalized data. The percent standard error of the estimate (%SEE) and average percent prediction error (%PE) are given as in Smith, 1984 and Van Valkenburgh, 1990.

Abbreviation	Measurement	Slope	Int.	$r^2$	%SEE	%PE	N
<b>Astragalus</b>							
AsL	length	3.16	-0.36	0.98	17.0	12.0	21
AsTL	trochlea length	2.73	0.99	0.98	17.6	14.1	21
<b>Calcaneum</b>							
CaL	length	3.03	-0.87	0.98	16.8	11.1	21
<b>Femur</b>							
FeAPD	midshaft anteroposterior diameter	2.68	1.23	0.98	17.4	8.3	22
FeB	breadth of epicondyles	2.86	-0.12	0.98	14.3	9.2	23
FeGTH	height of greater trochanter	2.24	1.15	0.96	23.5	15.7	22
FeHD	head diameter	2.70	0.75	0.98	16.7	11.3	23
FeL	length	3.25	-3.17	0.98	17.0	10.6	22
FeMLD	midshaft mediolateral diameter	2.96	0.87	0.98	14.2	9.7	22
<b>Humerus</b>							
HuAPD	midshaft anteroposterior diameter	2.49	1.24	0.97	20.3	9.0	22
HuEB	breadth of epicondyles	2.50	0.37	0.98	15.4	10.6	24

Table 2.1 (cont.)

HuHTL	breadth of the trochlea and condyle	2.29	1.06	0.97	19.3	13.1	24
HuL	length	3.52	-3.67	0.98	14.3	9.6	22
HuMLD	midshaft mediolateral diameter	2.57	1.37	0.98	17.7	9.1	22
<b>Dentition</b>							
m1L	lower first molar length	2.93	0.27	0.96	22.9	12.4	26
P4L	upper fourth molar length	2.97	0.37	0.97	20.8	15.5	27
<b>Radius</b>							
RaL	length	3.19	-2.92	0.98	19.7	13.6	19
<b>Skull</b>							
SkL	length	3.58	-4.00	0.99	13.8	8.0	25
<b>Tibia</b>							
TiAPD	midshaft anteroposterior diameter	2.79	1.07	0.97	18.8	11.5	21
TiL	length	3.76	-4.37	0.98	17.4	11.0	21
TiMLD	midshaft mediolateral diameter	2.75	1.15	0.96	22.9	15.5	20
TiSL	tibial tuberosity length	2.54	0.39	0.96	23.6	16.5	20
<b>Ulna</b>							
UIL	length	3.18	-3.11	0.99	11.8	8.9	20
UIOL	length of olecranon process	2.58	0.69	0.96	22.8	14.0	24

### *Fossil Specimens*

Our suite of allometric relationships were applied to study the body size of canids across the Edward's Plateau. We selected caves from across the EP region that were

within the dispersal and home range area of our taxa of interest: wolves, coyotes, and foxes. Dispersal area and home range were derived from empirical estimates based on life mode and body size in prior studies (Sutherland et al. 2000, Tucker et al. 2014, Smith et al. 2016). Canids, in general, occupy large home ranges and have wide dispersal abilities; therefore, we were able to include most caves found on the EP. Specimens were housed at the Texas Memorial Museum, in Austin, TX (Table 2.2).

Table 2.3. List of sites used in this study. The name of the site, its age, and the minimum number of individuals used in the analyses. All collections came from the Texas Memorial Museum.

Locality	Time	<i>Canis dirus</i>	<i>C. lupus</i>	<i>C. latrans</i>	<i>Vulpes/Urocyon</i>	<i>C. l. familiaris</i>	<i>C. l. familiaris/latrans</i>	<i>Canis sp.</i>
Hall's Cave	Holocene	0	1	0	0	1	1	1
Bering Sinkhole	Holocene	0	5	1	0	3	0	0
Ranny Creek Cave	Holocene	0	0	2	0	3	2	0
W. Culp Site	Holocene	0	0	1	0	1	0	0
Boneyard Pit	Holocene	0	0	0	0	0	2	0
Cunningham Shelter	Holocene	0	0	0	0	0	1	0
Jess Cox Ranch	Holocene	0	0	1	0	0	0	2
August Foster Site	Holocene	0	0	1	0	0	0	0
Montell Shelter	Holocene	0	0	1	0	0	0	0
Schulze Cave	Holocene	0	0	4	2	1	0	1
Smith Rockshelter	Holocene	0	0	0	0	0	0	3
Hall's Cave	Pleistocene	0	0	0	3	0	0	0
Zesch Cave	Pleistocene	0	2	2	9	0	0	0
Friesenhahn cave	Pleistocene	7	0	4	2	0	0	4
Kincaid Shelter	Pleistocene	1	0	5	2	3	7	0
Laubach 3, East wall, south end	Pleistocene	2	0	1	1	0	0	0
Clamp Cave	Pleistocene	1	0	2	4	0	0	1
Levi Shelter	Pleistocene	1	0	2	0	0	0	2

We used digital calipers to obtain body measurements from every specimen identified as a canid, (N = 201). For each fossil, we calculated mass using the corresponding regression for the measurement that was taken; if more than one measurement could be measured from an element, we estimated the mass based on the allometry with the highest r-squared and lowest %SEE values. For example, if the proximal end of a femur was preserved, we estimated the mass using the head diameter (FeHD,  $r^2 = 0.98$ , %SEE = 16.7) rather than the height of the greater trochanter (FeGTH,  $r^2 = 0.96$ , %SEE = 23.5) (Table 2.1). We then calculated the minimum number of individuals (MNI) for each species at each site for each time period: Pleistocene or Holocene. MNI was based on the number and symmetry of bones. For example, if an assemblage consists of two left humeri from the same species, the MNI that could produce the assemblage is two individuals; however, if the two humeri are a right and a left, then based on body symmetry, the MNI is one individual. We also calculated MNImass by including mass as a distinguishing character in addition to symmetry. For example, a left and a right humerus would be counted as two individuals if they are from individuals of significantly different size. All statistical analyses employ MNImass.

We tabulated the mass of each unique individual in the collection, and then calculated the average mass for each species across the Edward's Plateau for each time period. To determine if a species' mass changed between the Pleistocene and the Holocene, we tested for significant differences across time using a Mann-Whitney U test. Broader structure of the canid community was assessed for each time period by comparing the overall distribution of canid masses and calculating the skew and kurtosis.

Finally, we compared species masses from the Pleistocene and Holocene fossils to the average mass for species of wolf, coyote, and fox present in the region today (*Canis lupus*, *Canis latrans*, *Vulpes velox*, *Vulpes macrotis*, and *Urocyon cinereoargenteus*). We preferentially used the regression for the lower first molar length (m1L) or the skull length to estimate mass from modern collections; most modern specimens lacked field weights, and skulls were the most common part of the animal curated. Occasionally, a specimen was broken or the m1 was missing; in such instances another measurement was obtained from the post cranial remains if they were available. All specimens were adults, and each species was represented by an evenly mixed sample of males and females. We lumped subspecies together within species, as subspecies level identifications were not possible for the fossil samples. To achieve adequate sample sizes from the modern, we sampled specimens from both Texas and New Mexico. Specimens came from the Museum of Southwestern Biology, and the New Mexico Museum of Natural History and Science; individual specimens are reported in Table S2.2. We tested whether the distribution of fossil and modern calculated masses for each species were different using a Mann-Whitney U test.

## **Results**

All of the body measurements we investigated provided robust estimates of body mass. Some measurements produced more reliable estimates than others, but all yielded regressions with  $r^2 \geq 0.96$ , %SEE  $\leq 23.6\%$ , and %PE  $\leq 16.5\%$  (Table 2.1, Fig. S2.1-S2.5); values that compare favorably with other paleostudies (Van Valkenburgh 1990). Indeed, our %SEE and %PE values are comparable to, or better than, those previously

reported for measurements such as skull and lower first molar length (Van Valkenburgh 1990) (Fig. S2.1). The best allometries generally came from measurements on larger elements. All of the limb bone lengths, for example, produced allometric relationships with  $r^2 \geq 0.98$  and  $\%SEE \leq 19.7\%$  (Fig. S2.2); most likely because error was proportionally very small relative to the magnitude of the measurement. Some smaller measurements, however, also produced high quality allometries, such as the lengths of the calcaneum ( $r^2 = 0.98$ ,  $\%SEE = 16.8$ ) and astragalus ( $r^2 = 0.98$ ,  $\%SEE = 17$ ) (Table 2.1 and Fig. S2.4), because they were particularly easy to measure. By contrast, measurements such as the tibial tuberosity length (TiSL), were more challenging to measure. Thus, TiSL provided the weakest allometry in our suite of measurements ( $r^2 = 0.96$ ,  $\%SEE = 23.6$ ; Table 2.1 and Fig. S2.5).

In addition to providing estimates of body size, our allometric relationships aided in distinguishing individuals within fossil assemblages. Thus, we were able to increase our sample size by including mass as a criterion for determining MNI (Table 2.3). Including mass permitted us to identify 29.7% more Pleistocene age individuals and 27.3% more Holocene age individuals. Paleoecological studies are widely plagued by the problem of small sample sizes; allometric relationships with body size can help mediate this problem.

Table 2.4. Comparison between the minimum number of individuals calculated using conventional methods (MNI) and when mass is included (MNI<sub>mass</sub>).

<b>Category</b>	<b>MNI</b>	<b>MNI<sub>mass</sub></b>	<b>% Increase</b>
Total	87	112	28.70%
Holocene	33	42	27.30%
Pleistocene MNI	54	70	29.60%
<b>Total</b>	<b>201</b>		

We find clear evidence of shifts in the body size distribution of the overall canid community over time. Although we found no difference in the overall community mean between the Pleistocene (15.5 +/- 4 kg) and the Holocene (11.1 +/- 2.2 kg), the standard deviation (Pleistocene  $\sigma = 16.8$ , Holocene  $\sigma = 7.1$ ) and the range (Pleistocene = 76.63 kg, Holocene = 34.6 kg) were different. We found that the shape of the overall distribution was different over time with fewer larger and smaller individuals in the Holocene. The skew was equivalent across time periods (1.7; Fig. 2.2); however, the kurtosis of the Holocene community (6.1; Fig. 2.2B) was higher than in the Pleistocene (5.4; Fig. 2.2A).



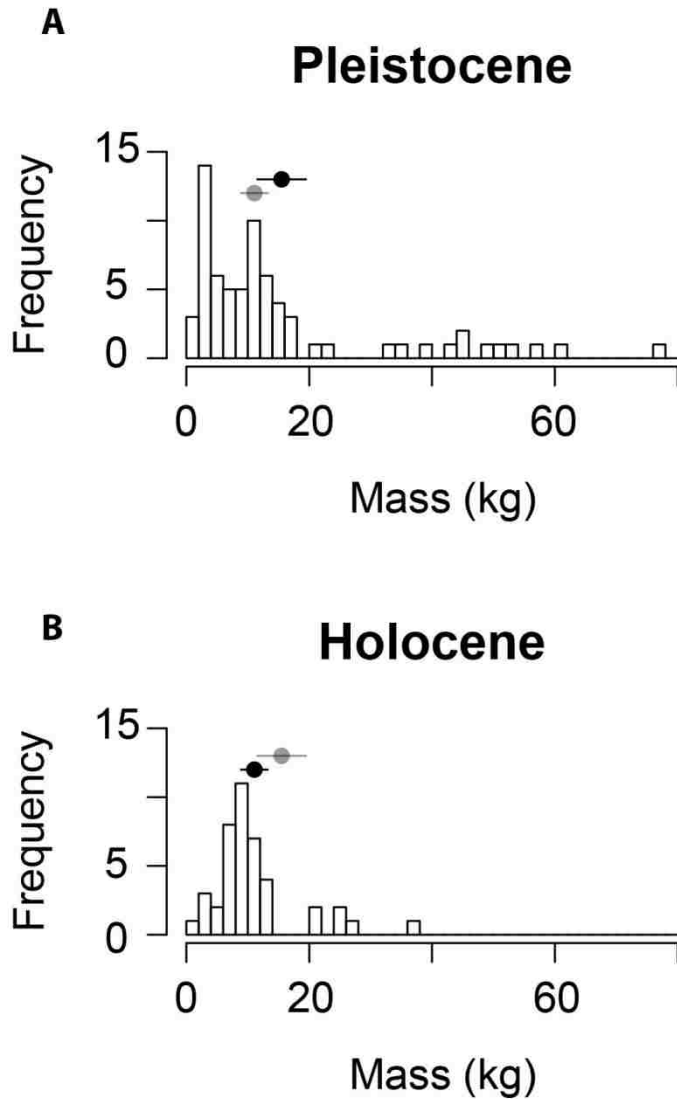


Figure 2.2. Total body size distribution of the A) Pleistocene canid community and B) Holocene canid community on the Edward's Plateau. This distribution includes all individuals identified as belonging to Canidae, including *Canis sp.*, *C. l. familiaris*, and possible hybrids. Mean mass is plotted for a given time period in black with 95% confidence intervals indicated; the gray point indicates the opposing time period for comparison.

The average body size of species did not change significantly over time. Average regional masses for coyote and fox were similar in the Pleistocene (coyote: N = 19,  $\bar{x} = 11.8$  kg, s.d = 3.3 kg; fox: N = 21,  $\bar{x} = 12.9$  kg, s.d = 1.2 kg) Holocene (coyote: N =

11,  $\bar{x} = 10.1$  kg, s.d. = 3.2 kg; fox: N = 2,  $\bar{x} = 3.9$  kg, s.d. = 1.9 kg) and modern (coyote: N = 58,  $\bar{x} = 11.8$  kg, s.d. = 2.4 kg; fox: N = 50,  $\bar{x} = 2.6$  kg, s.d. = 0.3 kg). Low sample sizes of wolves in the Pleistocene (N = 2, but see discussion) and fox in the Holocene (N = 2) cloud our ability to measure their size changes across the Pleistocene-Holocene boundary; however, the size of Pleistocene fox (N = 21,  $\bar{x} = 2.9$  kg, s.d. = 1.2 kg) is not significantly different from the mean size of modern fox (N = 50,  $\bar{x} = 2.6$  kg, s.d. = 0.3 kg) on the EP today (Fig. 2.3 and 2.4).

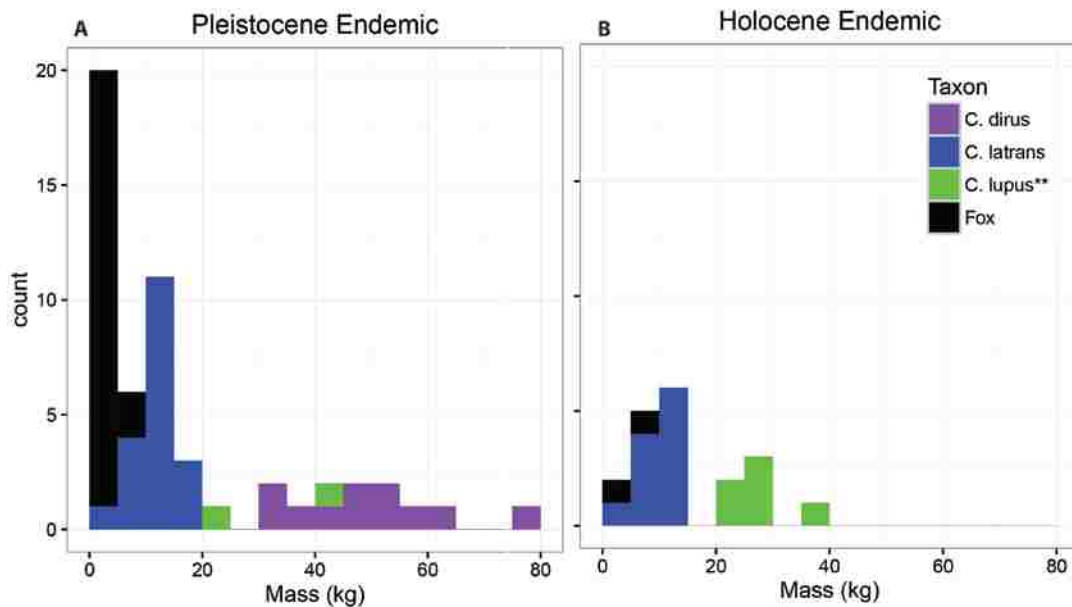


Figure 2.3. Body size distributions of endemic species for the A) Pleistocene and B) Holocene. Bins are stacked when multiple species are present. Fox are shown in black, coyote are shown in blue, wolves are shown in green, and dire wolves are shown in purple. \*\*The wolves from the Pleistocene sample are represented by two solitary specimens, and their size suggests that they may not be *Canis lupus*.

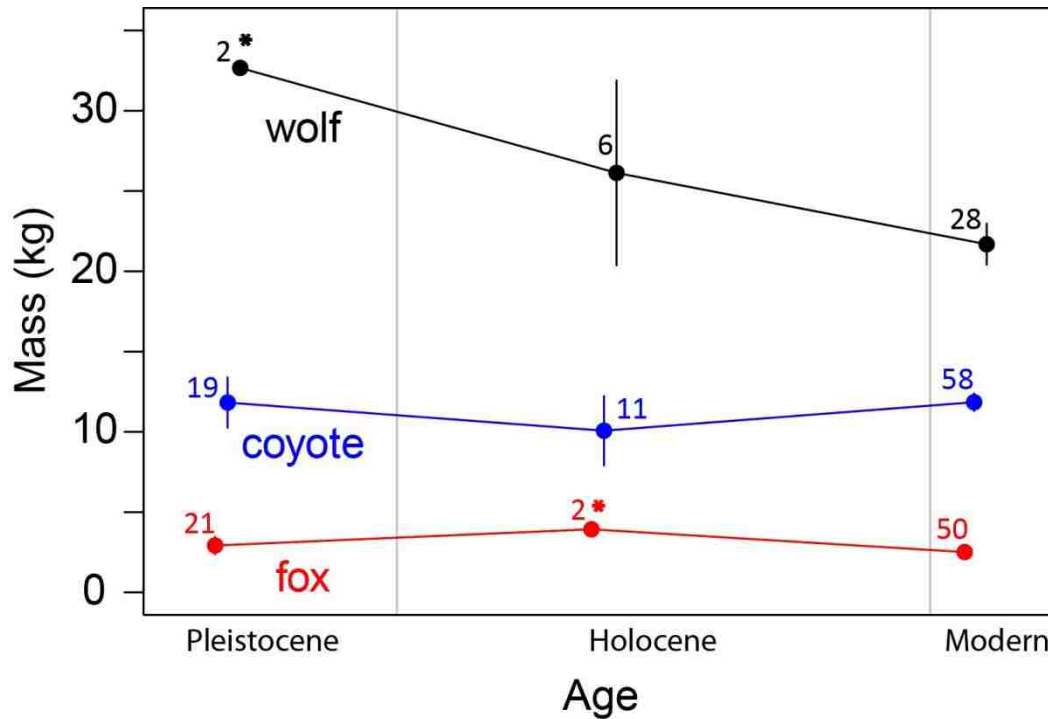


Figure 2.4. Mean body size of species over time with 95% confidence intervals. Fox are shown in red, coyote are shown in blue, and wolves are shown in black, with the sample size, N, indicated. The average of the three fox species used in this study are plotted; the species specific mean masses were *Urocyon cinereoargenteus*: 2.6 kg +/- 0.3 (N=14), *Vulpes velox*: 2.5kg +/- 0.4 (N=18), and *V. macrotis*: 2.2 +/- 0.3 (N=16). The \* indicates that not enough samples were present to produce meaningful error estimates on the size; these error bars have been omitted for figure clarity.

If we consider domesticated dogs and specimens that may be dog/coyote hybrids with our analyses of endemic canids, it is clear that medium body size canids are a dominant component of the Pleistocene and Holocene community (Fig. 2.5). Several specimens from the EP had been identified as *Canis lupus familiaris*, and still others were given ambiguous identification as *Canis sp.* or *Canis lupus familiaris/latrans*. The reason behind this ambiguity becomes clear when their calculated body sizes are plotted and compared, because there is no statistical difference in size between what have been classified as Pleistocene dogs (N = 3,  $\bar{x} = 11.2$  kg, s.d. = 12.7 kg), unknown *Canis* (N =

49,  $\bar{x} = 12.7$  kg, s.d. = 4.9 kg), and what might be hybridized individuals (N = 7,  $\bar{x} = 9.9$  kg, s.d. = 2.9 kg; Fig. 2.5A). This ambiguity remains in the Holocene record for dog (N = 6,  $\bar{x} = 8.6$  kg, s.d. = 1.7 kg), unknown *Canis* (N = 39,  $\bar{x} = 8.4$  kg, s.d. = 2.9 kg), and hybrids (N = 10,  $\bar{x} = 8.4$  kg, s.d. = 1.0 kg; Fig. 2.5B).

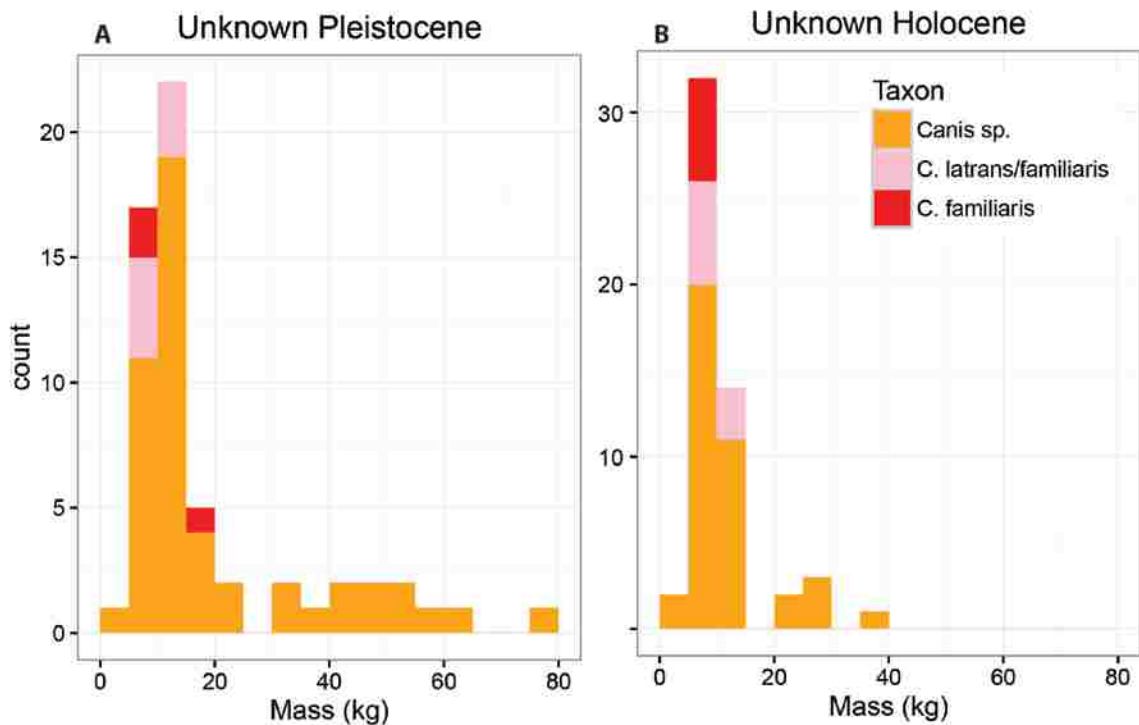


Figure 2.5. Body size distributions of *Canis sp.*, *C. l. familiaris*, and possible hybrids for the A) Pleistocene and B) Holocene. Bins are stacked when multiple species are present.

## Discussion

Not everything was bigger in Texas during the late Quaternary. Contrary to our expectations, species in the family Canidae did not cope with the major ecological changes occurring at the terminal Pleistocene on the Edward's Plateau through adaptive changes in body size (Fig. 2.3 – 2.5). Body mass of our study species remained similar following the extinction, even into the modern (Fig. 2.4). This is remarkable given the

considerable changes in ecological and community structure and organization that took place (Smith et al. 2016).

We expected to see a body size response in at least some species. Across modern environments, carnivore body size is influenced by prey size and availability, as well as interspecific interactions with other carnivores (Carbone et al. 1999, 2007, Meachen and Samuels 2012, Meachen et al. 2014). Canids would have lost several very large competitors on the EP as a result of the Pleistocene extinction and the prey base also changed dramatically, from a diverse megaherbivore community of browsers and grazers, to a Holocene community dominated by deer, pronghorn, and bison (Smith et al. 2016). The one possible exception we found in our study system was the wolf, which is smaller today on the EP than it was during the Holocene (Fig. 2.4). However, the primary response of wolves was immigration into the area following the Pleistocene extinction event, as they were exceptionally rare ( $N = 2$ , but see discussion below), if present at all, during the Pleistocene (Fig. 2.3A).

Coyotes remain the dominant species in this region. The consistency we find in their mean body size over time differs from that described at other localities during this time (Meachen and Samuels 2012, Meachen et al. 2014). Our results suggest that even a cosmopolitan species such as coyotes may respond differently to similar ecological changes (such as trophic downgrading and mesocarnivore release) across different landscapes. This has important conservation implications when considering the future degradation of ecosystems.

Although Canidae did not adapt body size to cope with the Pleistocene extinction on the Edward's Plateau, they exhibited other responses. Overall community structure

changed: the range of body sizes decreased, and, although the mean body size of the community was invariant, variation in body size across the community decreased substantially between the Pleistocene to the Holocene (Fig. 2.2). The overall canid community became one dominated by mesocarnivores after the Pleistocene extinction (Fig. 2.3 and Fig. 2.5). These changes resulted from the extinction of large carnivores, including the largest canid, the dire wolf; and, the movement of fox away from the EP (Fig. 2.3). Although only one canid species went extinct in North America, the overall structure of the community was different following the extinction, and even impacted very small members of the guild. Prior work suggests that species in the Canidae altered their geographic ranges to decrease interspecific overlap with other canids (Pardi and Smith 2016), and this behavior is observed in carnivore communities today (Koehler and Hornocker 1991). Rather than adapting body size in situ, EP canids adjusted their ranges to deal the ecological changes following the end Pleistocene extinction.

Geographic range change could have been a particularly effective survival strategy for fox species, because medium size canids made up a greater component of the canid community in the Holocene than in the Pleistocene (Fig. 2.3 and Fig. 2.5). Fox abundance dropped in the Holocene (Fig. 2.3B), a pattern that runs counter to that expected from preservation bias. We would expect to find fewer small individuals further back in time, and perhaps fewer individuals as a result of less sampling effort; however, there were more fox collectively found in the Pleistocene sample even though we analyzed a greater number of faunas from Holocene sites (Table 2.2). Prior work supports a northern shift in the range of fox following the end Pleistocene extinction; ecological niche modeling suggests suitable fox habitat shifted north (Pardi and Smith 2016). Furthermore, fox

actively avoid confrontations with larger mesocarnivores in modern systems (Palomares and Caro 1999, Randa and Yunger 2006). Shifting their range out of the EP may have been a more viable option than adapting *in situ*.

An informative comparison can be made between the Edward's Plateau and Rancho La Brea (RLB) Canidae communities. Although coyotes and dire wolves were abundant during the Pleistocene at both of these sites during the Pleistocene, and gray wolves were not a significant part of either community until after the extinction, there are important differences between the responses of these canid communities through time. Our findings are at odds with earlier work conducted on coyote body size at RLB (Meachen and Samuels 2012). There, RLB coyotes were larger in the Pleistocene than in the Holocene, and they got smaller following the Pleistocene extinction. This suggests there were important differences between carnivore communities found within the same time periods at these respective sites.

Differences between the Edward's Plateau and Rancho La Brea could be due to more intense competition within the carnivore guild at RLB. The frequency of carnivore tooth breakage is three times higher at RLB than found among modern animals (Van Valkenburgh and Hertel 1993). We have not conducted a similar quantitative analysis of tooth breakage on the EP carnivores; but, during our inspection and measurement of fossils for our body size analysis, we found nothing remarkable about the breakage or wear of these fossils. High incidence of tooth breakage among carnivores may indicate animals are engaging in higher risk hunting behaviors or more completely processing bones from kills and carcasses (Kruuk 1972). Indeed, stable isotope analyses at RLB support the hypothesis that competition was high, as there is significant overlap in the

isotopic dietary niche space of dire wolves, saber-toothed cats, and American lion (Coltrain et al. 2004). Ongoing stable isotope analyses of the canid community on the EP may shed light on the shared use of resources through time.

Our study reveals that coyotes on the Edward's Plateau were of modest body sizes throughout the late Quaternary; in contrast, Pleistocene coyotes at Rancho La Brea were quite large. Meachen & Samuels indicated the average femur head diameter (FeHD) for the Pleistocene coyotes at RLB were 17.77 mm ( $\sigma = 1.14$ ,  $N = 31 - 58$ ). Using our allometric relationship for FeHD ( $r^2 = 0.98$ , %SEE = 16.7; Table 2.1) suggests a mass of 13.4 kg with a 95% confidence interval of +/- 2.2 kg for these animals. By comparison, the average FeHD of Pleistocene coyotes on the EP was 15.4 mm ( $\sigma = 0.99$ ,  $N = 3$ ), or a mass of 9.1 kg +/- 1.5 kg; smaller than the RLB coyotes. Modern studies on body size variation in coyotes suggests they respond to changes in biotic interactions rather than climate (Gittleman 1985, Carbone et al. 1999, Meachen and Samuels 2012). Greater interspecific competition at RLB could have driven the differential responses in body size between these sites. Indeed, the richness of the carnivore community at RLB has been shown to be anomalously high (McHorse et al. 2012), and is consistent with carcass domination of the mired prey that would be trapped in the tar pits. In contrast, the EP was an open grassland environment (Toomey et al. 1993) that lacked such a specific attraction for carnivores.

Our results are likely robust for Pleistocene fox, coyote, and dire wolf average masses, as well as our calculations for Holocene coyotes on the Edward's Plateau. We had the power to detect intraspecific differences between populations of larger coyotes at Rancho La Brea and the smaller coyotes present on the Edward's Plateau. However, small



sample sizes hampered our interpretation of Pleistocene gray wolf and Holocene fox body size; these species were simply not abundant at these times on the EP (Fig 3). This may be a real ecological signal, and we suggest that gray wolves may have been competitively excluded from the EP during the Pleistocene by larger competitors (Fig. 2.3A). The Pleistocene body size distribution of dire wolves (Fig. 2.3A) and the Holocene distribution of gray wolves (Fig. 2.3B) indicate that although dire wolves were on average larger than gray wolves, there is overlap in the relative distributions of their masses. This is consistent with other estimates of dire wolf body size, and it has been suggested elsewhere that a typical dire wolf was about the size of a large arctic wolf (Anyonge and Roman 2006) (Fig. 2.3). As a consequence of this size overlap, if gray wolves and dire wolves had spatially and temporally coexisted, they would have experienced intense competition. In addition to their somewhat larger size, dire wolves were endemic to the Americas and had coevolved with North American ecological communities for a longer time than gray wolves (Dundas 1999). Both of these factors may have conferred an advantage upon dire wolves over gray wolves. In contrast, there is no body size overlap between the largest coyotes and the smallest dire wolves (Fig. 2.3A), which have permitted their spatial and temporal co-existence in the Pleistocene.

In addition to characterizing the responses of the canid community to the Pleistocene extinction, our mass calculations also helped resolve some questionable taxonomic identifications across the Edward's Plateau. Our body size estimates cast doubt on the taxonomic identification of at least one of the two Pleistocene age specimens identified to be *Canis lupus* (Fig. 2.2A). The two isolated specimens from Zesch Cave were labeled in the Texas Memorial Museum collections as *Canis lupus/rufus* and *Canis*

*rufus* (Lundelius Jr 1967, Graham et al. 1987, Sagebiel 1998). The specimens were an isolated right m1 from an animal we estimated at a mass of 21.9 kg, and a right humerus from an animal estimated to be 43.4 kg. Current taxonomy considers the red wolf to be a subspecies of *Canis lupus* (Wilson and Reeder 2005), and the original description places the mass of modern *C. l. rufus* around 22.9 kg (Paradiso and Nowak 1972). This is quite similar to the mass we estimated for smaller Zesch Cave specimen, but falls within the overlap between coyotes and wolves (Fig. 2A). Therefore, it is possible that this specimen is a "lone wolf", but lacking other diagnostic characters, it is difficult to say for certain. The larger specimen, however, is closer in size to our calculated estimates for dire wolf, and is similar to published estimates for the western dire wolf at 42kg (Anyonge and Roman 2006). We deem it unlikely that this larger specimen is a gray wolf, thus reaffirming our assertion that gray wolves were not a significant member of the Pleistocene canid community on the EP until after the extinction.

## **Conclusions**

Our study finds no evidence for an individual species response via body size to the Pleistocene extinction on the Edward's Plateau, Texas. Wolves get somewhat smaller in the modern, but none of the species we analyzed significantly changed size between the Pleistocene and the Holocene. Although invariance in the body size of our coyote population is in conflict with changes identified at other localities, specifically at Rancho La Brea (Meachen and Samuels 2012), we suggest that this distinction arises from differences in the degree of interspecific competition between geographic regions. Not

everything was bigger in Texas; rather, coyotes were bigger in California during the last ice age, because interspecific competition was comparatively greater there in the past.

The Edward's Plateau canid community responded to the ecological upheaval following the Pleistocene extinction (Smith et al. 2016) through compositional changes. The mean size of canids remained the same through time; however, the range of sizes, the variance in sizes, and the shape of the overall body size distribution of the community changed in the Holocene. The dominance of the mesocarnivore body plan remained following the extinction, but the relative dominance of mesocarnivores increased (Fig. 2.3 and 2.5).

Mass imposes many important constraints on organisms (Gittleman and Harvey 1982, Gittleman 1985, Carbone et al. 1999, 2007, Brown et al. 2004); it has great utility as a character for making inferences about the ecology and physiology of fossilized species. Here, we presented a means for measuring the masses of prehistoric Canidae from disarticulated fossil assemblages. Allometric relationships between skeletal remains that are commonly found as fossils and the masses of closely related species allow for both the calculation of the mass of individuals, as well as the body size profile of communities of organisms. We also find that intraspecific body size differences between populations are detectable. Moving forward, suites of familial level body size allometries may allow for the study of body size in other closely related groups of species from fragmentary material, once those allometries are established. This technique may also help to increase the sample size of represented individuals in statistical analyses, a problem that has long plagued paleocological research.

## **Acknowledgements**

We would like to acknowledge the helpful folks at the Texas Memorial Museum, (especially J. Chris Sagebiel, Matthew Brown, and Ernest Lundelius Jr.), the Museum of Southwestern Biology, and the New Mexico Museum of Natural History and Science.

## **Biosketch**

The authors are paleoecologists in the department of Biology at the University of New Mexico. M.I. Pardi has a background in the geological and biological sciences, and was a fellow in the Program in Interdisciplinary Biological and Biomedical Sciences during her doctoral program at UNM. F.A. Smith is an expert on body size and its ecological implications, and has led several working groups investigating life and body size over space and time. Both share an interest in how mammal communities have responded to late Quaternary environmental change.

## Chapter 3

### **Climate and culturally mediated changes to the human niche altered interspecific interactions with endemic canids**

Melissa I. Pardi<sup>1</sup> and Felisa A. Smith

*Department of Biology, The University of New Mexico, Albuquerque, New Mexico, USA*

#### Abstract:

Today, humans are found in virtually all habitats on Earth; but, earlier in their evolutionary history their distributions were constrained by abiotic conditions. We characterized the climatic niche of humans in North America from 10,000 yr B.P., as well as their relationship with the native canid guild. We find Holocene human distributions were well described with climatic niche models, and moreover, that humans likely impacted the realized niche and distribution of canid species. However, the climatic variables important in the human niche changed over the Holocene reflecting cultural and technological adaptations. In turn, these changes are reflected in the differing relationships between humans and canids in the early – middle versus the late Holocene. Our results suggest that the human niche is variable, yet predictable, and has shaped our interactions with endemic species for thousands of years.

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<sup>1</sup> Correspondence to: mpardi@unm.edu

Today, humans are ubiquitous across the globe. Our geographic distribution ranges from high elevation settlements in Tibet (>4,700 m), to below sea level in Death Valley (-50 m), and from harsh and inhospitable deserts such as the Sahara (40 C in the summer), to the subarctic city of Oymyakon, Russia (-50 C in the winter). However, humans are animals with physiological limitations, and earlier patterns of distribution and settlement were mediated by climate. This includes dispersal throughout Europe in the middle to late Pleistocene (Anikovich et al. 2007, Parfitt et al. 2010) and the timing and route of entry into the Americas (Hamilton and Buchanan 2007, Goebel et al. 2008). Insight into what controlled early patterns of human dispersal over novel landscapes gains us understanding of the broader ecological implications when humans encountered native species.

The concept of a niche is foundational to ecology and biogeography. Although broadly defined as the n-dimensional hypervolume permitting species persistence (Hutchinson 1957), typically, it is delineated at least partially by temperature and often includes important foraging axes (Elton 2001). Study of the human niche is encountering a paradigm shift, with a recent push for a synthesis of human evolutionary biology and ethnographic concepts (Banks et al. 2006, Fuentes 2016). Niche construction theory posits behaviors of past and present organisms impact the environment and provide feedbacks on natural selection for other organisms, including other species (Odling-Smee et al. 1996, Laland et al. 2003, Laland and O'Brien 2010, Broughton et al. 2010, Fuentes 2016); in this light, humans may be the ultimate niche constructors. Investigating the entry of humans – a novel predator – into the Americas at the terminal Pleistocene thus provides a unique opportunity to characterize their influence on ecological communities.

Here, by modeling changes in the human and canid niche throughout the Holocene, we address: 1) Did the climatic niche of humans change as they settled North America?, and 2) How did the introduction of a novel predator (humans) impact the niche of endemic carnivores in the Americas?

We characterized the human climatic niche over the past 10,000 years by constructing abiotic species distribution models using 1,000 year intervals (tables S3.1, S3.2 (“See the supplementary materials.” in press); Figs. 3.1, 3.2). Maps of the predicted distribution highlight the importance of abiotic factors in defining the niche of humans and their geographic distribution. The percentage of human sites predicted by species distribution models was high (> 80% predicted) and consistent over time when using a likelihood threshold of 0.2 (Fig. 3.1 and 3.2, fig. S3.1).

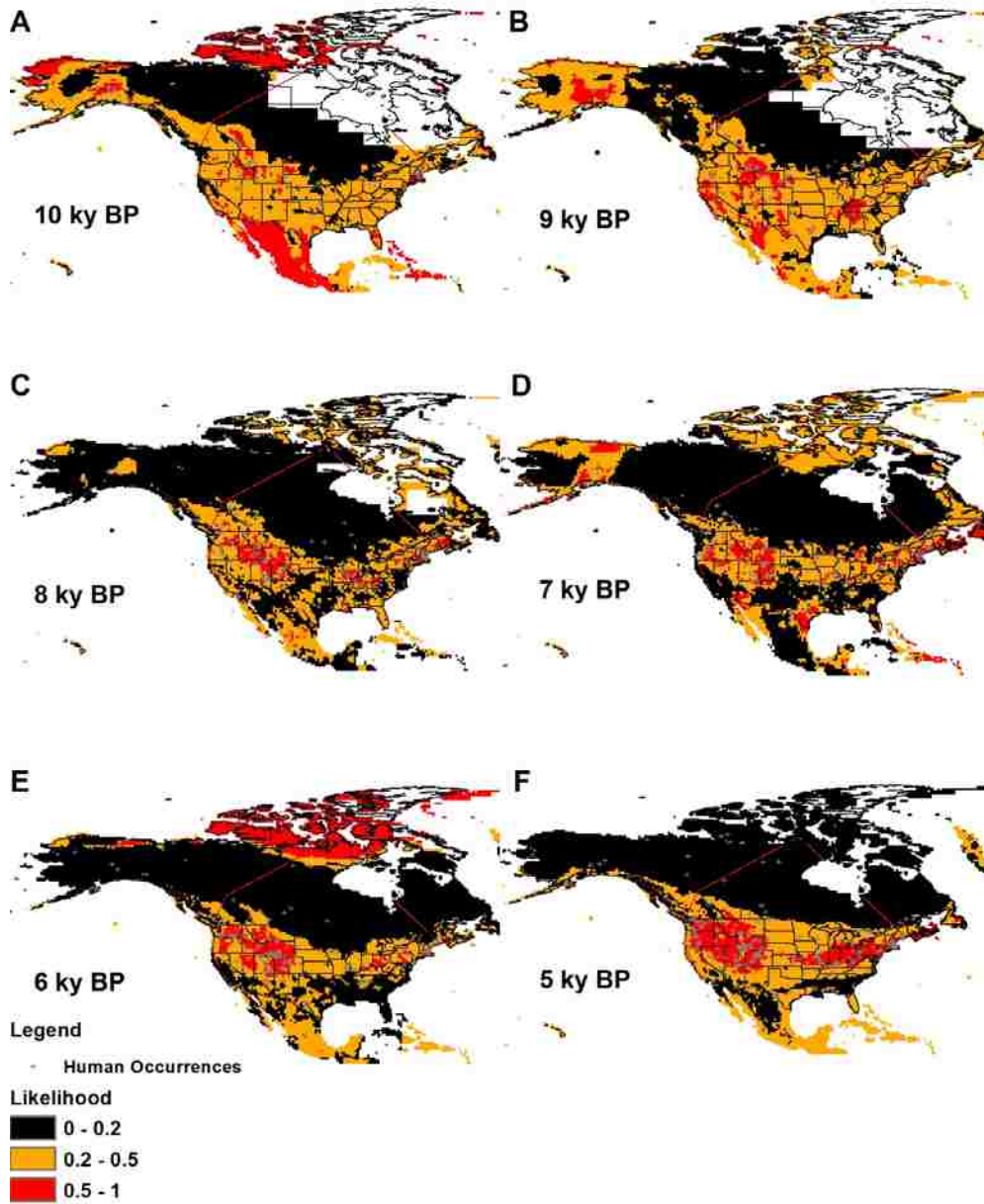


Figure 3.1. The average likelihood of occurrence from 100 bootstrapped model replicates for A) 10 kyr B.P., B) 9 kyr B.P., C) 8 kyr B.P., D) 7 kyr B.P., E) 6 kyr B.P., and F) 5 kyr B.P. Probable geographic ranges are at 0.2 (orange) and 0.5 (red) thresholds. Gray crosses indicate known occurrences (“See the supplementary materials.” in press). The red polygon demarks the research area used in analyses with endemic Canids.



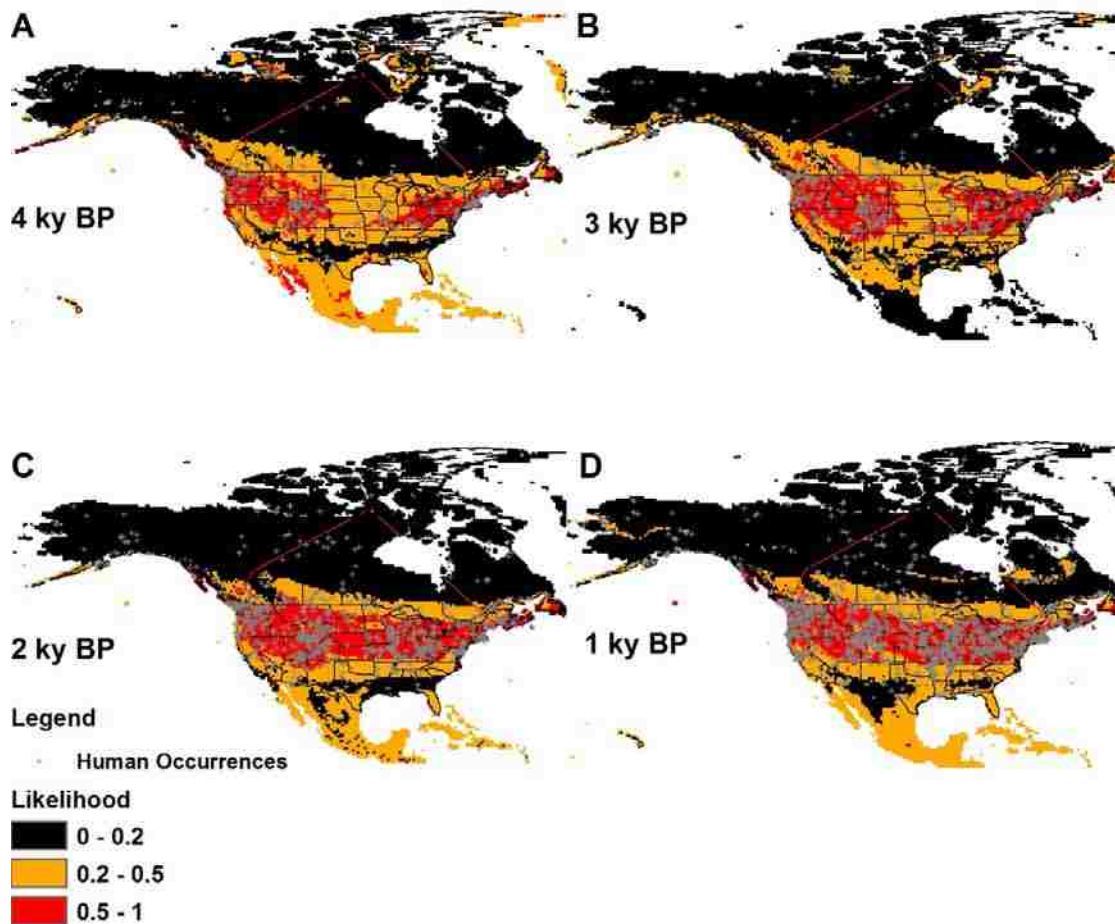


Figure 3.2. The average likelihood of occurrence from 100 bootstrapped model replicates for A) 4 kyr B.P., B) 3 kyr B.P., C) 2 kyr B.P., D) 1 kyr B.P. Probable geographic ranges are given at 0.2 (orange) and 0.5 (red) thresholds. Gray crosses indicate known occurrences (“See the supplementary materials.” in press).

We find that specific climate variables that constrained the human niche in North America changed through time (Fig. 3.3, fig. S3.2, and table S3.3). Annual temperature and precipitation variables were most important at the very beginning of the Holocene (10,000 – 9,000 yr B.P., Fig. 3.3 and table S3.3). Between 8,000 – 6,000 yr B.P., winter temperature variables contributed less than spring temperature variables (Fig. 3.3); but, winter temperature variables, especially mean maximum temperature (table S3.3),

became increasingly important beginning around 5,000 yr B.P through the end of the Holocene (Fig. 3.3).

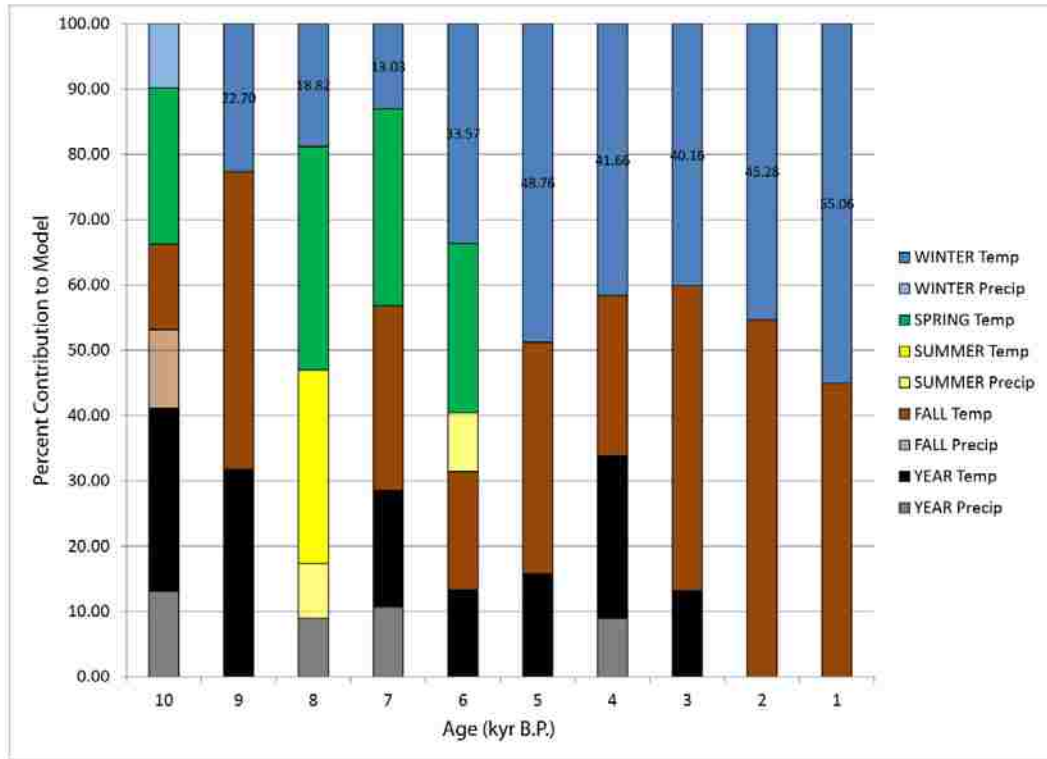


Figure 3.3. Percent contribution of seasonal variables used in each model. The variables selected for use in the final models were those that contributed to 50% of the preliminary models. Values shown are averages from 100 bootstrapped models.

We then investigated early – middle Holocene (10,000 – 5,000 year B.P.) and late Holocene (4,000 – 1,000 year B.P.) interactions between humans and a guild of cosmopolitan carnivores: wolves, coyotes, and fox (*Canis lupus*, *C. latrans*, and *Vulpes vulpes*). Canids exhibit diverse life history traits and share a unique historical relationship with humans (Palomares and Caro 1999, Berger and Gese 2007, Atwood and Gese 2008, Merkle et al. 2009); if canids and humans competed, we should observe negative

relationships and contracted niches where human occupancy was high. Alternatively, if humans and canids positively associated, we expected a positive or neutral (non-significant) relationship between the canid niche and human likelihood.

The relationship between canids and humans was investigated by plotting modeled observed/expected likelihoods (Obs/Exp) for these endemic species (“See the supplementary materials.” in press, Pardi and Smith 2016), against the observed likelihood of human occurrence (Figs. 4, 5). A climatic niche where Obs>Exp is considered to be expanded and contracted if Obs<Exp. We note many paleoecological studies focus on the predator-prey relationship between humans and herbivores (Lyons et al. 2004); we take the unique perspective of humans as a novel carnivore competitor.

We find interactions between human occupancy and the likelihood of carnivores occupying suitable abiotic niche space. Moreover, this changes over the Holocene. We found that the relationship between humans and wolves underwent changes over the course of the Holocene. In the early – middle Holocene (10,000 – 5,000 yr B.P.) we found that the wolf niche was contracted (Obs/Exp likelihood < 1), yet Obs/Exp increased with moderately high human likelihoods of occurrence (Fig. 3.4A). However, at higher human likelihoods (Obs > 0.4), we found that the relationship was somewhat negative. This differs from the relationship with humans in the late Holocene (4,000 – 1,000 yr B.P.), where the Obs/Exp likelihood of wolves exhibited a negative relationship with human likelihood across all latitudinal bands (Fig. 3.5A). The late Holocene wolf niche was expanded (Obs/Exp > 1) at longitudes east of 100W, but the niche was contracted (Obs/Exp < 1) in the west.

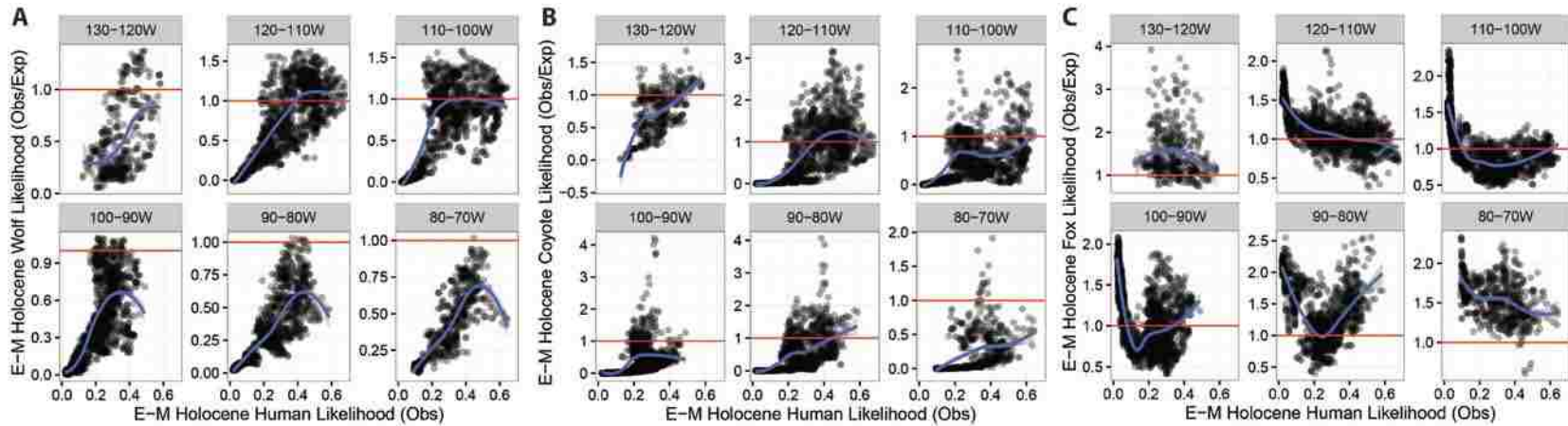


Figure 3.4. The ratio of the observed to the expected for A) wolf, B) coyote, and C) fox (Obs/Exp) as a function of mean human likelihood during the early – middle Holocene. Obs/Exp provides a measure of niche change since the Pleistocene: no change occurs where Obs/Exp = 1, niche expansion results in Obs/Exp > 1, and niche contraction results in Obs/Exp < 1. LOWESS lines are shown in blue, and where Obs/Exp = 1 is shown by the red vertical line.

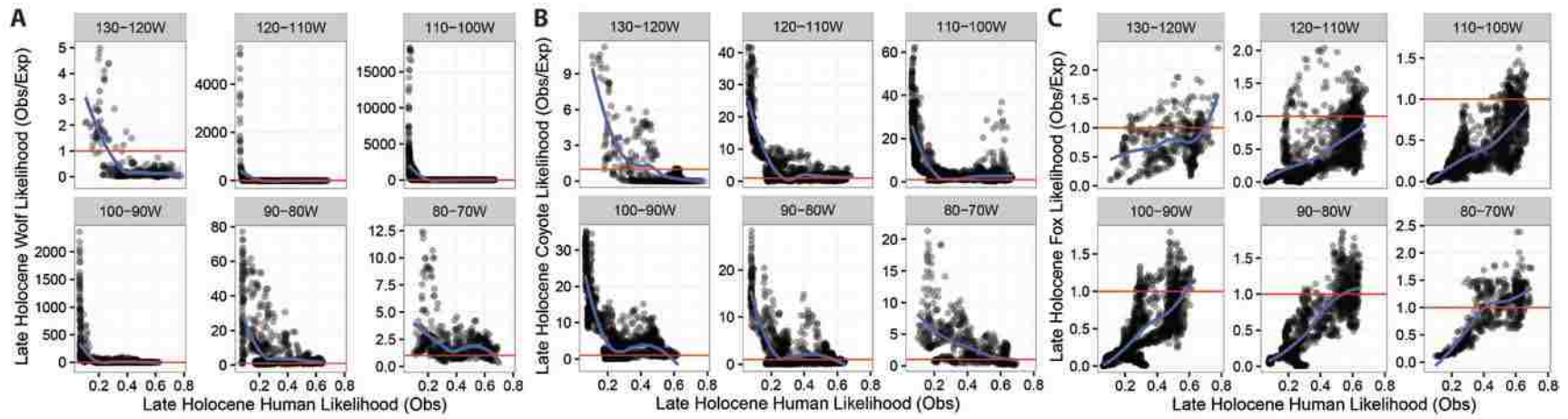


Figure 3.5. The ratio of the observed to the expected for A) wolf, B) coyote, and C) fox (Obs/Exp) as a function of mean human likelihood during the late Holocene. Obs/Exp provides a measure of niche change since the Pleistocene: no change occurs where Obs/Exp = 1, niche expansion results in Obs/Exp > 1, and niche contraction results in Obs/Exp < 1. LOWESS lines are shown in blue, and where Obs/Exp = 1 is shown by the red vertical line.

The relationship between coyotes and humans mirrored that of wolves. The early – middle Holocene coyote niche was for the most part contracted, although the relationship between early – middle Holocene coyotes and human likelihood was predominantly positive (Fig. 3.4B). Similarly with wolves, this relationship reverses in the late Holocene. Although the late Holocene coyote niche was expanded, Obs/Exp likelihoods decreased with greater human likelihood (Fig. 3.5B).

The smallest canid in our study, fox, responded differently to the presence of humans. Although fox had an expanded niche during the early – middle Holocene across most latitudes, their relationship with humans was generally negative (Fig. 3.4C). There is an exception in the west (between 100 – 80W), where the relationship between fox and humans was positive at human likelihoods over 0.2. The relationship between fox and humans changes greatly in the late Holocene; although the fox niche became contracted during this time, the relationship with humans was positive across all longitudinal bands (Fig. 3.5C).

Adaptations in technology and culture appear to have followed mid-Holocene climate change, and coincide with changes observed in the human climatic niche. Winter temperature values contributed largely to defining the human niche after 6,000 yr B.P., a shift that temporally coincided with increased human population density (fig. S3.1) (Peros et al. 2010). Following the mid-Holocene altithermal, between 7,000 – 6,500 yr B.P. (fig. S3.1), climate stabilized and became relatively more moist, altering eastern North American hydrogeologic patterns (Zeder and Smith 2009, Marlon et al. 2013). Meandering streams and flood plains preceded the domestication of crop plants (Zeder and Smith 2009) and the establishment of long term subsistence economies (fig. S3.1)

(Smith 2009). Foraging is thought to have intensified in the east and southwest at this time, and humans made a switch to using higher-cost, lower-rank resources (Meltzer 1999, Broughton et al. 2010). Early domestication, between 5,000 – 4,000 yr B.P. (fig. S3.1), preceded the first crop complex at 3,800 yr B.P. (Smith and Yarnell 2009) (fig. S3.1).

Humans in the late Holocene were ecologically distinct from humans in the early – middle Holocene. Winter temperatures, particularly the maximum mean temperature (table S3.3), may have placed constraints on agrarian cultures that exhibited intensive niche construction activities, such as the establishment of sedentary settlements and the cultivation of domesticated plants (Charnov et al. 1976, Odling-Smee et al. 1996, Laland et al. 2003). By comparison, hunter-gatherers that were on the landscape prior to 6,000 yr B.P. could have been constrained by a different suite of seasonal variables, such as spring and summer temperatures (Fig. 3.3, table S3.3), because their lifestyle relied on tracking seasonal resources across landscapes (Ames and Ames 1985, Lieberman et al. 1993).

Interactions between humans and canids varied across the guild, and there are a variety of reasons why canid species might exhibit differing responses to human occupation. Humans, wolves, and coyotes may have shared more similar requirements than with foxes (Gittleman 1985) following the end Pleistocene. In particular, hunter-gatherers and wolves exhibited overlap in their target prey species (Olsen 1985). Hunter-gatherers would have also produced refuse and scavenge as a byproduct of their activities, an abundant new resource for opportunistic species such as coyotes. Similarly, coyotes that are found in urban setting are flexible in their diets, exploiting human resources when available (Newsome et al. 2015). Our study suggests coyotes may have exhibited this

behavior before sedentary cultures emerged, as an initial response to human occupation. If wolves and coyotes were drawn to areas of human occupation in the early – middle Holocene, fox may have been competitively excluded, as fox avoid areas frequented by larger carnivores (Randa and Yunger 2006).

Changes in the human niche through the Holocene influenced interactions with endemic canids; the relationships between canids and humans appear to flip in the late Holocene once humans become more abundant and constrained by winter temperatures. Human densities were increasing in the late Holocene (Peros et al. 2010), a change which may not have been conducive to human/wolf/coyote coexistence. Indeed, we find that while the relationship between wolves and humans was largely positive in the early – middle Holocene, it was negative where human likelihood was greater than 0.4 (Fig. 3.4A). Interestingly, these changes seem to have promoted coexistence between humans and fox. Although fox undergo a niche contraction in the late Holocene, they share a positive relationship with people. If larger canids were being excluded at high human densities and permanent settlement in the late Holocene, then fox may have experienced trophic release and refuge in these areas.

The human niche in North America was dynamic over the Holocene, with humans seemingly responding to changes in climate through cultural and technological adaptations. We are not the first to suggest that climate appears to precede cultural innovations (Anderson 2001, Richerson et al. 2001, Anderson et al. 2007). However, our study provides several new insights: 1) past occurrences of humans in North America can be predicted using climate, 2) climate variables constraining the human niche changed through time and was coincident with important climate change events, and 3) changes in



the niche altered interactions between humans and endemic carnivores. Our results suggest that even before the establishment of agriculture in North America, the activities of humans had noticeable influences on the distribution and niche of other species other than prey. While niche construction is not unique to humans, permanent settlement and agriculture has taken this phenomenon to its extreme. Shifts in the niche changed how humans fit into the natural world, and impacted the niche of other species.

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## APPENDICES

## APPENDIX TO CHAPTER 1

Pardi, M. I. and Smith, F. A. 2016. Biotic responses of canids to the terminal Pleistocene megafauna extinction. - *Ecography* 39: 141–151.

Supplementary material (Appendix ECOG-01596 at  
<[www.ecography.org/appendix/ecog-01596](http://www.ecography.org/appendix/ecog-01596)>). Appendix 1–2.

## APPENDIX TO CHAPTER 2

Table S2.1. Specimens used in deriving allometric relationships.

<b>Institution</b>	<b>Specimen#</b>	<b>ScientificName</b>	<b>Sex</b>
MSB	142766	Canis lupus	male
MSB	70048	Canis lupus baileyi	female
MSB	83337	Canis lupus baileyi	male
MSB	142634	Canis lupus baileyi	female
MSB	142639	Canis lupus baileyi	female
MSB	142640	Canis lupus baileyi	male
MSB	140042	Vulpes velox velox	male
MSB	142647	Vulpes velox velox	female
MSB	142650	Vulpes velox velox	female
MSB	142653	Vulpes velox velox	male
MSB	142654	Vulpes velox velox	female
MSB	142655	Vulpes velox velox	male
MSB	142656	Vulpes velox velox	female
MSB	142657	Vulpes velox velox	male
MSB	142666	Vulpes velox velox	male
MSB	231176	Canis latrans	male
MSB	198472	Canis latrans	male
MSB	92553	Canis latrans	male
MSB	231529	Canis latrans	not recorded
MSB	269006	Canis latrans	male
MSB	265829	Canis latrans	male
MSB	140706	Vulpes macrotis neomexicana	male
MSB	144542	Vulpes vulpes	female
MSB	198741	Vulpes vulpes	male
MSB	142839	Canis latrans	female
NMMNH	5824	Canis latrans	female
NMMNH	5821	Vulpes macrotis	male
NMMNH	5822	Urocyon cinereoargenteus	female

Table S2.2. Individual specimens used for estimating mass. Hol = Holocene, Plei = Pleistocene, Mod = Modern. Measurement abbreviations correspond to those from Table 2.1 in the main text. The mass is the value calculated from the allometric relationship for the indicated measurement.

Museum ID	spec. #	Genus	species	Time	Measurement	Mass (g)
TMM 43483	4	Canis	latrans	Hol	HuEB	9476.51
TMM 43133	214	Canis	familiaris	Hol	m1	10813.36
TMM 43133	216	Canis	familiaris	Hol	m1	9145.87
TMM 43133	231	Canis	familiaris	Hol	P4	6996.20
TMM 43133	1413	Canis	latrans	Hol	m1	10426.85
TMM 43133	232	Canis	lupus	Hol	SKL	25125.40
TMM 43133	233	Canis	lupus	Hol	m1	36540.91
TMM 43133	234	Canis	lupus	Hol	m1	25716.84
TMM 43133	235	Canis	lupus	Hol	m1	21731.11
TMM 43133	236	Canis	lupus	Hol	m1	21448.52
TMM 43133	219	Canis	familiaris	Hol	P4	7689.96
TMM 43133	220	Canis	familiaris	Hol	P4	8507.36
TMM 43445	35	Canis	familiaris/latrans	Hol	P4	9194.55
TMM 43445	36	Canis	familiaris/latrans	Hol	P4	9044.31
TMM 43201	2	Canis	familiaris/latrans	Hol	m1	7866.85
TMM 41229-	9951	Canis	familiaris	Hol	m1	11410.61
TMM 41229-	6561	Canis	familiaris/latrans	Hol	CaL	7531.88
TMM 41229-	12042	Canis	lupus	Hol	m1	26209.95
TMM 41229-	721	Canis	sp.	Hol	RaL	8654.04
TMM 41229-	none	carnivore		Hol	m1	2739.89
TMM 220	36	Canis	latrans	Hol	m1	11512.22
TMM 220	22	Canis	sp.	Hol	HuHTL	3348.21
TMM 220	27	Canis	sp.	Hol	FeAPD	6220.53
TMM 220	49	Canis	sp.	Hol	HuAPD	6076.70
TMM 220	53	Canis	sp.	Hol	UIL	5791.33
TMM 804	107	Canis	latrans	Hol	m1	8672.48
TMM 43202	70	Canis	familiaris	Hol	m1	7099.75
TMM 43202	71	Canis	familiaris	Hol	m1	8957.40
TMM 43202	81	Canis	familiaris	Hol	RaL	5100.55
TMM 43202	5	Canis	familiaris/latrans	Hol	FeB	7405.96
TMM 43202	73	Canis	familiaris/latrans	Hol	P4	9637.87
TMM 43202	43	Canis	latrans	Hol	m1	13034.61
TMM 43202	80	Canis	latrans	Hol	UIOL	9258.31
TMM 43202	7	Canis	familiaris	Hol	HuAPD	10109.50
TMM 43202	77	Canis	familiaris	Hol	P4	7279.99

TMM 43202	79	Canis	familiaris	Hol	UIOL	5568.05
TMM 43202	84	Canis	familiaris	Hol	HuEB	8565.74
TMM 43202	6	Canis	familiaris/latrans	Hol	FeB	7338.13
TMM 43202	72	Canis	latrans	Hol	m1	8393.58
TMM # (Schulze Cave)	7187	Canis	familiaris	Hol	P4	11109.37
TMM # (Schulze Cave)	7301	Canis	latrans	Hol	m1	1951.24
TMM # (Schulze Cave)	7303	Canis	latrans	Hol	FeAPD	12702.59
TMM # (Schulze Cave)	7304	Canis	latrans	Hol	FeHD	8647.20
TMM # (Schulze Cave)	None	Canis	latrans	Hol	FeAPD	11396.53
TMM # (Schulze Cave)	7211	Canis	sp.	Hol	HuEB	12467.46
TMM # (Schulze Cave)	7374	Vulpes	velox	Hol	m1	2584.43
TMM # (Schulze Cave)	7371	Vulpes	vulpes	Hol	FeAPD	5277.17
TMM # (Schulze Cave)	7297	Canis	latrans	Hol	P4	9829.61
TMM # (Schulze Cave)	7305	Canis	latrans	Hol	TiL	10735.15
TMM # (Schulze Cave)	None	Canis	latrans	Hol	CaL	12411.55
TMM # (Schulze Cave)	7212	Canis	sp.	Hol	UIOL	10907.48
TMM # (Schulze Cave)	7372	Vulpes	velox	Hol	P4	2582.60
TMM 40618	225	Canis	sp.	Hol	P4	7660.18
TMM 40618	227	Canis	sp.	Hol	m1	11461.34
TMM 40618	244	Canis	sp.	Hol	FeB	8964.41
TMM 43481	6	Canis	familiaris	Hol	TiL	6774.33
TMM 43481	4	Canis	latrans	Hol	m1	13709.27
MSB	260	Canis	latrans	Mod	m1	12635.43
MSB	320	Canis	latrans	Mod	m1	12855.42
MSB	1219	Canis	latrans	Mod	m1	9734.28
MSB	1222	Canis	latrans	Mod	m1	8291.42
MSB	1225	Canis	latrans	Mod	m1	9657.73
MSB	1228	Canis	latrans	Mod	m1	11064.07
MSB	6577	Canis	latrans	Mod	m1	11780.28
MSB	6579	Canis	latrans	Mod	m1	10393.17
MSB	10027	Canis	latrans	Mod	SKL	9398.79
MSB	10843	Canis	latrans	Mod	m1	10505.76
MSB	11391	Canis	latrans	Mod	UIL	13390.85
MSB	16411	Canis	latrans	Mod	m1	10505.76
MSB	16412	Canis	latrans	Mod	m1	11164.58
MSB	16452	Canis	latrans	Mod	m1	11265.68

MSB	16521	Canis	latrans	Mod	m1	9780.41
MSB	16826	Canis	latrans	Mod	m1	12472.08
MSB	23005	Canis	latrans	Mod	SKL	16155.96
MSB	25897	Canis	latrans	Mod	m1	12599.01
MSB	27523	Canis	latrans	Mod	m1	10980.77
MSB	27529	Canis	latrans	Mod	m1	13954.31
MSB	38001	Canis	latrans	Mod	m1	12653.67
MSB	41039	Canis	latrans	Mod	m1	8388.47
MSB	41430	Canis	latrans	Mod	m1	7171.39
MSB	41460	Canis	latrans	Mod	m1	10667.99
MSB	42349	Canis	latrans	Mod	m1	11710.79
MSB	46325	Canis	latrans	Mod	m1	11990.37
MSB	46374	Canis	latrans	Mod	m1	11131.01
MSB	46375	Canis	latrans	Mod	SKL	9638.31
MSB	57638	Canis	latrans	Mod	m1	9530.59
MSB	74054	Canis	latrans	Mod	m1	13435.37
MSB	85639	Canis	latrans	Mod	SKL	14498.21
MSB	92553	Canis	latrans	Mod	m1	13837.87
MSB	92554	Canis	latrans	Mod	m1	13003.47
MSB	101888	Canis	latrans	Mod	SKL	16738.70
MSB	123745	Canis	latrans	Mod	m1	13664.41
MSB	140709	Canis	latrans	Mod	m1	10409.21
MSB	140998	Canis	latrans	Mod	m1	13246.45
MSB	142839	Canis	latrans	Mod	m1	10570.46
MSB	143823	Canis	latrans	Mod	m1	11316.46
MSB	143826	Canis	latrans	Mod	m1	12328.05
MSB	143827	Canis	latrans	Mod	m1	11080.78
MSB	143828	Canis	latrans	Mod	m1	15506.35
MSB	143830	Canis	latrans	Mod	m1	14208.81
MSB	145825	Canis	latrans	Mod	m1	11885.02
MSB	160103	Canis	latrans	Mod	m1	12131.80
MSB	160105	Canis	latrans	Mod	SKL	14377.80
MSB	160107	Canis	latrans	Mod	SKL	9062.16
MSB	160109	Canis	latrans	Mod	SKL	11687.74
MSB	160121	Canis	latrans	Mod	m1	9904.11
MSB	195888	Canis	latrans	Mod	FeMLD	22273.96
MSB	198302	Canis	latrans	Mod	m1	9177.16
MSB	198472	Canis	latrans	Mod	m1	12929.31
MSB	214896	Canis	latrans	Mod	m1	10217.85
MSB	230592	Canis	latrans	Mod	m1	8085.95
MSB	230633	Canis	latrans	Mod	m1	12745.11

MSB	230715	Canis	latrans	Mod	m1	12274.32
MSB	231176	Canis	latrans	Mod	m1	12947.82
MSB	231470	Canis	latrans	Mod	m1	12043.28
MSB	23006	Canis	lupus	Mod	m1	15506.35
MSB	23007	Canis	lupus	Mod	m1	28473.11
MSB	61156	Canis	lupus	Mod	FeMLD	30413.60
MSB	66571	Canis	lupus	Mod	m1	20809.11
MSB	92743	Canis	lupus	Mod	m1	22658.45
MSB	101288	Canis	lupus	Mod	m1	20657.55
MSB	142639	Canis	lupus	Mod	m1	19181.81
MSB	142765	Canis	lupus	Mod	m1	23369.81
MSB	142766	Canis	lupus	Mod	m1	19133.85
MSB	160132	Canis	lupus	Mod	m1	22471.50
MSB	160133	Canis	lupus	Mod	m1	21812.10
MSB	160134	Canis	lupus	Mod	m1	23279.94
MSB	160135	Canis	lupus	Mod	m1	22312.06
MSB	160136	Canis	lupus	Mod	m1	22551.50
MSB	160137	Canis	lupus	Mod	m1	25761.33
MSB	160138	Canis	lupus	Mod	m1	22765.74
MSB	160140	Canis	lupus	Mod	m1	20381.59
MSB	160141	Canis	lupus	Mod	m1	20556.92
MSB	160142	Canis	lupus	Mod	m1	17595.27
MSB	160145	Canis	lupus	Mod	m1	17034.49
MSB	160146	Canis	lupus	Mod	m1	20582.05
MSB	160147	Canis	lupus	Mod	m1	20657.55
MSB	160148	Canis	lupus	Mod	m1	17482.16
MSB	160150	Canis	lupus	Mod	m1	19302.05
MSB	195099	Canis	lupus	Mod	m1	21474.31
MSB	195161	Canis	lupus	Mod	FeMLD	21576.19
MSB	195271	Canis	lupus	Mod	FeMLD	27226.91
MSB	196208	Canis	lupus	Mod	m1	22172.64
MSB	85760	Urocyon	cinereoargenteus	Mod	SKL	2479.25
MSB	160193	Urocyon	cinereoargenteus	Mod	SKL	2736.83
MSB	160194	Urocyon	cinereoargenteus	Mod	SKL	2542.32
MSB	160195	Urocyon	cinereoargenteus	Mod	SKL	2435.55
MSB	160196	Urocyon	cinereoargenteus	Mod	SKL	2791.91
MSB	160197	Urocyon	cinereoargenteus	Mod	SKL	2798.64
MSB	160198	Urocyon	cinereoargenteus	Mod	SKL	3236.48
MSB	160199	Urocyon	cinereoargenteus	Mod	SKL	2625.80
MSB	160201	Urocyon	cinereoargenteus	Mod	SKL	2633.04
MSB	160202	Urocyon	cinereoargenteus	Mod	m1	1842.41



MSB	160203	Urocyon	cinereoargenteus	Mod	SKL	2425.66
MSB	160204	Urocyon	cinereoargenteus	Mod	SKL	2473.86
MSB	160205	Urocyon	cinereoargenteus	Mod	SKL	2527.43
MSB	160206	Urocyon	cinereoargenteus	Mod	SKL	2666.23
MSB	16190	Vulpes	macrotis	Mod	m1	2140.43
MSB	20562	Vulpes	macrotis	Mod	m1	2491.83
MSB	24546	Vulpes	macrotis	Mod	m1	2040.14
MSB	54442	Vulpes	macrotis	Mod	m1	2296.88
MSB	54443	Vulpes	macrotis	Mod	m1	2429.78
MSB	54444	Vulpes	macrotis	Mod	m1	2631.98
MSB	64390	Vulpes	macrotis	Mod	m1	1575.62
MSB	64391	Vulpes	macrotis	Mod	SKL	2069.19
MSB	64392	Vulpes	macrotis	Mod	SKL	1900.17
MSB	64393	Vulpes	macrotis	Mod	m1	2243.92
MSB	89147	Vulpes	macrotis	Mod	m1	2362.71
MSB	92664	Vulpes	macrotis	Mod	m1	2084.32
MSB	92716	Vulpes	macrotis	Mod	m1	1932.39
MSB	102111	Vulpes	macrotis	Mod	m1	2290.95
MSB	140117	Vulpes	macrotis	Mod	m1	2658.01
MSB	140706	Vulpes	macrotis	Mod	m1	2710.57
MSB	1238	Vulpes	velox	Mod	m1	3237.00
MSB	3851	Vulpes	velox	Mod	m1	2554.91
MSB	101289	Vulpes	velox	Mod	m1	1874.76
MSB	142647	Vulpes	velox	Mod	m1	2174.57
MSB	142653	Vulpes	velox	Mod	m1	3011.94
MSB	142656	Vulpes	velox	Mod	m1	1650.79
MSB	142657	Vulpes	velox	Mod	m1	2684.21
MSB	142659	Vulpes	velox	Mod	m1	1927.10
MSB	142666	Vulpes	velox	Mod	m1	2671.09
MSB	142692	Vulpes	velox	Mod	TiL	1941.00
MSB	142693	Vulpes	velox	Mod	m1	2723.82
MSB	142698	Vulpes	velox	Mod	m1	2757.12
MSB	145872	Vulpes	velox	Mod	m1	2948.59
MSB	145875	Vulpes	velox	Mod	m1	2510.64
MSB	232361	Vulpes	velox	Mod	m1	2606.12
MSB	246686	Vulpes	velox	Mod	m1	2561.27
MSB	265446	Vulpes	velox	Mod	m1	2586.84
MSB	265774	Vulpes	velox	Mod	m1	2529.55
MSB	8683	Vulpes	vulpes	Mod	SKL	4178.85
MSB	232364	Vulpes	vulpes	Mod	SKL	4396.34
TMM 43133	1411	Canis	latrans	Plei	P4	13314.60

TMM 43133	1422	Canis	latrans	Plei	P4	11927.82
TMM 43133	1426	Canis	latrans	Plei	P4	13207.59
TMM 1295	104	Canis	dirus	Plei	FeHD	51296.60
TMM 1295	1	Canis	latrans	Plei	m1	9925.81
TMM 1295	3	Canis	latrans	Plei	m1	11546.22
TMM 1295	101	Canis	sp.	Plei	FeB	22940.74
TMM 1295	2	Vulpes	sp.	Plei	m1	2374.30
TMM 1295	6	Vulpes	sp.	Plei	m1	2410.53
TMM 1295	8	Vulpes	sp.	Plei	m1	2086.21
TMM 1295	50	Vulpes	sp.	Plei	m1	3400.28
TMM 1295	100	Canis	sp.	Plei	HuEB	18843.83
TMM 1295	9	Vulpes	sp.	Plei	m1	2707.01
TMM 933-	2	Canis	dirus	Plei	m1	60117.59
TMM 933-	1848	Canis	dirus	Plei	HuAPD	77238.71
TMM 41229-	1933	Canis	dirus	Plei	TiL	56140.34
TMM 933-	1961	Canis	dirus	Plei	FeB	45188.57
TMM 933-	2274	Canis	dirus	Plei	TiL	38860.14
TMM 933-	2505	Canis	dirus	Plei	TiL	33184.98
TMM 933-	2822	Canis	dirus	Plei	FeAPD	56926.26
TMM 933-	377	Canis	latrans	Plei	TiL	13859.46
TMM 933-	2013	Canis	latrans	Plei	TiSL	6985.95
TMM 933-	3672	Canis	latrans	Plei	P4	16623.44
TMM 933-	5697	Canis	latrans	Plei	TiL	10679.16
TMM 933-	670	Canis	sp.	Plei	m1	14604.25
TMM 933-	1622	Canis	sp.	Plei	m1	10347.49
TMM 933-	2454	Canis	sp.	Plei	m1	13785.62
TMM 933-	3398	Canis	sp.	Plei	m1	10237.06
TMM 933-	1804	Urocyon	cinereoargenteus	Plei	m1	3054.81
TMM 933	2166	Urocyon	cinereoargenteus	Plei	HuEB	4391.31
TMM 933-	483	Canis	dirus	Plei	TiAPD	32421.96
TMM 933-	484	Canis	dirus	Plei	TiL	38860.14
TMM 933-	1195	Canis	dirus	Plei	HuEB	42930.57
TMM 933-	1846	Canis	dirus	Plei	RaL	51143.28
TMM 933-	1847	Canis	dirus	Plei	UIOL	56777.55
TMM 933-	1849	Canis	dirus	Plei	HuAPD	79110.18
TMM 933-	1907	Canis	dirus	Plei	m1	62828.44
TMM 933-	1960	Canis	dirus	Plei	FeAPD	60143.23
TMM 933-	1961	Canis	dirus	Plei	FeHD	42847.41
TMM 933-	1962	Canis	dirus	Plei	TiL	56140.34
TMM 933-	1963	Canis	dirus	Plei	RaL	35935.13
TMM 933-	2275	Canis	dirus	Plei	HuAPD	34520.91

TMM 933-	3904	Canis	dirus	Plei	HuAPD	73704.92
TMM 933-	450	Canis	latrans	Plei	P4	10603.43
TMM 933	831	Canis	latrans	Plei	HuEB	10586.94
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TMM 933-	1625	Canis	latrans	Plei	m1	11292.82
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TMM 933-	1632	Canis	latrans	Plei	RaL	11934.28
TMM 933-	1633	Canis	latrans	Plei	FeHD	8042.02
TMM 933	2118	Canis	latrans	Plei	FeB	6299.49
TMM 933-	2453	Canis	latrans	Plei	m1	10911.44
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TMM 908	2429	Canis	dirus	Plei	FeHD	48725.36
TMM 908	2143	Canis	familiaris	Plei	m1	12222.50
TMM 908	3291	Canis	familiaris/latrans	Plei	HuEB	7190.03
TMM 908	3577	Canis	familiaris/latrans	Plei	FeB	8188.23

TMM 908	3934	Canis	familiaris/latrans	Plei	FeHD	10809.52
TMM 908	3935	Canis	familiaris/latrans	Plei	HuEB	7197.19
TMM 908	3938	Canis	familiaris/latrans	Plei	P4	8396.25
TMM 908	3939	Canis	familiaris/latrans	Plei	P4	10882.58
TMM 908	4258	Canis	familiaris/latrans	Plei	FeB	8754.22
TMM 908	4259	Canis	familiaris/latrans	Plei	FeB	10054.24
TMM 908	4260	Canis	familiaris/latrans	Plei	FeB	11507.56
TMM 908	4262	Canis	familiaris/latrans	Plei	FeHD	8523.95
TMM 908	4263	Canis	familiaris/latrans	Plei	HuEB	8589.63
TMM 908	4264	Canis	familiaris/latrans	Plei	HuEB	9637.96
TMM 908	4267	Canis	familiaris/latrans	Plei	HuEB	9965.77
TMM 908	4268	Canis	familiaris/latrans	Plei	HuEB	7958.47
TMM 908	4292	Canis	familiaris/latrans	Plei	HuEB	7005.19
TMM 908	4296	Canis	familiaris/latrans	Plei	UIOL	6379.20
TMM 908	4315	Canis	familiaris/latrans	Plei	AsL	7364.57
TMM 908	4324	Canis	familiaris/latrans	Plei	m1	10813.36
TMM 908	4325	Canis	familiaris/latrans	Plei	m1	10651.19
TMM 908	4332	Canis	familiaris/latrans	Plei	P4	10274.77
TMM 908	4469	Canis	familiaris/latrans	Plei	UIOL	8550.45
TMM 908	341	Canis	latrans	Plei	P4	14191.38
TMM 908	437	Canis	latrans	Plei	m1	8856.99
TMM 908	925	Canis	latrans	Plei	TiSL	8319.52
TMM 908	1139	Canis	latrans	Plei	HuEB	8814.55
TMM 908	1428	Canis	latrans	Plei	CaL	8360.02
TMM 908	1465	Canis	latrans	Plei	HuHTL	6954.87
TMM 908	2146	Canis	latrans	Plei	CaL	13590.26
TMM 908	2316	Canis	latrans	Plei	UIOL	9116.54
TMM 908	3258	Canis	latrans	Plei	AsL	7759.07
TMM 908	3788	Canis	latrans	Plei	FeHD	8570.04
TMM 41343	178	Canis	latrans	Plei	UIOL	14734.93
TMM 41343	1	Urocyon	cinereoargenteus	Plei	UIOL	2398.69
TMM 41343	11	Canis	dirus	Plei	UIOL	48412.21
TMM 41343	128	Canis	dirus	Plei	UIOL	34028.52
TMM 40449	563	Canis	dirus	Plei	m1	44373.25
TMM 40449	68	Canis	latrans	Plei	m1	15187.77
TMM 40449	97	Canis	latrans	Plei	UIOL	9206.60
TMM 40449	98	Canis	sp.	Plei	HuHTL	6143.77
TMM 40449	102	Canis	sp.	Plei	AsL	10891.45
TMM 40685-	381	Canis	latrans	Plei	P4	16873.29
TMM 40685-	382	Canis	latrans	Plei	P4	11416.62
TMM 40685-	385	Canis	lupus	Plei	m1	21886.28

TMM 40685-	386	Canis	lupus	Plei	HuAPD	43447.39
TMM 40685	827	Urocyon	cinereoargenteus	Plei	P4	2046.13
TMM 40685	1048	Urocyon	sp	Plei	TiSL	5208.06
TMM 40685	1095	Urocyon	sp	Plei	UIOL	2986.77
TMM 40685	247	Urocyon/Vulpes	sp.	Plei	FeB	2562.23
TMM 40685	1035	Urocyon/Vulpes	sp.	Plei	FeB	3873.26
TMM 40685	1036	Urocyon/Vulpes	sp.	Plei	FeB	3757.21
TMM 40685	1112	Urocyon/Vulpes	sp.	Plei	P4	2077.26
TMM 40685	828	Vulpes	velox	Plei	m1	3184.24
TMM 40685	184	Vulpes	vulpes	Plei	TiL	4000.32
TMM 40685-	379	Canis	latrans	Plei	m1	12887.71
TMM 40685-	383	Canis	latrans	Plei	P4	14966.08
TMM 40685-	775	Canis	latrans	Plei	HuAPD	11711.52
TMM 40685-	848	Canis	latrans	Plei	FeHD	11096.90
TMM 40685	582	Lynx	rufus	Plei	HuEB	10786.83
TMM 40685	249	Urocyon/Vulpes	sp.	Plei	TiSL	3476.92
TMM 40685	257	Urocyon/Vulpes	sp.	Plei	UIOL	2292.64
TMM 40685	1083	Urocyon/Vulpes	sp.	Plei	P4	2406.02
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TMM 40685	1038	Vulpes	vulpes	Plei	HuEB	3907.16

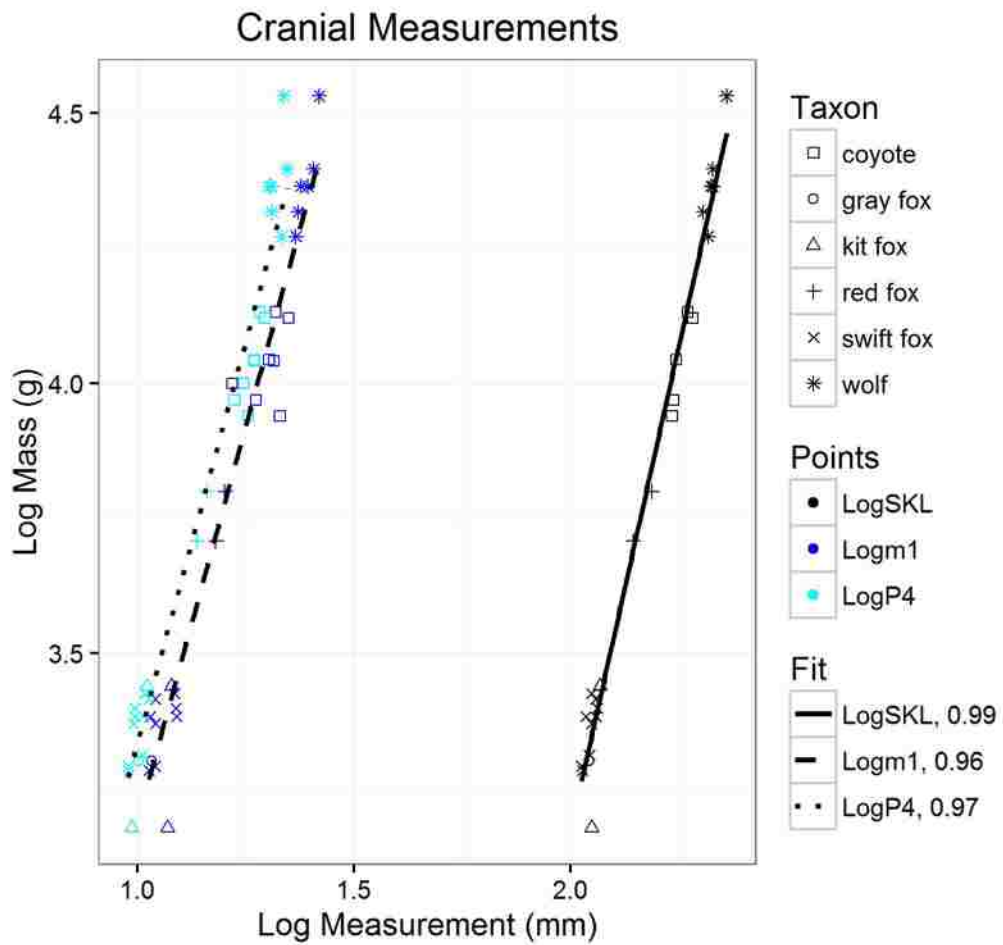


Figure S2.1. Allometric relationship between mass and cranial/dental measurements. Relationships are plotted across all species measured for each measurement type. The linear best fit is provided, and the r-squared value for each fit is indicated in the legend.

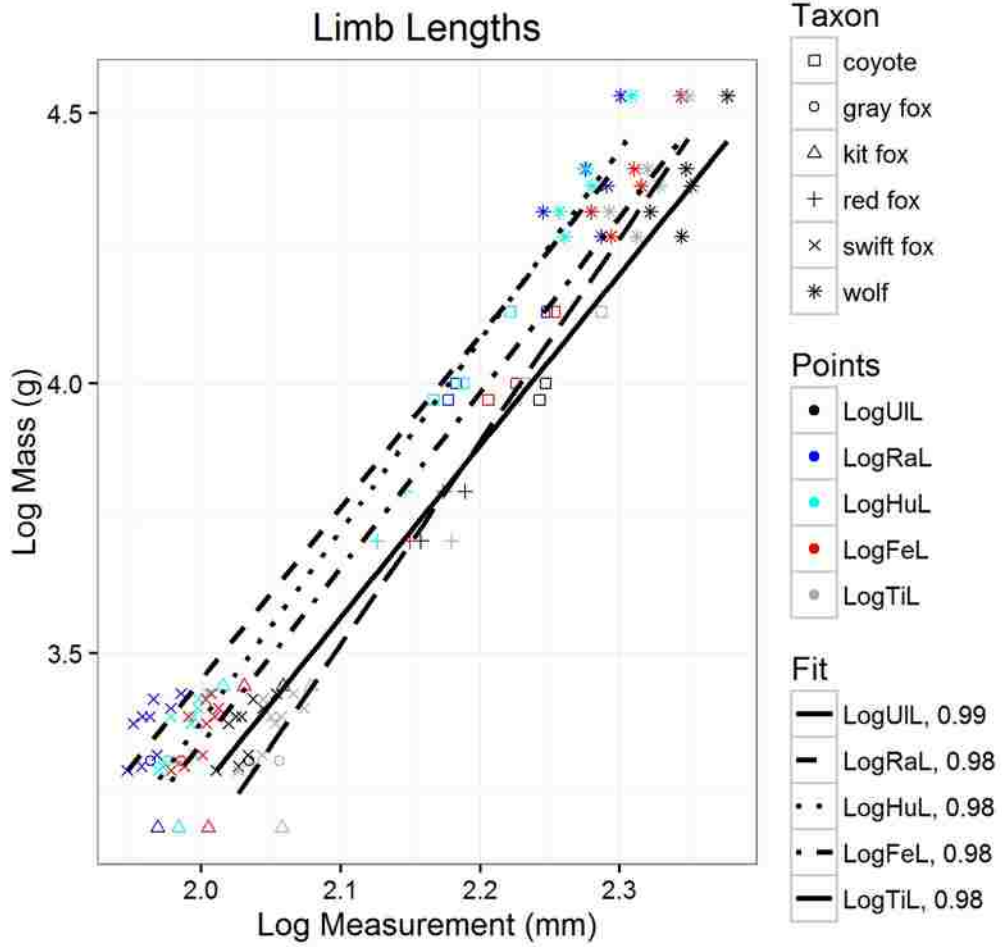


Figure S2.2. Allometric relationship between mass and total limb length measurements. Relationships are plotted across all species measured for each measurement type. The linear best fit is provided, and the r-squared value for each fit is indicated in the legend.

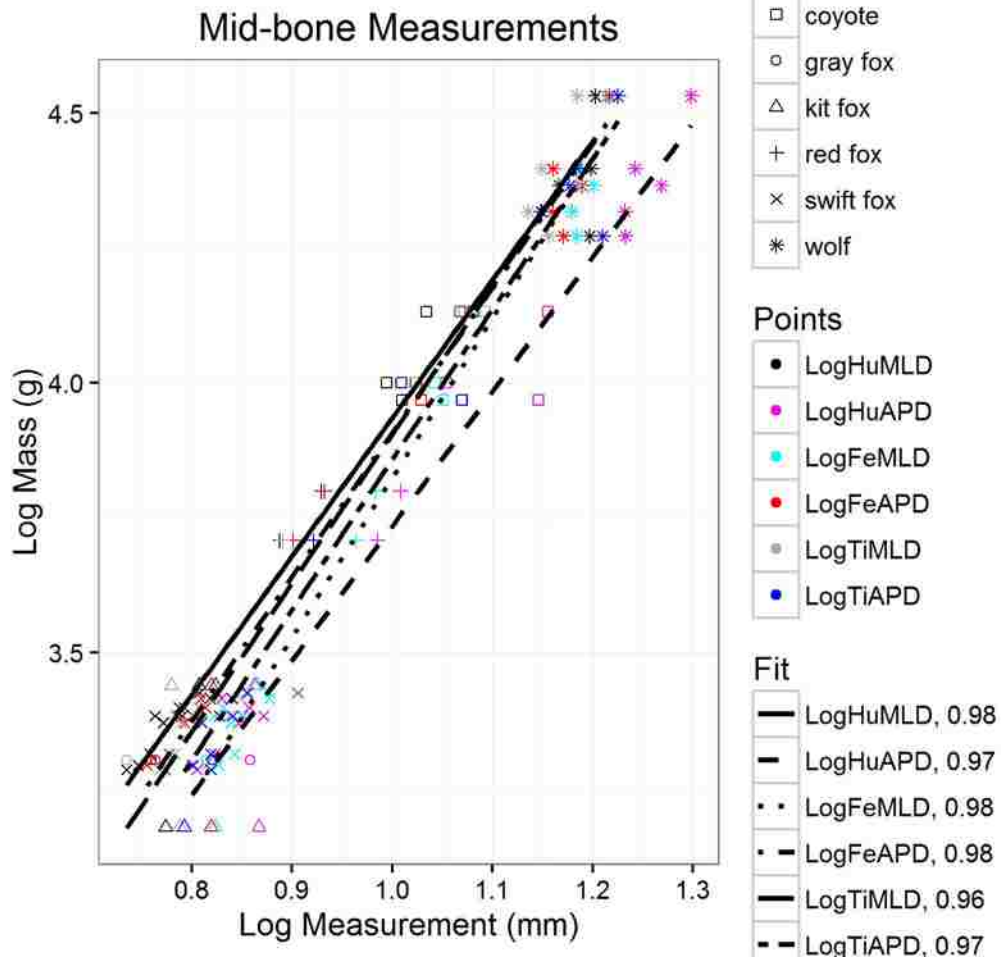


Figure S2.3. Allometric relationship between mass and measurements obtained from the middle of the limb bones. Relationships are plotted across all species measured for each measurement type. The linear best fit is provided, and the r-squared value for each fit is indicated in the legend.



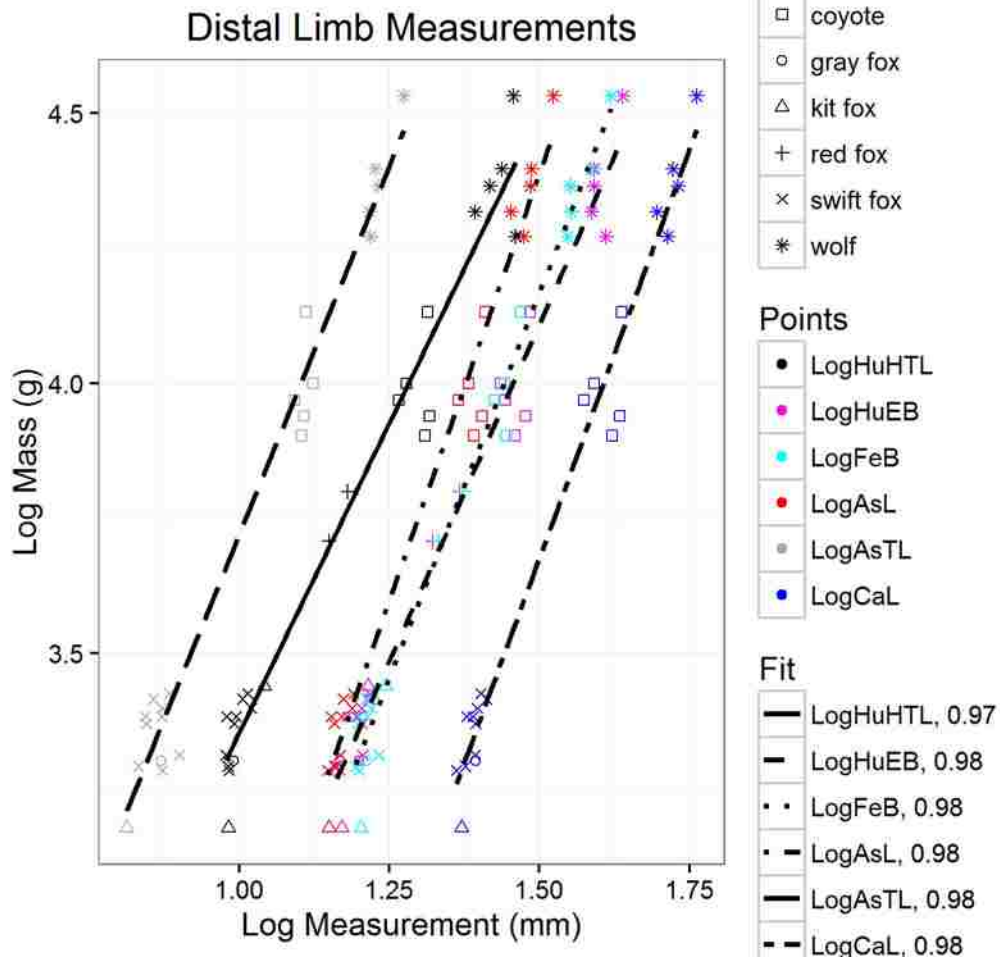


Figure S2.4. Allometric relationship between mass and measurements obtained from the distal limb epiphyses and foot bones. Relationships are plotted across all species measured for each measurement type. The linear best fit is provided, and the r-squared value for each fit is indicated in the legend.

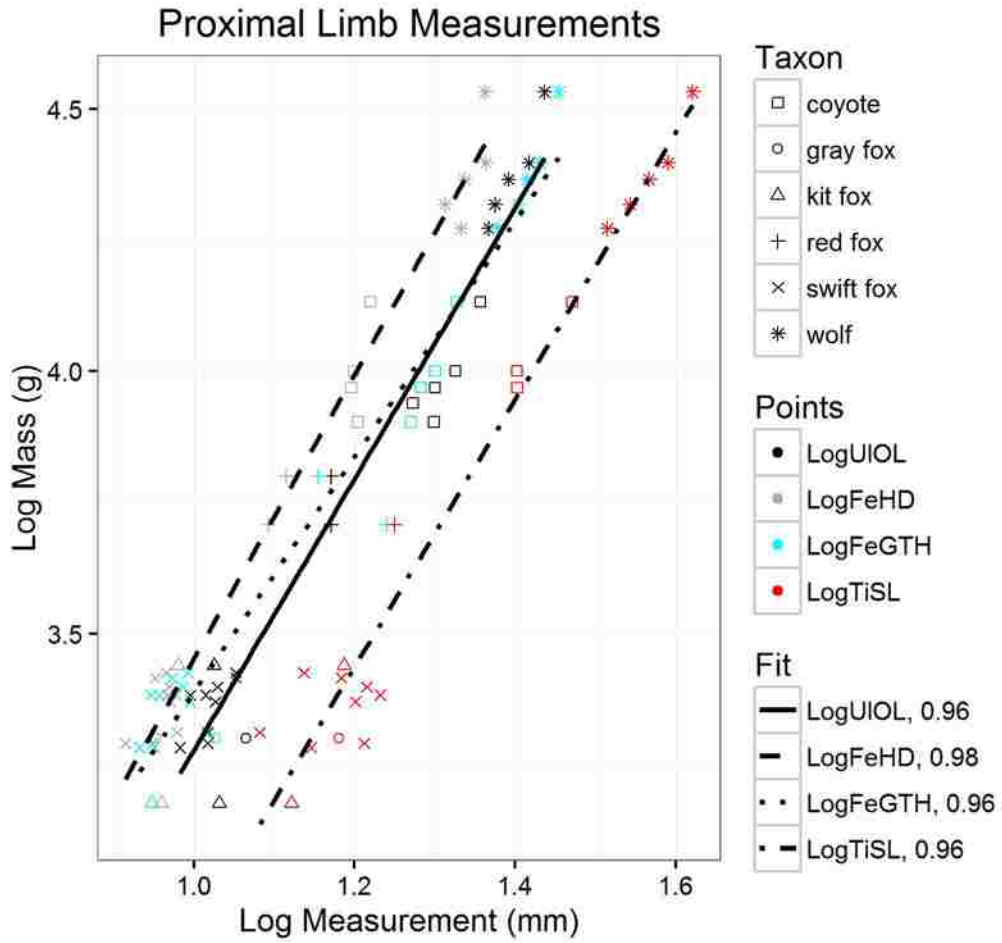


Figure S2.5. Allometric relationship between mass and measurements obtained from the proximal limb epiphyses. Relationships are plotted across all species measured for each measurement type. The linear best fit is provided, and the r-squared value for each fit is indicated in the legend.

## APPENDIX TO CHAPTER 3

### Materials and Methods

#### Human data and quality control

Human occurrence data were radiocarbon dates from cultural and natural objects associated with humans from the Canadian Archaeological Radiocarbon Database, v 2.0 (CARD 2.0) (“Canadian Archaeological Radiocarbon Database (CARD 2.0)” 2015).

These radiocarbon dates are confined to North America. To produce a temporally well constrained dataset, we removed records that had more than a 3,000 year uncertainty.

From this subset of the data we retained records that were of unquestionable human origin, for example: human remains, human made objects, domesticated plants and animals, and hearth burned objects. We opted to not use radiocarbon dates from associated materials such as wood or soil, unless there was a compelling reason to assume they were contemporaneous with human occupation. We then assigned each record's mean age to the nearest 1,000-year date to match the resolution of our paleoclimate data (table S3.1). Many sites in the CARD contained more than one object with a radiocarbon date; this redundancy in the database resulted in a large number of sites that were represented, and duplicate records for a given time period were removed prior to niche modeling.

## Paleoclimate data

Our study employed 35 spatially downscaled paleoclimate variables from the National Center for Atmospheric Research Community Climate System Model version 3 (CCSM3) (Liu et al. 2009, Veloz et al. 2012). These modeled paleoclimate reconstructions were available at 1,000-year intervals at a 0.5x0.5 degree resolution. We used a geographic information system to spatially associate each human occurrence with the modeled environmental variables that were of the closest age.

The CCSM3 is an appropriate climate model to use for building our niche models. These data have been used to successfully model species distributions in a wide variety of plant taxa (Veloz et al. 2012), and species in the Canidae (Pardi and Smith 2016). Additionally, results from modeling studies that have utilized the CCSM3 are robust with the Hadley Center general circulation model (Singarayer and Valdes 2010).

## Human ecological niche modeling in Maxent

We used maximum entropy niche modeling to produce abiotic species distribution models of humans from 10 kyr – 1 kyr B.P. at 1,000-year intervals. Maxent is an especially powerful modeling method for archeological and paleontological data because it is a presence-only method (Phillips et al. 2004, Phillips and Dudík 2008, Elith et al. 2011).

Background data for each model were 10,000 randomly sampled locations from North America of each CCSM3 variable. We chose the logistic output of the model for our analyses, which provides habitat suitability values, and can be interpreted as the likelihood of occurrence for the modeled species. Models were resampled using a

bootstrapping method with 100 replicates. 25% of the human occurrence data were used for testing and "auto features" were used for algorithm selection. The auto features setting allows the Maxent program to determine the function used to fit the model, and this determination is made based on the size of the sample size of the the occurrence data. Models were run in two batches: first, exploratory models were run with all 35 paleoclimate variables, and then we retained the variables that contributed 50% to the model and used these inputs for our final models (table S3.2, table S3.3, and fig. S3.2); the average of the 100 models run with the most contributing variables were used in our comparative analyses. The averaged model was projected onto its corresponding CCMS3 climate scenario to produce likelihood maps at each 1,000-year time period.

#### Interspecific relationships between endemic canids and humans

Climatic niche models for *Canis lupus*, *Canis latrans*, and *Vulpes vulpes* were obtained from the literature, these models were calculated using the maximum entropy method and the same climate data used in our study (Pardi and Smith 2016). Canid models consisted of an observed and expected reconstruction for each species. The observed models were created using location and background data for the early-middle Holocene (10 – 5 kyr B.P.) and the late Holocene (4 – 1 kyr B.P., and then projected onto the 10,000 and 4,000 year CCSM3 climate scenarios to produce maps. The expected model was produced by running a model using Pleistocene and early – middle Holocene climate and occurrence inputs, and then projected onto the 10,000 and 4,000 year CCSM3 climate scenarios, respectively. Deviations between the observed and expected provide a

measure of spatially explicit niche change for each species between the Pleistocene and Holocene.

We compared the Obs/Exp of each species to the likelihood of human occurrence for the early-middle Holocene (Fig. 3.4) and the late Holocene (Fig. 3.5). The canid niche models were time averaged from 10 – 5 kyr B.P. and 4 – 1 kyr B.P.; therefore, we averaged our 10 – 5 kyr and 4 – 1 kyr B.P. human models to match the resolution of the canid data for these analyses. We selected 10,000 random locations within the defined research area (red polygon, Fig. 3.1 and 3.2), and recorded the Obs and Exp canid species likelihood, as well as the human likelihood at each location for the early-middle Holocene and late Holocene. We then plotted Obs/Exp as a function of human likelihood for each species within 10-degree latitudinal bands (Fig. 3.4 and Fig. 3.5).

### Supplementary Text

#### Model Assessment and Sensitivity Analyses

We assessed the performance of the model based on the resulting area under the operator curve (AUC) for each averaged model (table S3.2). An AUC of 0.5 corresponds to a random model; values over 0.75 are generally considered meaningful (Phillips and Dudík 2008). All of our models had a training AUC greater than 0.82 and testing AUC greater than 0.73. Sample sizes for our occurrence data varied over time. Our smallest dataset consisted of 67 sites (51 training, 16 test) at 10 kyr B.P., and our largest dataset consisted of 1741 sites (1306 training, 435 test) at 1 kyr B.P. We plotted the testing AUC as a function of sample size and did not find a significant relationship ( $p = 0.053$ ,  $r^2 =$

0.31), and there is no apparent relationship between the age of a model and AUC (fig. S3.3).

Although there was no significant relationship between the performance of the model and sample size, we tested to see if modulating the sample size of the largest data set would change the reported climate variable contribution to the model. We randomly subsampled the 1 kyr B.P. data set to 300, 100, and 50 occurrence points (225, 75, and 38 training points), and then modeled the niche based on these subsampled data using the same methods as our full dataset. A Chi-squared analysis of the percent contribution of each climate variable indicates that there are differences between the models; however, all of the sub-sampled models identified winter climate variables as the most important contributors to the model, which is the same result we found with the full data set (table S3.4, fig S3.2).

The apparent conflict between the Chi-squared analysis with the AUC analysis and overall results of the models may be attributed to correlation between climate variables in the CCSM3 dataset. If two variables are highly correlated, the use of either may result in a SDM that performs comparably well. Indeed, many of the variables in the CCSM3 data set correlate with each other (fig. S3.4). For example, at 1 kyr B.P., mean winter precipitation (band 1) correlates highly with mean winter temperature (band 9,  $cor = 0.59$ ) and mean maximum winter temperature (band 25,  $cor = 1.00$ ) (fig. S3.4). Mean maximum fall temperature (band 27) correlates with annual temperature seasonality (band 33,  $cor = 0.79$ ), summer mean precipitation (band 2,  $cor = 0.53$ ), and the standard deviation of spring maximum temperature (band 32,  $0.40$ ). It is therefore not surprising that the smallest sub-sampled model might identify these other climate

variables as large contributors rather than mean maximum fall temperature (table S3.3 and S3.4).

#### Human conformity to an abiotic niche

Conformity of human occurrence to each niche model was assessed by calculating the percentage of known occurrences that were predicted by each model. We applied a threshold of 0.2 and 0.5 likelihood for each model at each time period. If an occurrence was found outside of the defined area, it was designated as a false negative, if it was within this area it was designated as a positive prediction. We calculated the percentage positive predictions for each model, and plotted the results over time (Fig. 3.3 and fig. S3.1). Human conformity to the Maxent models was comparable across time when the 0.2 likelihood threshold was applied, and all models positively predicted over 80% of the occurrences. When we applied the 0.5 likelihood threshold there was more variability in conformity to the model, and younger models performed more better. The worst performing model at the 0.5 threshold was at 10 kyr B.P., where 34% of sites were predicted by the model; over 50% of sites were positively predicted in the 5 – 1 kyr B.P. models at the more rigorous threshold.



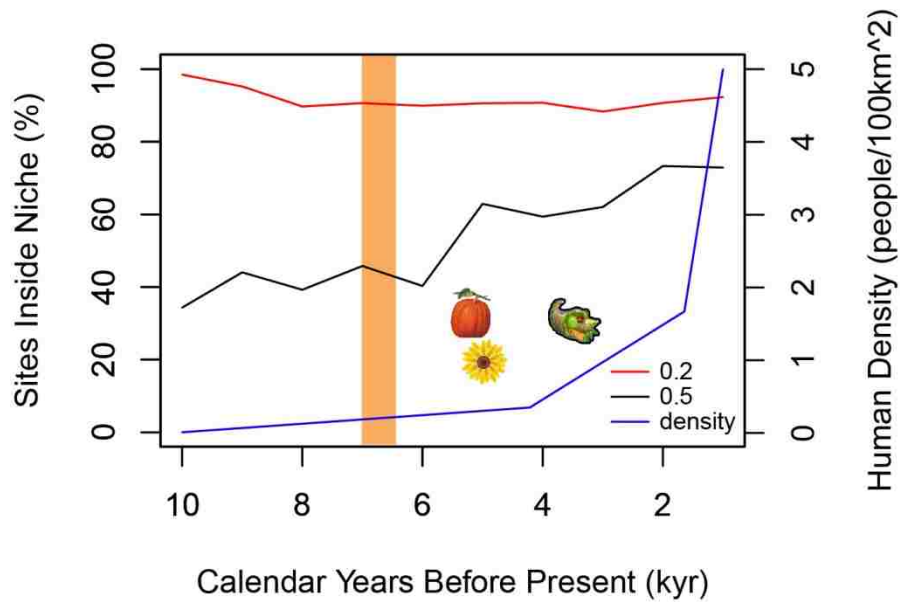
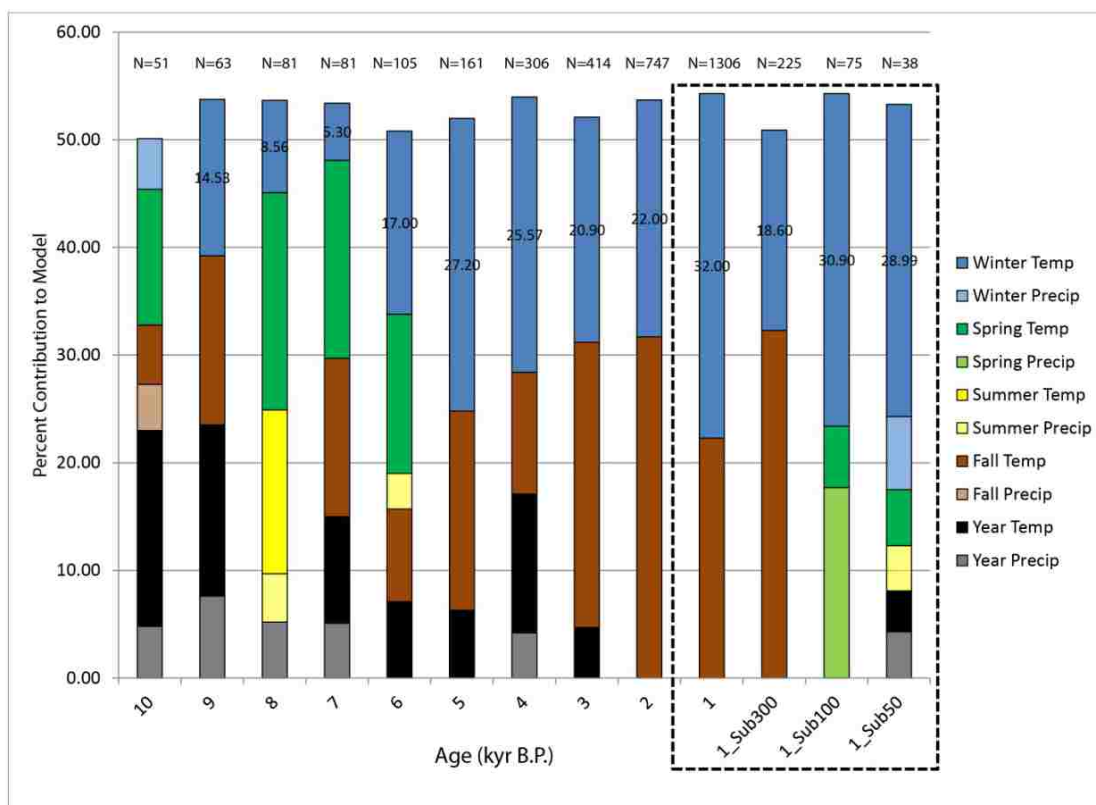
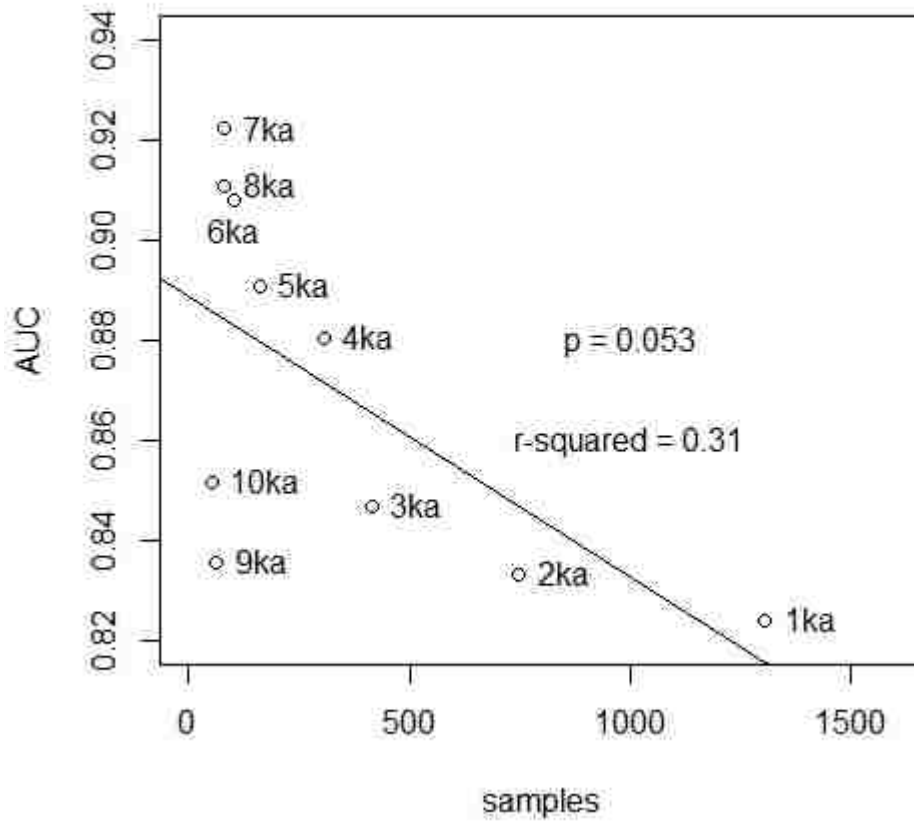


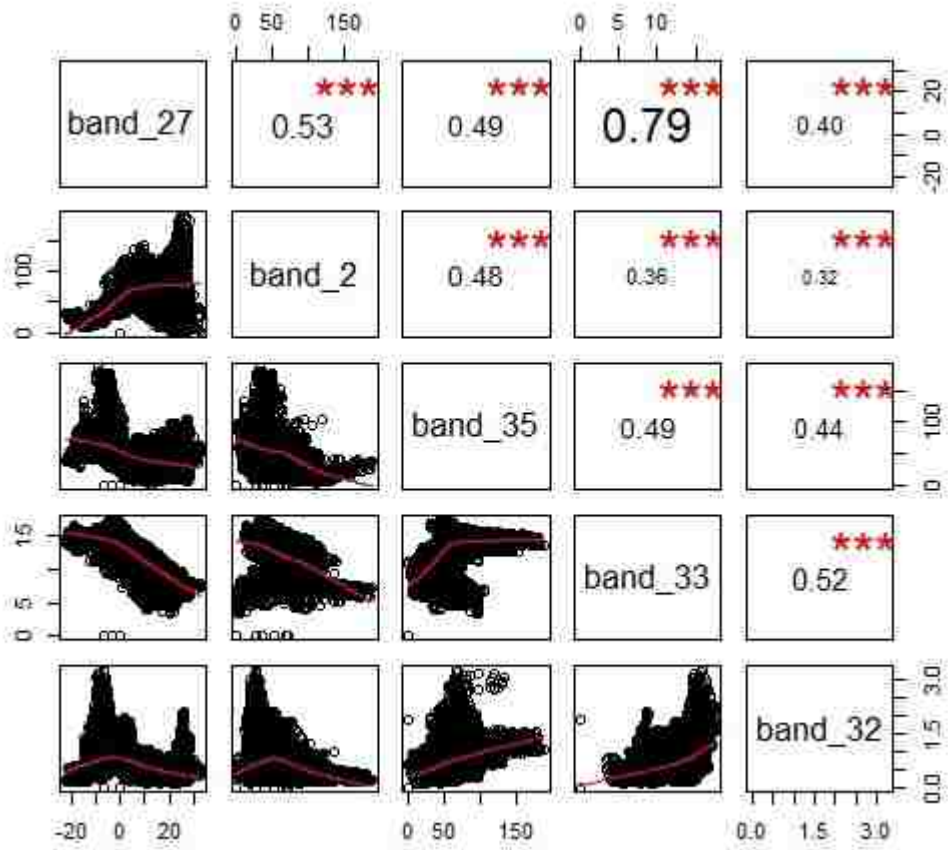
Figure S3.1. Percentage of sites predicted at each time point. The percentage predicted by the model using a 0.2 threshold is plotted in red; the 0.5 threshold is plotted in black. Human population density is plotted in blue (Peros et al. 2010). Mid-Holocene warming is indicated by the orange bar (Zeder and Smith 2009). Early domestication of important crop plants are indicated by the sunflower and pumpkin, followed by the first appearance of a crop complex at Riverton (Smith and Yarnell 2009).



**Fig. S3.2.** The variable contribution for preliminary models run with all 35 climate variables; the variables that contributed 50% to the models are shown. The results from subsampling the largest dataset are provided in the dashed box.



**Fig. S3.3.** AUC of the final models as a function of sample size. There is no significant relationship between AUC and sample size, and there is no pattern with AUC and the age of the model.



**Fig. S3.4.** Correlation between climate variables in the CCSM3 dataset. These are the variables that contributed 50% to the 50 point subsampled dataset. Band IDs can be found in Table S3.3.

Table S3.1. Sites included in modeling the niche: the materials that were used to obtain the date and their contexts (“Canadian Archaeological Radiocarbon Database (CARD 2.0)” 2015). The age of each occurrence is given in normalized calendar years. The age of each occurrence is given in normalized calendar years. Sites are listed in chronological age.

Identifier	Site name	Materials	Age	$\sigma$	Context
EkSa-32	Boyd	charcoal; charbon de bois	505	70	
24CH6	Coal Banks Terrace	charcoal; charbon de bois	505	80	feature 2, 1.9 m depth
FhNa-10	Bushfield West	bone collagen; collagène osseux	505	70	southern edge of Block 1, unit 211S/47E, associated with a hearth
41LU1	Lubbock Lake	charcoal; charbon de bois	505	55	area 8, substratum 5A, lower FA8-6
EaLf-10	Eveline St. Burial	charcoal; charbon de bois	505	10 5	human burial, Unit 5, Level F, 50-52 cm depth, rich black topsoil
34MC8	Clement	cultigen; cultigène	505	85	square 23:7, in or near postmold at base of mound, McCurtain focus
47PI2	Diamond Bluff	charcoal; charbon de bois	505	50	
KgJm-7	Daylight	caribou bone collagen; collagène osseux de caribou	505	22 5	interior of House 3, above occupation layer
KkJg-1	Silumiut	animal remains; restes d'animaux	505	50	House 13, section I, floor area, 1 m depth
20AE127	Schwerdt	charcoal; charbon de bois	505	70	feature 9, Berrien phase
33CN7	Bunnel Kame	unknown; inconnu	505	45	
33BL6	Brokaw	charcoal; charbon de bois	505	75	Monongahela phase
36FA40	Howarth-Nelson	charcoal; charbon de bois	505	35	
AKXMR091	South Meade	charcoal; charbon de bois	510	60	Loc. A, with sideblades and knife side blades
NIRu-1	Iglulualuit	caribou bone collagen; collagène osseux de caribou	510	21 0	house 20 interior
45KI431	Allentown	unknown; inconnu	510	80	
35JA59	Stump	charcoal; charbon de bois	510	80	house fill
45KI428	West Point	charcoal; charbon de bois	510	50	
CASis-?	Iron Gate	charred wood; bois carbonisé	510	75	Housepit 4, fill 5-10 deep between floors 2 and 3
45SA12	Hamilton Island	charcoal; charbon de bois	510	90	

CASac-?	Hollister	charred plant remains; restes de plantes carbonisés	510	75	gravepit burning of burial 33, 54" depth, representing the middle Phase 1 period of the Late Horizon
45LI206	Lakeview Rockshelter	charcoal; charbon de bois	510	80	
EhPo-78	Western Heritage Centre	charcoal; charbon de bois	510	80	level 2, 20 cm depth, hearth
5ME4971	Rapid Creek	unknown; inconnu	510	70	
5DA265	Bayou Gulch	charcoal and peat; charbon de bois et tourbe	510	85	feature 33
32ME415	Youess	charcoal; charbon de bois	510	30	village on a high terrace, Scattered Village
32SI17	Ben Standing Soldier	wood; bois	510	14 0	feature 20, post 107, west wall of House 5 floor pit, 1.16-1.45 m depth, Extended Middle Missouri
39DW201	McKensey Village	wood; bois	510	10 0	principal support post for ridge pole in long rectangular house, 18 cm depth, tree-ring dated to AD 1501, Extended Middle Missouri
25FT13	Compton	charcoal; charbon de bois	510	10 0	center post of House 1, 18-30" depth
39HU6	Arzberger	bone; os	510	10 0	bone and charcoal from X26, a large circular depression supposedly part of a bastion, Middle Missouri
25BW15	McIntosh	charcoal; charbon de bois	510	40	feature 8702
32CS101	Shea	charcoal; charbon de bois	510	50	feature 36, a pit in a fortified Plains village
EcKt-15	Tulabi Falls Portage	charred bone; os carbonisé	510	10 0	hearth, Unit 16, Level E, 13 cm depth, in humus
16BO8	Werner Mound	charcoal; charbon de bois	510	70	
47LC262	Ot	charcoal; charbon de bois	510	50	feature 30
47LC44	Sand Lake	charcoal; charbon de bois	510	70	feature 47, a basin-shaped refuse pit associated with early ridging episodes
47LC61	Pammel Creek	charcoal; charbon de bois	510	70	Level 5, feature 96
40SY1	Chucalissa State Park	charcoal; charbon de bois	510	10 0	stratum 1, log on floor of house 3, bottom of stratum 1, Walls-Pecan Point assemblage, the last occupation of the site
11U635	Dillow's Ridge	charcoal; charbon de bois	510	11 0	unit 59-06, in a small village and chert workshop
GkJa-__6	Kakago	charcoal; charbon de bois	510	80	Area A, Sq. G-3, hearth, Level XIII
12MG1	Bundy-Voyles	unknown; inconnu	510	70	Oliver phase
15BB45	New Field	unknown; inconnu	510	50	Madisonville
33WO8	Fort Meigs	charcoal; charbon de bois	510	55	scattered midden deposit, 6- 12" depth, Fort Meigs phase

33SA8	Bear Fort / Sandusky Avenue	charcoal; charbon de bois	510	70	Layer 3, a transitional Eiden/Wolf phase occupation
33HO52	Diamond	unknown; inconnu	510	65	
33LN14	Eiden	unknown; inconnu	510	50	
AkGv-__8	Parsons	cultigen; cultigène	510	80	house 8, feature 183
46PD1	Mouth of Seneca	unknown; inconnu	510	80	
36SO113	Railroad	unknown; inconnu	510	50	feature 44
BbGm-__2	Serpent Mounds	human bone collagen; collagène osseux humain	510	60	component 2, ossuary pit 2
BfFt-__2	Steward	charcoal; charbon de bois	510	80	midden deposit
VTCH94	Donahue	plant remains; restes de plantes	510	12 5	feature 9, unit 2, general association of grit-tempered, smoothed and fabric padded, incision, linear punctate, cord-wrapped stick, and cultigens
19SU8	Calf Island	charcoal; charbon de bois	510	14 5	
KfDe-5	Kamaiyuk 1	cassiope charcoal; charbon de cassiope	510	50	House 3 floor, south lobe hearth box, 13S/3W, Level 2/3
33HA36	Madisonville	unknown; inconnu	514	66	
EaOp-6	Saamis	bone collagen; collagène osseux	515	12 5	unit 73, SE quad, and XU 77, SE quad, Area C, 90 cm depth
5LA6204	Louden or Greer	charcoal; charbon de bois	515	65	total excavated deposit in midden circle
25WN1	Frank Parker	charcoal; charbon de bois	515	11 5	cache 3 of house 2
33MI3	Erp / Pleasant Hill	charcoal; charbon de bois	515	75	campfire 1.7 ft deep, 55 ft from wall toward center of site, an enclosure and village site on a bluff top
33WA100	Sandy Run	unknown; inconnu	515	10 5	
33FR52	O.C. Voss Village	charcoal; charbon de bois	517	11 0	Feature XIX associated with House II, feature XVIII, considered intrusion of later refuse pit into House II pattern
DiSo-1	Hesquiatt Village	charcoal; charbon de bois	520	90	component II, upper Zone C
35DO219	Section Creek	charcoal; charbon de bois	520	50	composite sample
45PC35	Fishing Rocks midden	charcoal; charbon de bois	520	11 0	ca. 10 m asl
45SK37	Tronsdal	bone; os	520	85	1.2-1.4 m depth, Strait of Georgia culture type
EeRl-36	Squatter's	charcoal; charbon de bois	520	80	Housepit 10, floor A
EbRg-1	Matthew Washington	charcoal; charbon de bois	520	90	roof beam of level-stripped semi-subterranean house, S8-10/W0-2
45CH426	Lucky Break	plant remains; restes de plantes	520	75	
45CH425	Osprey Camp	charcoal; charbon de bois	520	70	

EdRa-22	Curr	charcoal; charbon de bois	520	85	hearth feature 2-1 on west side of Housepit 1, Area 2, unit 99-100n/107-108e
DjPm-126	Castle Forks Buffalo Jump	bison bone collagen; collagène osseux de bison	520	90	Level 15, 230 cm depth
10BK26	Wahmuza	charcoal; charbon de bois	520	80	hearth, level D/A VII
DjOn-?	South Pediment 2	soil; sol	520	95	A-1 horizon of buried soil
24FR54	Dry Island	bone collagen; collagène osseux	520	10 0	occupation layer, 1.37 m depth
5RB748	Edge or Lookout Point	unknown; inconnu	520	75	
5GF110	Sisyphus Shelter	unknown; inconnu	520	55	
32ME413	Forkorner	charcoal; charbon de bois	520	50	village on a high terrace, Scattered Village
34WA2	Duncan	unknown; inconnu	520	90	feature 8, a hearth
39LM232	Pretty Head	wood; bois	520	80	component B, post 24 from the wall of feature 2, a house, Initial Middle Missouri
3SB29	Sliding Slab Rock Shelter	plant remains; restes de plantes	520	50	square N3/E2, levels 2-4, 20-40 depth, stratum 10C
23HI135	Holbert Bridge Mound	human bone; os humaine	520	13 5	unburned bone from burial 1 in a rock and earth burial mound
23SA131	Guthrey	charcoal; charbon de bois	520	75	feature 14, test F, squares 2 and 3
15BA4	Wickliffe	charcoal; charbon de bois	520	70	Mound A, refuse pit
11PK	Yokem Mounds	charcoal; charbon de bois	520	10 0	Mound 2, burned structure containing 8 Late Woodland burials of which one had 2 side-notched points in the rib cage
11F	Dickson Mounds	charcoal; charbon de bois	520	20 0	timber of a Mississippian house, with Mississippian Plain and Cordmarked pottery
11MT-?	Jasper Newman	charcoal; charbon de bois	520	10 0	feature 6, 1.4 ft depth, with a Middle Mississippian refuse pit and Cahokia Cord-marked pottery
11CO18	Reed-Walker	charcoal; charbon de bois	520	80	fire pit associated with shell-tempered pottery, chipping debris, and bone, Vincennes culture
15LY18	Tinsley Hill	charcoal; charbon de bois	520	40	feature 23, a central support post of a wall-trench structure
12LR329	Clampitt	unknown; inconnu	520	50	Oliver phase
20MA7	Boven Earthworks	charcoal?; charbon de bois?	520	10 0	
33.0	Reber Kame	charcoal; charbon de bois	520	60	
15HR21	Florence	unknown; inconnu	520	50	Elkhorn
15BK2	Snag Creek	unknown; inconnu	520	70	Gist
15LA31	Blankenship Rockshelter I	unknown; inconnu	520	13 5	



36FA26	Campbell Farm	charcoal; charbon de bois	520	100	feature 1, a refuse pit in a late prehistoric Monongahela site
NYCA5	Onoville Bridge	charcoal; charbon de bois	520	100	feature 103, south portion of trench surrounding a stockaded proto-Iroquoian village site
FjFp-4	La Grande Rivière	charbon de bois; charcoal	520	50	charbon de bois sous un long foyer composé d'un monticule de sable; datation douteuse
NYSM-2233	Klock	cultigen; cultigène	520	75	
NH	Smyth	unknown; inconnu	520	95	
13OB4	Wittrock	charcoal; charbon de bois	525	75	upper zone, Little Sioux phase Mill Creek village, post mold 2, square W 20B, 30-32" level
23MD43	Bontke Shelter	charcoal; charbon de bois	525	60	
21FA2	Vosburg	charcoal; charbon de bois	525	125	
3CG218	Burris	charcoal; charbon de bois	525	120	
22CO-?	Wilford	charcoal; charbon de bois	525	60	House 2, burned post in northeast wall trench of a platform type house superimposed on the larger House 1
33WO9	Dodge	bone collagen; collagène osseux	525	70	
18AG119	Cresaptown	charcoal; charbon de bois	525	70	trench D, level 2, feature 1, with limestone tempered ware
36LA2	Shenks Ferry	unknown; inconnu	525	50	
15BN21	Jewell	charcoal; charbon de bois	527	120	structure
46WD39	Neale's Landing	unknown; inconnu	527	89	
NiTs-1	Gupuk	caribou bone collagen; collagène osseux de caribou	530	90	Area 2, midden, 0-2N/2-3W, 100-110 cm level
35CLT21B	Ecola Point	charcoal; charbon de bois	530	90	
EdQx-15	Monte Creek	charcoal; charbon de bois	530	80	fill at bottom of circular storage pit
35HA1421	Indian Grade Spring	charcoal; charbon de bois	530	60	
EaPh-4	Little Bow	bone collagen; collagène osseux	530	75	0-10 cm depth
LA-1549	Henderson	unknown; inconnu	530	30	
25WT7	Shipman	charcoal; charbon de bois	530	70	post hole in Lodge 4
PcJq-5	Cape Garry	wood; bois	530	80	House 6, section B-2, floor zone, 50 cm depth
23BE125	Rodgers Shelter	charcoal; charbon de bois	530	70	horizon 1
47LC19	Midway Village	charcoal; charbon de bois	530	70	test pit 20, in center of small refuse area, 2.5-3 ft depth, with pottery, shell, fish and mammal bones
15HI15	Burcham	charcoal; charbon de bois	530	70	unit 1, wall trench

23SC	Dreckshage	charred wood; bois carbonisé	530	10 0	house beam overlying late Mississippi Trappist house floor
11F891	Crabbe	charcoal; charbon de bois	530	10 0	Pit 1, 3 ft depth, Spoon River Focus
11PP199	Hayes Creek	charcoal; charbon de bois	530	70	structure 2, feature 51, in a village with a U-shaped midden deposit and an apparent plaza
33PI44	Tick Ridge	unknown; inconnu	530	10 5	
Clif-__11	Nyman	charcoal; charbon de bois	530	90	Sq. 10W0N, Level II, Stratum II, hearth 15, 17.8 cm depth
15BE269	Big Bone Lick	charcoal; charbon de bois	530	10 5	densely consolidated organic sandy gravel with bison bones and shell-tempered pottery, 3.08 m depth
33WA372	Kern Effigy 1	charcoal; charbon de bois	530	95	soil immediately above and adjacent to the base of the effigy, 90 cm depth
33WO43	Hartman	unknown; inconnu	530	50	
AdHm-__29	Savage	charcoal; charbon de bois	530	80	Feature 5
18AG43	Moore Village	charcoal; charbon de bois	530	50	feature 255, Monongahela phase
AfHa-__1	Slack-Caswell	charcoal; charbon de bois	530	35	ash lens within longhouse
36AL40	Portman	charcoal; charbon de bois	530	90	
36WH737	Rice or Mon City	charcoal; charbon de bois	530	70	
BdGr-__10	Coulter	charcoal; charbon de bois	530	80	Sq. 310-335, subseq. 7, Midden 62, 20-30 cm level
36CD7	Kalgren	unknown; inconnu	530	50	
18FR18	Rosenstock	charcoal; charbon de bois	530	60	feature 4, with quartz and granite tempered ware
SgFq-1	Haa Island	plant remains; restes de plantes	530	60	House 19, roof area, 25-30 cm depth, 10 m asl
36CN44	Ramm	unknown; inconnu	530	10 0	
18CV254	Solomon's	charcoal; charbon de bois	530	70	feature A, with shell tempered Sullivan ceramics
BbGb-__5	McDonald Island 36H32	charcoal; charbon de bois	530	10 0	hearth
36CH	Kauffman II	unknown; inconnu	530	60	
BfFv-__1	McIvor	human bone collagen; collagène osseux humain	530	80	House 1 pits and Midden I
CcCt-1	Rustico Island	charcoal; charbon de bois	530	70	midden
EaNg-1	Avonlea	charred pottery encrustation; tartre de poterie carbonisée	535	23 0	the exterior surfaces of potsherds
25LC1	Schrader	charcoal; charbon de bois	535	11 5	floor of House 1 with artifacts suggestive of Nebraska culture influenced by Upper Republican component

36BT43	Bonnie Brook	charcoal; charbon de bois	535	105	Feature 76, a cylinder-shaped refuse pit in the southeastern sector between two houses
12H-?	Baker's Trails	cultigen; cultigène	539	39	Feature 11
AKXPA130	Aleck's Creek Weir	wood; bois	540	50	wood-stake fish weir
45JE15	Seal Rock	charcoal; charbon de bois	540	70	
JcRx-2	Pointed Mountain	charcoal; charbon de bois	540	120	square 133, southeast end of hearth, in sand
DcRu-123	Lime Bay Peninsula	charcoal; charbon de bois	540	80	basal shell midden deposits
DcRu-25	Old Songhees Reservoir	charcoal; charbon de bois	540	75	
35JA27	Johan II	charcoal; charbon de bois	540	90	stratum 1
45LE209	Koapk or Cowlitz Falls	charcoal; charbon de bois	540	70	
45GA42?	Pataha Canyon	charcoal; charbon de bois	540	60	
25BD1	Lynch	charcoal; charbon de bois	540	100	X65, House 3, a circular house, Middle Missouri
25CC96	Cass	charcoal; charbon de bois	540	110	pit F-7
25RH1	Leary	charcoal; charbon de bois	540	55	below plow depth and under 3 bison scapulae with the rim of a decorated pot
PaJs-2	Qariaraqyuk	caribou bone collagen; collagène osseux de caribou	540	90	composite, house 29, level 2, units 12, 17, 19, and 23, 15-20 cm depth
21ML33	Crosier Cemetery	charcoal; charbon de bois	540	110	direct association with Sandy Lake rim sherd
13SR153	Buchanan	soil extract; extrait de sol	540	60	humates
47LC95	Tremaine	charcoal; charbon de bois	540	70	feature 5, N12/W8, 100-120 cm depth
23BU10	Powers Fort	charcoal; charbon de bois	540	100	structure 1, 30.5 cm below datum, Powers phase
22HA35	Claiborne	charcoal; charbon de bois	540	60	Level I
11PP3	Millstone Bluff	charcoal; charbon de bois	540	50	unit 26, in a village of 25 house depressions arrayed around a triangular central plaza
15McN3	Rowlandtown	unknown; inconnu	540	70	Medley
SIHq-1	Bear Track	bone collagen; collagène osseux	540	60	house feature
9FL-?	Foster's Bend	charcoal; charbon de bois	540	55	timber fragments from a possibly palisaded village with a small (5%) Dallamar component and a large (95%) Lamar component
15FR36A	Carpenter Farm	unknown; inconnu	540	60	Elkhorn
33BU2	Campbell Island	unknown; inconnu	540	60	
33HA400	Schomaker	unknown; inconnu	540	60	

20SA-?	Kantzler	charcoal; charbon de bois	540	10 0	feature 9, upper element, with shell-tempered Oenota rim, late Saginaw Wayne ware, a sherd of Parker Festooned, and a carved antler
33ER7	Kurtz	bone collagen; collagène osseux	540	60	
46WD35	Barlett-Bird	unknown; inconnu	540	45	Feurt phase
BaGw-___1	Beeton	maple charcoal; charbon d'érable	540	90	midden deposits
AfGu-___2	Bonisteel	charcoal; charbon de bois	540	12 0	occupation layer 1, organic-rich sand
36NB3	Allenwood Bridge	unknown; inconnu	540	45	
36LA183	Murry	charcoal; charbon de bois	540	10 0	Funk phase
36PI13A	Faucett	charcoal; charbon de bois	540	10 0	Minisink component
6NL109	Disposal	unknown; inconnu	540	11 0	
ME30.42	Goddard	human bone collagen; collagène osseux humain	540	50	burial 24, 90S/85W, with copper beads
BfCv-3	Horne	charcoal; charbon de bois	540	55	Unit D2, quadrants 1 and 4, 88 cm below datum, small hearth, Feature 5
33FA-?	Baldwin Village	cultigen; cultigène	542	33	
CAHum118	Patrick's Point	charcoal; charbon de bois	545	11 5	
DjLx-1	Lovstrom	bison bone collagen; collagène osseux de bison	545	10 0	Block E, component 2
41UV2	Kincaid Shelter	charcoal; charbon de bois	545	12 0	zone 5
21.0	Bearskin Point	charcoal; charbon de bois	545	50	feature 3, a hearth in an aceramic site
19HD-?	Palmer or Epa	charcoal; charbon de bois	545	13 0	feature 2A, A3
AKSIT329	Kanalku Coal Claim Weir	wood; bois	550	50	wood-stake fish weir
CAHum-?	Yurok	charcoal; charbon de bois	550	60	just above sterile sand, ca. 6 ft depth
35LNC50	Yaquina Head	charcoal; charbon de bois	550	50	rock hearth
45PC101	North Nemah River midden	charcoal; charbon de bois	550	60	
35LIN468	Marion Creek	charcoal; charbon de bois	550	60	composite sample
35CL113	Compressor Station	charcoal; charbon de bois	550	80	
45PI50	Chambers Bay	charcoal; charbon de bois	550	60	
EeQw-6	Green Acres	charcoal; charbon de bois	550	70	Test pit 2, house fill, house pit 7, 1.80N/0.70W, 30-40 cm depth
26CH15	Humboldt Lakebed	charcoal; charbon de bois	550	60	feature
45SP233	Maribeau Park	charcoal; charbon de bois	550	60	

26NY301	Gatecliff Shelter	charcoal; charbon de bois	550	90	horizon 1, charcoal scatter from surface on which massive rock fell, also dated by GaK-3616
24BW675	Pilgrim	charcoal; charbon de bois	550	11 0	stone circle 73
24CA-?	Pishkun	charcoal; charbon de bois	550	20 0	hearth, 1.5 m depth, with bison bones and arrow points at a pishkun site
24HL946	Laulo	sediment; sédiment	550	70	feature B3, analytic unit 5
39ST56	Sommers	charcoal; charbon de bois	550	10 0	wall post set in floor of House XU-18, in a fortified village on a high terrace, Initial Middle Missouri
34BK2	Edwards I	charcoal; charbon de bois	550	70	post hole in square SI2-R5, with small notched and un-notched points, obsidian, Southwestern glazed sherds, and Dismal River-like pottery
25LP8	Royel Goodenow	charcoal; charbon de bois	550	80	Lower Loup component
25SY2	Cornish Meadows	charred wood; bois carbonisé	550	10 0	post in House 1
23MN732	Pigeon Roost Creek	charcoal; charbon de bois	550	10 0	horizon 1
47LC70	Pertzsch	unknown; inconnu	550	60	
13DM3	Kingston	charcoal; charbon de bois	550	95	Burlington phase village on an upland ridge
11J12	Twenhafel	charcoal; charbon de bois	550	10 0	burned timbers of a house, feature 18, containing Mississippian pottery
15McN18	Crawford Lake	unknown; inconnu	550	22 0	Dorena
15McN24	Steam	charcoal; charbon de bois	550	65	refuse pit
15CK146	Goolman	charcoal?; charbon de bois	550	40	feature
15FR101	Capital View	unknown; inconnu	550	50	Early Madisonville
9SW2	Singer-Moye	charcoal; charbon de bois	550	60	Mound A, main roof support of uppermost structure, to date last major occupation of the site
AeHI-__33	Haagsma	charcoal; charbon de bois	550	70	feature 29, in longhouse shared by Western Basin and Middle Ontario Iroquois peoples
46MR95	Saddle	charcoal; charbon de bois	550	50	feature 64, Monongahela phase
36ME617	Wansack	unknown; inconnu	550	10 0	
18FR14	Biggs Ford	charcoal; charbon de bois	550	90	feature 20, with limestone tempered ware
28WA2	Harry's Farm	charcoal; charbon de bois	550	90	pit containing Chance Incised and Durfee Underline pottery
36CO9	Catawissa Bridge	unknown; inconnu	550	35	
28WA5	Medwin North	unknown; inconnu	550	13 5	with 11 maize kernels

36PI25	Kutay	charcoal; charbon de bois	550	80	bell-shaped shell and refuse-filled pit with Chance Incised and Deowango rim sherds, on first terrace of Delaware River
FIFi-4	Rivière Laforge	charbon de bois; charcoal	550	60	puits C-12, échantillon E-2
BIFh-1	Lanoraie	charbon de bois; charcoal	550	10 5	dans le fond d'une fosse contenant du charbon de bois et des tessons de céramique
CcFd-3	Bourassa	collagène osseux de mammifère; mammal bone collagen	550	10 0	inconnu
RI	Block Island	charcoal; charbon de bois	550	15 0	Late Woodland component, with a Madison point
DfEf-2	Anse à Norbert	charbon de bois; charcoal	550	70	foyer
KkDo-3	Tungatsivvik site	caribou bone collagen; collagène osseux de caribou	550	50	House 5 floor, 1.10 m below datum, 6 m asl
EiBg-11	Delta à Blanc-Sablon	charbon de bois; charcoal	550	15 0	concentration R8, carré BK-85, 3-5 cm de la surface
NbTj-8	Verna Mae Firth	wood; bois	555	90	test pit S4, humus buried under berm deposits
25DO2	Parker	charcoal; charbon de bois	555	65	floor of house 1
16CD13	Belcher Mound	charcoal; charbon de bois	555	80	
33MY57	Incinerator or Sunwatch	charcoal; charbon de bois	555	10 0	square D-1, feature 13, 45-60 cm depth
lhFi-6	Cartier	charcoal; charbon de bois	555	80	level 1, 0-2.5 cm below sod, on floor of house 2
NYSM-1115	Cayadutta	cultigen; cultigène	557	58	
AKSEL188	McArthur Pass	charcoal; charbon de bois	560	50	upland test pit, level 1
DfSj-23	T'ukw'aa	charcoal; charbon de bois	560	50	defensive area, lowest matrix, just above bedrock
35LNC76	Ahnkuti	wood; bois	560	70	weir stake, Zone 2, feature 4
DhRx-66	Cypress Street	charcoal; charbon de bois	560	50	
45SJ11	Smallpox Bay	charcoal; charbon de bois	560	50	ca. 9 m asl
10IH1017	Upper Landing	unknown; inconnu	560	60	Feature 1
EcPn-2	Cattle Baron	charcoal; charbon de bois	560	10 0	
MbNs-1	Nadlok	caribou bone collagen; collagène osseux de caribou	560	95	test pit, extensive bone level below level 4 of 1985, pre-dating house 2
FbNp-17	Amisk	bone collagen; collagène osseux	560	70	Level 1, upper portion, modern soil, sandy loam, 10-20 cm thick
24RB253	Timi's Shelter	charcoal?; charbon de bois	560	50	feature 3B
FkMh-5	Pas Reserve	birch charcoal; charbon de bouleau	560	45	extremely thin stratum just below Selkirk Layer 1a, 85 cm below datum

39CA208	Helb	charcoal; charbon de bois	560	80	feature 417, level 4, subfloor pit within house 15, Extended Middle Missouri
39BF11	Crow Creek	charcoal; charbon de bois	560	75	single post (post 46) in House IV, feature 100, in the Wolf Creek component
41HI1	Kyle	charcoal; charbon de bois	560	80	stratum 5
NdLd-21	Tulloch Point	caribou bone collagen; collagène osseux de caribou	560	65	test pit 3, House 1, 10-15 cm depth
3CL27	Bayou Sel	charcoal; charbon de bois	560	80	post hole under feature 7, strat 7, sec N4 E10, east wall, with early Caddoan (Mid-Ouachita phase) ceramics
34LF66	Gertrude Bowman	charcoal; charbon de bois	560	80	test pit 1, house 1, unit III, Fort Coffee Focus, Fulton Aspect
23CE153	Flycatcher	charcoal; charbon de bois	560	100	feature 61, a pit in square 640N/W530, originating at depth of occupational level
47LC76	Olson or Olsen	charcoal; charbon de bois	560	70	feature containing fired rock, Oneota artifacts and organic remains
23CT54	Gooseneck	charcoal; charbon de bois	560	40	
23BU21A	Turner	charred plant remains; restes de plantes carbonisés	560	100	structure 8, Powers phase
23BU21B	Snodgrass	charcoal; charbon de bois	560	150	structure 14, 3.4 m below datum, Powers phase
11S63	Julien	charred wood; bois carbonisé	560	80	burned Sand Prairie phase structure, feature 91
23NM38	Lilbourn	charcoal; charbon de bois	560	75	
15FU24	White	unknown; inconnu	560	70	Medley
11SY62	Parking Lot	charcoal; charbon de bois	560	120	yellowish brown silty clay stratum, 15-20 cm depth
QdJb-3	Maxwell Bay	caribou bone collagen; collagène osseux de caribou	560	160	worked antler
47WN198	Karow Cemetery	charcoal; charbon de bois	560	70	feature 5, trash pit, 1 m diameter, filled with lithic debitage, tools, shell-tempered body sherds, some decorated as Lake Winnebago Trilled
47DR167	Whitefish Bay View	charcoal; charbon de bois	560	60	feature 6, an Oneota trash pit with Green Bay phase ceramics, chert flakes, faunal remains (mostly fish) and some floral remains including corn
33HA17	Sand Ridge	charcoal; charbon de bois	560	70	Fort Ancient component
33WO7	Williams	charcoal; charbon de bois	560	75	refuse pit, 15-30 cm below subsoil in sandy silt on Maumee River floodplain
33HI123	Paint Creek 7	unknown; inconnu	560	40	

33ER14	Mixer	bone collagen; collagène osseux	560	70	
46WD67	Muskingum Island	unknown; inconnu	560	45	Feurt phase
46NI267	GAI No. 24	unknown; inconnu	560	10 0	
AiHd-___8	Suraras Springs	carbonized maple wood; bois d'érable carbonisé	560	60	Feature 3, sand
36FA363	Grays Landing	unknown; inconnu	560	70	
36SO51	Kinsinger	unknown; inconnu	560	70	feature 131
36LA36	Nace	charcoal; charbon de bois	560	15 0	midden
BeFv-___4	Roebuck	cultigen; cultigène	560	10 0	composite sample of wood, corn, beans, cherry, and plum pits from three site areas, ash and midden, 20-60 cm depth
28ME114	Sturgeon Pond	unknown; inconnu	560	80	maximum age for the uppermost of three buried surfaces
28CM42	Steel	marine shell; coquillage	560	60	shell midden ca. 100 yards south-southeast of the site
NYSM-1200	Getman	charcoal; charbon de bois	560	75	bottom of an oval hearth, 7" below the plow line, one of the central fireplaces in a longhouse floor, with maize, Chance phase
DcEs-1	Chicoutimi	charbon de bois; charcoal	560	10 0	carré A0G5 et A0; 3e niveau appelé couche indienne, dans un foyer entre 14 et 16 pouces de profondeur
CkEe-9	Pelletier	charbon de bois; charcoal	560	70	foyer, aire I
BgDb-7	Coldwell Farm	charcoal; charbon de bois	560	60	Area 5, Level 3, 2N/18E
26DO38	Spooner Lake	charcoal; charbon de bois	565	12 0	Pit 2, 0-15 cm depth, Spooner IV component, Kings Beach complex, with Desert side- notched points, Sierra sub- type, and bedrock mortar pestle
45GR144	Mesa 12	charcoal; charbon de bois	565	80	
24TL1237	Bootlegger Trail	charcoal; charbon de bois	565	11 5	area B, level II hearth
DgMs-28	Pawson	bone collagen; collagène osseux	565	11 0	"garbage pit", 90 cm deep, top at 60-70 cm depth
32SN110	Ituhu	cultigen; cultigène	565	25	
15JO23a	Dameron Rockshelter	charcoal; charbon de bois	565	10 0	stratum III, upper level of midden (F-5) on talus slope
AiGx-___5	Gunby	charcoal; charbon de bois	565	80	house 9, pit feature 12, in ceramic vessel
36CN164	Memorial Park	charcoal; charbon de bois	565	40	Stewart phase
18AN17	Waveland Farm	charcoal; charbon de bois	565	55	feature 1, with shell tempered ware
GaGb-46h	Lac Washadimi, station H	inconnu; unknown	565	12 0	structure 21



19HD1	Indian Crossing	charcoal; charbon de bois	565	100	in feature with Jacks Reef Pentagonal and Levanna points
AKXBS031	Verdent Cove South Midden	charcoal; charbon de bois	570	50	midden test pit, level 2, 30 cm depth
35DO393	Tyee Burial	charcoal; charbon de bois	570	90	pit
45CA214	Pitship Point	charcoal; charbon de bois	570	70	1 m below sea level
CASoI236	Carquinez Strait	charcoal; charbon de bois	570	130	
DjRi-3	Milliken	charcoal; charbon de bois	570	100	zone A, covering burial 7 in upper part of topsoil, 75-80 cm depth
24CA1012	Ulm Pishkun	charcoal; charbon de bois	570	90	Area D North, Unit 55, Level X
24BH1610	Whoop-up and Yell	charcoal; charbon de bois	570	55	occupation layer, hearth
5LA2158	Upper Plum Canyon Shelter	unknown; inconnu	570	50	Panhandle
DgMp-66	Site 10	bone collagen; collagène osseux	570	55	Level 1
GjLp-3	Wuskwatim UNR 48	bone collagen; collagène osseux	570	90	nuggety clay, Unit 100n92w, SE 1/4, Level 3, 4-8 cm depth
32SN403	Hendrickson III	charcoal; charbon de bois	570	85	fortified village on a low terrace, near the surface of the pit that contained UGa-1396
NdLd-1	Malerialik	caribou bone collagen; collagène osseux de caribou	570	105	interior of House 3, sq. 2.2, 15-25 cm depth
11MS895	Lawrence Primas	wood; bois	570	70	feature 1
11AX-?	Kohler	charcoal; charbon de bois	570	80	MCC-1-4, 70-80 cm depth
23MI71	Callahan-Thompson	charcoal; charbon de bois	570	90	
12OR1	Cox's Woods	unknown; inconnu	570	70	Oliver phase
12B1036	McCullough's Run	unknown; inconnu	570	50	Oliver phase
33WO42	LaSalle Ossuary	bone collagen; collagène osseux	570	100	Indian Hills phase
33OT9	Petersen	unknown; inconnu	570	80	Wolf phase
33LA159	Kernisky	unknown; inconnu	570	55	
36AL17	McJunkin	charcoal; charbon de bois	570	65	feature 1, area B
28SX28	Minisink	charcoal; charbon de bois	570	55	with an engraved cobblestone and a large Kelso corded ribsherd atop a blanket of charcoal deep within a refuse pit
28SX-?	Rockelein	charcoal; charbon de bois	570	55	postmold in outline of a Late Woodland lodge
19WR-?	Cedar Swamp 3	charcoal; charbon de bois	570	50	hearth feature with lithic debitage and grit-tempered pottery
19DK44	Hornblower II	charcoal; charbon de bois	570	60	feature 1, a pit opening from stratum 1, 33 cm depth, with a Levanna point

TgAu-7	Ella Lake	willow charcoal; charbon de saule	570	10 0	fire place in front of tent ring
DbEi-?	Cap-de-Bon-Désir 109G	unknown; inconnu	570	10 0	
CfDk-2	Wilson	charcoal; charbon de bois	570	95	hearth feature #22, N50.0- 50.35/E58.3-58.6, just below the plow zone
HeDf-12	Lac de la Hutte Sauvage	charbon de bois; charcoal	570	80	loc-3, foyer B, puits 2S,4E, 0N,3E, 0N,2E, 2S,2E
DiSo-16	Yaksis Cave	charcoal; charbon de bois	575	85	zone B, with heavy shell concentrations
QaLf-2	Cape Walker	fox bone collagen; collagène osseux de renard	575	75	house 1
13WD8	Dixon	charcoal; charbon de bois	575	70	upper half of Pit #6, a trash pit along the river bank
11GE482	Apple Creek	charcoal; charbon de bois	575	90	feature 367b, an in situ remnant of the last fire burned in a hearth associated with Pike House
33JA3	Canter Caves	cultigen; cultigène	575	20 0	stratigraphic position unknown
33RO-?	James Starr Mound 1	cultigen; cultigène	579	33	
AKXHP311	Croxton	charcoal; charbon de bois	580	10 0	Area J, with end and side blades, discoids, flake-knives, leister parts, decorative art, and knife side blades
AKBAR002	Utqiavik = Utqiagvik	caribou bone collagen; collagène osseux de caribou	580	55	Mound 44 slump, Kilimatavik type harpoon head (Ba90-98)
AKXBS020	Northwest Lagoon	charcoal; charbon de bois	580	80	feature 19, test pit C, level 2, 28 cm depth
AKSIT283	Wilson Cove Fort	charcoal; charbon de bois	580	60	shelter 1, 15 cm depth
AKCRG336	Little Salt Lake Weir	wood; bois	580	60	wood-stake fish weir
DfSi-5	Macoah	charcoal; charbon de bois	580	60	concentration of shell, bone, and charcoal at base of site, 1.5 m depth
35TI57	Nehalem Bay Dune	charcoal; charbon de bois	580	60	
35LK656	Duncan Creek Rockshelter	charcoal; charbon de bois	580	60	level 5
35JA100	Elk Creek Lake	charcoal; charbon de bois	580	60	house 4 floor
35KL16	Border Village	charcoal?; charbon de bois?	580	10 0	unit 8, 20-30 cm depth
45GR75	Smokian	charcoal; charbon de bois	580	60	
26WA202	Shinner site F	plant remains; restes de plantes	580	80	Lovelock wickerware, 18-24" depth
35HA53	Stubblefield Lookout Tower	charcoal; charbon de bois	580	50	hearth
10CW43	Big Springs	wood; bois	580	80	post in main excavation
10CW226	Upper Terrace	charcoal; charbon de bois	580	70	unit 2, 45-52 cm depth

10EL294	Three Island Crossing	charcoal; charbon de bois	580	180	a thin occupational surface near the ground surface. with Rose Spring and Eastgate points, fish remains, mussel shells, and ground stone tools
10VY67	Big Creek Cave	charcoal; charbon de bois	580	70	
DgOv-72	Lancaster	charcoal; charbon de bois	580	180	170 cm depth
24CH69	Pablo Bottom	bone collagen; collagène osseux	580	220	occupation layer, 0.6 m depth
41HC6	Roper	charcoal; charbon de bois	580	70	
32ME7	White Buffalo Robe	charcoal; charbon de bois	580	60	village on a low terrace, Nailati
DgMh-48	Feland	mammal bone collagen; collagène osseux de mammifères	580	130	a single, thin, buried soil horizon ca. 13-15 cm depth
34GV22	Currie	charcoal; charbon de bois	580	70	Log A, square B5
11PK868	McFarland	unknown; inconnu	580	70	plowzone-destroyed feature
47PT29-2	Bigelow 2	charcoal; charbon de bois	580	65	Area K, feature 6, a pit, 2.2-3.1 ft depth, with Madison Ware, Effigy Mound culture
47JE1	Aztalan	charcoal; charbon de bois	580	100	pit 10, in the northeast quadrant of the village
11CK2	Robinson Reserve	unknown; inconnu	580	80	Langford component
20AN-?	Henderson-Lamb	charcoal; charbon de bois	580	140	unit S20/W10, 0-0.092 m depth, with pottery
33SA141	Baker I	bone collagen; collagène osseux	580	60	Fort Meigs phase
33SA187	Birchard Library	bone collagen; collagène osseux	580	70	
33HU37	Schaffer	bone collagen; collagène osseux	580	60	
AcHm-__3	Wolfe Creek	charcoal; charbon de bois	580	110	Feature 5
AdHl-__16	Sherman	charcoal; charbon de bois	580	70	Feature 8a, brown topsoil, ash, fired soil, charcoal, refuse
AeHl-__31	Cemetery	charcoal; charbon de bois	580	120	test excavation
33MU-?	Merry's Cave	unknown; inconnu	580	110	
33LA7	Reeve Village	unknown; inconnu	580	130	Fairport component
7S-G-22	Poplar Thicket	marine shell; coquillage	580	60	with Townsend ceramics
BgDs-10	Minister's Island	charred wood (5.4 g); bois carbonisé	580	210	hearth, Feature 5, N21-22/W26-27, 35 cm depth
25CC44	Zesson	charcoal; charbon de bois	585	100	feature 2, with a limited sample suggesting a mixture of Upper Republican and Nebraska culture pottery

PeJr-1	Learmonth	conifer wood; bois de conifère	585	85	driftwood, House 1, section C-3, floor zone, to date the earliest occupation, and probably the construction, of the house
16CM47	Pierre Clement	charcoal; charbon de bois	585	60	pit 27, to 40 cm depth below topmost level of a site with shell-tempered and Palaquimine pottery
JcDe-1	Nunaingok 1	charcoal; charbon de bois	585	90	sub-operation 3C, in midden associated with structures 1 and 2
AKTEL104	Ikpek area	charcoal; charbon de bois	590	80	feature 33 (Schaff's feature 8), 40-58 cm depth
AKKTZ069	Cape Espenberg	charcoal; charbon de bois	590	90	house feature 11, 28 cm depth
AKXBS030	Bear Cove Village	charcoal; charbon de bois	590	50	feature 7, test pit B, level 3, 20 cm depth
AKSEW056	Uqciuvit	unknown; inconnu	590	60	
45CA415	Daishowa	wood; bois	590	80	
CACCo30	La Serena	charcoal; charbon de bois	590	50	
35LK2844	Scott's Village	charcoal; charbon de bois	590	60	structure 1, feature 1, a shallow centrally located pit in the house floor, composite sample from feature 1
35LK-?	Paisley Five Mile Point Cave 3	charcoal; charbon de bois	590	90	structure 2, a large rock ring, composite sample
26EU1319	Numic	charcoal; charbon de bois	590	50	unlined hearth
24MO1071	Rattlesnake	human bone collagen; collagène osseux humain	590	160	burial
SBC1.11.13	Kokoweef Cave	charcoal; charbon de bois	590	120	level 30-32
42GR538	Bison Alcove	plant remains; restes de plantes	590	65	
48SW1670	Rock Springs Uplift	unknown; inconnu	590	50	
KjNb-6	Junction	charcoal; charbon de bois	590	60	Level 5, upper quartzite level
5LA125	Umbart Cave	charcoal; charbon de bois	590	110	Level 2, Upper Republican-like, or Late Panhandle?
32OL14	Cross Ranch	charcoal; charbon de bois	590	100	wooden brace between center supports, features 158 and 159, House 3, Extended Middle Missouri
39CO14	Lower Grand or Davis	charcoal; charbon de bois	590	90	feature 102, extramural trash-filled pit adjacent to house 12, Middle Missouri
DiLv-3	Lowton	bone collagen; collagène osseux	590	110	cultural layer
HgLt-1	Nagami Bay	human bone collagen; collagène osseux humain	590	40	cultural layer
QiLd-1	Brooman Point	caribou bone collagen; collagène osseux de caribou	590	40	House 12, 5.38W0.20, floor layer

15CE6	Turk	charcoal; charbon de bois	590	12 0	mound fill
46MS57	Lewis Old Town	unknown; inconnu	590	70	Feurt phase
33AD25	Island Creek Village	unknown; inconnu	590	40	
33LN2	White Fort	charcoal; charbon de bois	590	50	feature 96-15
BcGw-___1	Beswetherick	charcoal; charbon de bois	590	10 0	bottom of a large pit, 38 cm depth
36SO241	Jonas' Field	unknown; inconnu	590	60	feature 1
18AN180	Swamp Knoll	charcoal; charbon de bois	590	70	test pit 1, level 2, with shell tempered ware
SfFk-5	Sverdrup	plant remains; restes de plantes	590	50	House 6, sleeping area, 5-6 m asl
36MR5	Smithfield Beach	unknown; inconnu	590	60	
36PI135	Milford Beach	unknown; inconnu	590	80	
EkBs-1	Rivière Saint-Augustin	charbon de bois; charcoal	590	10 0	niveau pédologique
26WA198	Shinners site A	plant remains; restes de plantes	595	80	twined matting, from rope cache, 20" depth
39CA1	Vanderbilt Village	charcoal; charbon de bois	595	10 5	Extended Middle Missouri
14GE600	C.C. Witt Lodge	charcoal; charbon de bois	595	60	lodge
20WN-?	Gibraltar	corn; maïs	595	10 0	deposit 2, a pit 16" in diameter, 21" deep, with no other material in association
18AG44	Wallizer	charcoal; charbon de bois	595	95	feature 1, below plow zone, with limestone tempered ware
AKKOD043	Kizhuyak, site 240	charcoal; charbon de bois	600	10 0	small charcoal particles from lower midden layer, 3 m thick, expected to provide an early date for the Koniag phase
AKLIV-VP	Chatanika River	dog bone collagen; collagène osseux de chien	600	70	
35CS43	Bandon	charcoal; charbon de bois	600	11 0	ca. 1.5 m asl
JcRw-3	Klondike	charcoal; charbon de bois	600	95	Area C, Stratum 24
DcRu-2	Esquimalt Lagoon (11T)	charcoal; charbon de bois	600	50	midden, 4 m asl, 205-210 cm depth
CAMno382	Mammoth Junction	charcoal; charbon de bois	600	60	
45SP325	Fishtrap Rockshelter	charcoal; charbon de bois	600	50	
EfPm-134	Mindapor burial	bone collagen; collagène osseux	600	60	burial
41VV82	Coontail Spin	charcoal; charbon de bois	600	19 0	zone A-3, beneath a rock overhang
39ST9	La Roche	charcoal and wood; charbon de bois et bois	600	10 0	post butt of House 3, 35-80 cm depth
34HP45	Cooper	soil; sol	600	80	slump trench

13CK21	Phipps	charcoal; charbon de bois	600	100	upper zone, Little Sioux phase Mill Creek village, uppermost portion of midden, 8-18" depth
15HI1	McLeod Bluff / O'Byams Fort	unknown; inconnu	600	70	
20OG-?	Linseman-Walters Earthwork	charcoal; charbon de bois	600	75	south bank, excavation no. 2, 60 ft east of southwest gate, 16" below top of bank
33MS-?	Hobson	unknown; inconnu	600	80	
15BL80	Mills	unknown; inconnu	600	50	
33WO447	Black's Knoll	bone collagen; collagène osseux	600	80	
CbHs-__14	Patrick Point	charcoal; charbon de bois	600	40	Test pit 1, 50 cm depth
20MB-?	North Fort	charcoal?; charbon de bois?	600	70	
AaHp-__20	Robson Road	charcoal; charbon de bois	600	70	component 2, feature 31
33MU113	Richards	charcoal; charbon de bois	600	70	bottom of fire pit C, 76 cm below plow zone
AfHf-__10	Harrietsville	charcoal; charbon de bois	600	75	Midden 1
36WH283	Wylie 3	charcoal; charbon de bois	600	80	Monongahela
31MG2	Town Creek Mound	charred wood; bois carbonisé	600	140	wall post of final temple structure on the mound
36AL4	Bunola	charcoal; charbon de bois	600	100	feature 1, a large but shallow basin-shaped pit in a late prehistoric Monongahela site
36WA53	Kinzua	charcoal; charbon de bois	600	100	large storage pit inside rectangular proto-Iroquois house
BaGo-__29	Gibbs	charcoal; charbon de bois	600	60	Midden, N13E0, 30-40 cm depth
36FR31	Fort Loudoun	unknown; inconnu	600	65	
LIDw-7	Junction B	caribou bone collagen; collagène osseux de caribou	600	70	cultural feature
19PL-?	Oak Island	charcoal; charbon de bois	600	70	with Levanna points
BdCx-5	Reid	charcoal; charbon de bois	600	45	shell heap, the lowest of three levels, associated with small corner-notched projectile points of semi-crystalline siliceous material
32SN246	Naze	cultigen; cultigène	605	45	
12B184	Lykins	unknown; inconnu	605	85	Oliver phase
NiTs-2	Pond	moose bone collagen; collagène osseux d'original	610	80	House 2, 0-2N/2-4E, 60-70 cm depth, near the floor, composite sample
DcRu-65	Fort Rodd Hill	charcoal; charbon de bois	610	100	
45PI13	Minter II	charcoal; charbon de bois	610	60	
CANev-?	Childers	charcoal; charbon de bois	610	75	unstratified midden, 12-24" level, Martis complex

26WA729-T	Warrior Point, Cave T	plant remains; restes de plantes	610	80	basketry in the 3-6" level of a 60" deposit
10CR358	East Fork Lookout	wood; bois	610	70	possible housepit, 3.3 m diameter, with fragments of Douglas fir beams protruding from its walls
24HL1078	Thunderstruck	charcoal; charbon de bois	610	60	feature B, block B, analytical unit 2
IjOg-2	Charlot River	charcoal; charbon de bois	610	110	square F, hearth in tent feature, the lower of two superimposed components
14ML5	Solomon River	charcoal; charbon de bois	610	100	unit X105, a central hearth, eight caches, and a scatter of 15 postmolds, 13 of which form two more or less parallel walls
25SY1	Farnsworth	charcoal; charbon de bois	610	140	floor of house 2
34CK6	Harlan	charcoal; charbon de bois	610	75	mound unit 4, square N1-L6, layer A, early Gibson Aspect
16IV128	St. Gabriel	charcoal; charbon de bois	610	65	
47LC185	Northshore	charcoal; charbon de bois	610	70	feature 2, with Oneota ceramic similar to Blue Earth Phase styles in south-central Minnesota
15FU4	Adams	charcoal; charbon de bois	610	70	midden
20AE195	Elam	unknown; inconnu	610	70	Berrien phase
33LU10	Gladieux	charcoal; charbon de bois	610	150	test pit 1, feature 1, a firepit
CdHk-___3	Foxie Otter	charcoal; charbon de bois	610	80	hearth feature, with a grit-tempered sherd, E-0, quad 4, level 4
33CU-?	Staas	unknown; inconnu	610	70	
BcHi-___3	Nodwell	charcoal; charbon de bois	610	75	House 3 pit
46MC1	Snidow	unknown; inconnu	610	60	Bluestone phase
36WA36	Gould Farm	unknown; inconnu	610	80	
BbGi-___1	Lite	charcoal; charbon de bois	610	60	composite sample, Area B, 30-36 cm depth in midden
444WM119	White Oak Point	unknown; inconnu	610	55	with Townsend and Currioman ceramics
28BU56	Savich Farm	charcoal; charbon de bois	610	30	feature 114, a Late Woodland refuse pit in top soil, extending into subsoil and an Archaic component
BhFl-1e	Pointe-du-Buisson, Station 4	charbon de bois; charcoal	610	110	foyer le plus au sud de l'alignement de 3 foyers, puits Q-36, adjacent aux racines d'un gros arbre
CT5-11	Yellow Trail	charcoal; charbon de bois	610	70	excavation unit adjacent to the hearth dated by Beta-13464
19NT-?	Arthur Dean	human bone collagen; collagène osseux humain	610	80	burial

BcDc-4	Eisenhauer	oak? charcoal; charbon de chêne?	610	95	4.6 x 1.5 m area beneath shell underlain by black soil and ash 5-15 cm deep
CbDd-2	Wintenberg	marine shell; coquillage	610	60	lot 4, unit 19, midden
45KL26	Wakemap Mound	charcoal; charbon de bois	615	10 0	stratum B, test trench 2
45GR162	Mesa 06	charcoal; charbon de bois	615	14 5	
DIPd-3	Ross	charcoal; charbon de bois	615	12 0	component II, unit B, dispersed on floor, with no diagnostic artifacts
JcRw-14	Hughes	charcoal; charbon de bois	620	70	square 18, base of lake proglacial lake silt on varved lake clay
35DO36	Crispin Ranch	charcoal?; charbon de bois?	620	60	
CALak153	Cold Creek Canyon	charcoal; charbon de bois	620	60	base of midden, unit S12/E16, 60-70 cm depth, Borax Lake Pattern of North Coast Range cultural sequence
45KI432	West Seattle Pump Station	charcoal; charbon de bois	620	50	
CASac6	Johnson	charcoal; charbon de bois	620	10 0	basketry and wood of grave pit burning of burial 67, the late phase 1 period of the Late Horizon
100E1481B	Rattlesnake Midden	freshwater shell; coquille de mollusque d'eau douce	620	80	
42BO36	Hogup Cave	plant remains; restes de plantes	620	70	stratum 14, square 110L100 (FS 569)
FaOm-22	Bodo Archaeological Locality	Bone collagen; collagène osseux	620	50	
24CB91	Shield Trap	charcoal; charbon de bois	620	65	stratum II, 66 cm below datum, provenience uncertain due to vandalism or fine sediment infilling
KfNm-3	Hennessey	burned caribou bone collagen; collagène osseux de caribou	620	95	circular pit structure, south end of site, 13 cm depth
34CU10	Little Deer	unknown; inconnu	620	60	feature 3, a hearth, Turkey Creek Phase
32MO2	Bendish	charcoal; charbon de bois	620	10 0	floor of House 3, midway along the front wall at the entry, Extended Middle Missouri
3LR2	White Cliffs	charcoal; charbon de bois	620	70	beam in a burned structure on the old ground surface under Mound 2, Millers Crossing phase
15HK22	Andalex Village	unknown; inconnu	620	70	
20MK1	Juntunen	charcoal; charbon de bois	620	10 0	feature 20, an undisturbed horizontal concentration of sherds with fish bone, scales and charcoal, Springwells phase
33WO128	Wright	unknown; inconnu	620	55	



33AD23	Wamsley Village	unknown; inconnu	620	80	
33CS92	Tumblin	unknown; inconnu	620	80	
33AB2	Conneaut Fort	charcoal; charbon de bois	620	12 0	
36AL16	McKees Rocks Village	charcoal; charbon de bois	620	10 0	feature 39, a pit in a late prehistoric Monongahela site
BcGw-__10	Dunsmore	charcoal; charbon de bois	620	60	Level 4 in undisturbed midden, 30 cm depth
36AR221	Kimmel Mine	unknown; inconnu	620	80	
DcGt-2	Lac Duparquet	charbon de bois; charcoal (7.5 g)	620	45	puits N1 à environ 30 cm sous la surface dans une dépression constituée de couches de charbons de bois et de sable superposées contenant des éclats
BdGr-__1	Benson	charcoal; charbon de bois	620	70	Sq. 295-330, House 14, Feature 2
NYSM-2332	Garoga	charcoal; charbon de bois	620	10 0	feature 11, a deep pit, 99 cm diameter, 147 cm deep
BhFl-1b	Pointe-du-Buisson, Station 2	restes d'animaux carbonisés; charred animal remains	620	50	croûte de carbonisation sur la paroi intérieure provenant de vieux bouillons
MhBw-3	Qiqitalakjuak	wood; bois	620	80	House 2, section B-2, quadrant 2, between slabs and right bench support
CcCm-9	Wakelin	charcoal; charbon de bois	620	15 0	Level 5, red sandy clay, hearth and ash lens, 20 cm depth
11ML-?	Noble-Weiting	cultigen; cultigène	621	36	Feature 8
JgLp-1	Mountain Lake	charcoal; charbon de bois	625	90	lower bank, area 1, pit 2, level 2
38FA48	Blair Mound	charcoal; charbon de bois	625	75	Level C-D contact
AgHd-__1	Force	charcoal; charbon de bois	625	75	Pit feature 39
7K-F-17	Island Field	human bone collagen; collagène osseux humain	625	90	burial 88
NYSM-1180	Oak Hill 7	charcoal; charbon de bois	625	75	bottom of pit 1, 18" depth, with fired rocks, a Chance Incised vessel, one Durfee Underlined rimsherd, and an undecorated trumpet pipe, Owasco
KeDe-1	Kodlunarn Island	conifer charcoal; charbon de conifère	628	15 0	test pit south of the ship's trench, bloom 1
AKKAR001	New Karluk	wood; bois	630	50	floor plank in house 9A
35LNC57	Cape Creek	charcoal; charbon de bois	630	50	composite sample
45PC102	Niawiakum	charcoal; charbon de bois	630	90	
DcRt-10	Willows Beach	charcoal; charbon de bois	630	65	
DgRs-1	Beach Grove	charcoal; charbon de bois	630	18 0	28-31'N, 0'W of Datum A, 30" depth, charcoal layer 6" below burial 9
45SA116	McClellan Meadows	charcoal; charbon de bois	630	60	

35HA1261	Dunn	charcoal; charbon de bois	630	60	House 1
10GG1	Bliss	charcoal; charbon de bois	630	11 0	Area B, backhoe trench 5
EePm-102	DeWinton burial	bone collagen; collagène osseux	630	75	burial disturbed by house construction
DhPj-69	Belly Burial	human bone collagen; collagène osseux humain	630	80	burial disturbed by erosion
24YE32	Ryder	charcoal; charbon de bois	630	70	
5ST278	Frisco Bay	unknown; inconnu	630	10 0	open camp
EaNk-3	Mitchellton	human bone collagen; collagène osseux humain	630	75	rock cairn burial
5JF8	Graeber Cave	charcoal; charbon de bois	630	75	grid A-4, with a flat-bottom ceramic vessel, Shoshoean
5BA320	Carrizo Ranches	charcoal; charbon de bois	630	50	hearth A, level 1, 10 cm depth
32DU955A	Bobtail Wolf	bone amino acid; aminoacide osseux	630	60	west terrace, Block 2, 537N/471E, 13 cm depth, top of Btn horizon, mixed components
41SW23	Deadman's Shelter	charcoal; charbon de bois	630	14 0	stratum D
15BA2	Twin Mounds	charcoal; charbon de bois	630	70	unit 1, posthole
11AX253	Pettitt	charcoal; charbon de bois	630	10 0	
15WA374	Dunklau	bone collagen; collagène osseux	630	85	burial
20GT-?	Samel's Field	charcoal; charbon de bois	630	11 0	Level 1, 0-0.3 ft depth
20MB178	Verchave I	charcoal; charbon de bois	630	10 0	feature 2, a Late Woodland refuse pit containing plain, smoothed, fine-tempered sherds and a Madison point, Wolf phase
AcHo-___1	Liahn I	charcoal; charbon de bois	630	30	Pit feature 20
33AT427	McCune village	charcoal; charbon de bois	630	10 0	above zone containing only Late Woodland sherds, 1'2" below surface and plow zone
AdHm-___7	Bellamy	charcoal; charbon de bois	630	75	Feature 6, flotation sample from circular pit
AfHj-__29	Thoren	charcoal; charbon de bois	630	75	Feature 3
36WH297	Meadowcroft Rockshelter	charcoal; charbon de bois	630	10 0	firepit, stratum VIII, feature 12
36GR63	Gensler	unknown; inconnu	630	65	
BgFo-18	McDonald	charbon de bois; charcoal	630	60	inconnu
19DK148	Lucy Vincent Beach	charcoal; charbon de bois	630	40	feature 9, a pit feature, 70 cm below datum, with pottery, debitage, faunal and floral remains

CkEk-4	Darisse	charbon de bois; charcoal	630	80	sondage E, mince couche culturelle d'où provient l'échantillon
DbEj-7	Anse-aux-Pilotes IV	collagène osseux de mammifères marins; marine mammal bone collagen	630	10 0	puits no 7, couche B
ME91.1	Hathaway	charcoal; charbon de bois	630	10 0	component IV, feature I, burial 28
16ST2	Tchefuncte	charcoal; charbon de bois	633	15 0	site ST 2, midden A, top 6"
EaLf-1	Lockport	charcoal; charbon de bois	635	90	Bed C/E, N124/W35, contact of Beds C and E where Bed D is absent, 0.83 m depth
23PL16	Coons	charcoal; charbon de bois	635	60	0-30E, plowzone-mix boundary of House 1
18MO9	Winslow	charcoal; charbon de bois	635	80	refuse pit 12, 48-55" depth, with Late Woodland sherds
GaGd-8	Lac Kanaaupscow	charbon de bois; charcoal	635	80	station A, foyer 1, constitué d'un monticule de sable entouré de petites pierres rondes; il contenait des restes osseux
NYSM-1118	Briggs Run	cultigen; cultigène	635	45	
AKXMK047	Dumond's MK-26	charcoal; charbon de bois	640	90	stratum 3, test pit A, level 3, 55 cm depth
DfRu-8	Helen Point	charcoal; charbon de bois	640	90	Carlson's assemblage 14
10NP105	Lenore	charcoal; charbon de bois	640	14 0	House D, with fire-cracked rubble, 246 cm depth
42UT150	Smoking Pipe	bone collagen; collagène osseux	640	11 0	midden
24HL101	Wahkpa Chu'gn	bison bone collagen; collagène osseux de bison	640	90	bison kill, area C, unit 72, level 2
24FR52	Holmes Terrace	bison bone collagen; collagène osseux de bison	640	12 0	Area A, Level 1
5PE56	Avery Ranch	charcoal; charbon de bois	640	10 0	structure 1, test pit 5, level 5
32OL159	Bundlemaker	charcoal; charbon de bois	640	60	Zone III a Plains Village temporary camp on a dissected high terrace
39ST238	Durkin	charcoal; charbon de bois	640	55	floor of long rectangular house in unit 6, Initial Middle Missouri
47DO-?	Elmwood Island	unknown; inconnu	640	70	feature 192, with collared ceramics, Kekoskee phase
20AE812	Armintrout- Blackman	charcoal; charbon de bois	640	50	feature 5, a lens of charcoal- stained soil at the base of the plow zone, possibly the bottom of a fire pit
20AE56	Allegan Dam	charcoal; charbon de bois	640	10 0	feature 17, a storage pit, 60.9- 89 cm depth, with grit- and shell-tempered ceramics
SIHq-3	Remus Creek	muskox bone collagen; collagène osseux de boeuf	640	85	semi-subterranean feature

		musqué			
33FU4	Cufr	unknown; inconnu	640	50	
33AD36	Killen Ridge	unknown; inconnu	640	80	
33OT6	Libben	charcoal; charbon de bois	640	10 5	
33ER409	Weilnau	unknown; inconnu	640	80	Eiden phase
AlGt-__36	New	charcoal; charbon de bois	640	75	House 1, Feature 28, a refuse pit, 35 cm depth, a large sample
NYSM-287	Nahrwold	charcoal; charbon de bois	640	95	storage pit with much bone and flint refuse, maize and beans, a sinew-stone, flint knife, and Castle Creek Beaded type pottery, Owasco
19MD-?	Spy Pond	charcoal; charbon de bois	640	85	
ME	Hunneman	unknown; inconnu	640	12 0	general association of grit-tempered, smoothed, cord-wrapped stick decorated ceramics, ceramic period 6
5MF373	Site A:10:1	cultigen; cultigène	645	75	beehive-shaped masonry granaries with stone material resembling Shoshonean types
AfHh-__28	Boisclair	charcoal; charbon de bois	645	75	Feature 3
33BL3	Opatrny Village	charcoal; charbon de bois	645	55	feature 7C, Monongahela phase
AKPSM027B	Putu	charcoal; charbon de bois	650	10 0	feature 7 hearth, Zone I, upper soil unit
AKFAI001	Campus	bone collagen; collagène osseux	650	20 0	L5SE, L6SW, middle to lower zone, 10-15 cm depth, 5 samples combined
35LA420	Chalker	unknown; inconnu	650	50	
CAMnt-?	Gamboa	charcoal; charbon de bois	650	90	large shell mound, trench 1, 93 cm depth overlying sterile soil
10AA17	Swan Falls	charcoal; charbon de bois	650	60	rye grass matting that covered a small wickiup structure, with pottery and Elko series and Rose Spring points
EhPv-?	Banff	charcoal; charbon de bois	650	10 0	occupation 3
DiMe-16	Duthie	bone collagen; collagène osseux	650	27 0	cultural layer
39DW240	Grover Hand	charcoal; charbon de bois	650	20 0	burial pit fill in Mound 1
39RO5	Hartford Beach Village	charcoal; charbon de bois	650	70	feature 3, level 1, 23-33 cm depth, with ceramics similar to the Initial Middle Missouri
13WA2	Clarkson	charcoal; charbon de bois	650	55	feature 2, refuse pit
21WA3	Sheffield	charcoal; charbon de bois	650	18 0	feature 5, a firepit in the lowest level of square H, Blue Earth focus
21GD3	Silvernale	unknown; inconnu	650	12 0	refuse pit containing only Blue Earth phase Oneota ceramics

KfJm-3	Meliadine 1	caribou bone collagen; collagène osseux de caribou	650	60	interior of House 1, occupation layer under east wall
47GT377	Fred Edwards	charcoal; charbon de bois	650	70	feature 50, a deep basin-shaped pit
15BE36	Arrasmith	unknown; inconnu	650	60	
33HY168	Baden I	unknown; inconnu	650	55	
33FU5	Patyi-Dowling	charcoal; charbon de bois	650	50	pit 3 m from burial containing undefined variant of Macomb Linear ceramics
46WD38	Blennerhassett Village	charcoal; charbon de bois	650	95	stratum 2, Feurt phase
46BX73	OSB Two	unknown; inconnu	650	60	
AfHd-__3	Uren	charcoal; charbon de bois	650	60	pit feature in longhouse
36WH48	Morganza Village	charcoal; charbon de bois	650	70	Monongahela
BfGx-__13	Camp Kitchikewana 13H30	charcoal; charbon de bois	650	12 5	hearth
DaGt-1	Lac Opasatica	charbon de bois; charcoal	650	80	structure 8, un foyer
36LU77	Airport II	charcoal; charbon de bois	650	40	feature 30, a deep basin pit
FIFo-1	Mintobakwoustik	charbon de bois; charcoal	650	50	dans un long foyer composé d'un monticule de sable
28OC101	Wells Island	marine shell; coquillage	650	75	
BgFg-1	Bilodeau	charcoal; charbon de bois	650	11 0	shallow pit containing bones and scattered charcoal, possibly a disturbed hearth in the center of an oval dwelling
ME7.12	Standish	organic sediment; sédiment organique	650	60	buried flood deposits
DcEe-2b	Cap-à-l'Orignal, Section B	charbon de bois et bois; charcoal and wood (19.3 g)	650	90	deux échantillons réunis, puits N85, W90 et N90, W86; lambeaux d'une couche culturelle organique épargnés par la charrue
33RO4	Howard Baum	unknown; inconnu	652	39	
15MS1	Fox Farm	cultigen; cultigène	652	33	FG09 Tu2
5LO4	Kasper	charcoal; charbon de bois	655	25 0	Central Plains, Upper Republican phase
13LA1	McKinney	charcoal; charbon de bois	655	90	feature 4, 1970 test, Toolesboro locality, village on a loess-capped high terrace
11F1284	Orendorf	cultigen; cultigène	655	43	feature 761
19FR17	Pine Hill	charcoal; charbon de bois	655	16 5	pit feature 17
33DL11	W.S. Cole	unknown; inconnu	656	11 3	
AKSIT229	Starrigavan	unknown; inconnu	660	50	
35CS130	Osprey Weir	wood; bois	660	50	weir stake, baseline east, 16.2E/1.3S
35TI-004	Cronin Point	unknown	660	60	
DhRt-2	Stselax Village	charcoal; charbon de bois	660	13 0	charcoal and black ash layer at base of house floor deposits

35DO383	Susan Creek Campground	charcoal?; charbon de bois?	660	70	rock feature
35KL231	Odell Lake	charcoal; charbon de bois	660	60	
45OK355	Sntl'exwenewixwtn	human remains; restes humains	660	70	
HkPa-14	Pelican Beach	charcoal; charbon de bois	660	70	Level 3
24CH234	Morrow-Bateman Kill	bone collagen; collagène osseux	660	60	bison kill, test pits 2 and 7, Level 6
24PH8	Johnson Bison Kill	charcoal; charbon de bois	660	70	ring 17
DiLv-14	Heron	bison bone collagen; collagène osseux de bison	660	10 0	on slope, 30 cm depth
39LM146	Antelope Dreamer	corn; maïs	660	50	feature 107, house 11, floor, Initial Middle Missouri
23PL4	Young	charcoal; charbon de bois	660	10 0	House 1, feature 1, an interior support post
13AM103	Hartley Fort	charcoal; charbon de bois	660	12 0	Orr focus burials
23PM549	Denton Mound	charcoal; charbon de bois	660	10 0	large center post in a probable funeral house, early part of Late Mississippian Nodena phase
47MQ65	Bornick	charcoal; charbon de bois	660	50	feature 1, test square 21, 1.5-2.0 ft depth, a component of the Grand River phase
15FU3	Sassafras Ridge	charcoal; charbon de bois	660	80	structure
15ML109	Chambers	charcoal; charbon de bois	660	60	feature 54
20DE-?	Summer Island	charcoal; charbon de bois	660	10 0	pit originating in a midden, 0.65 ft depth, with fired rock, a scraper, burned fish and mammal bone, and Oneota pottery
12JO289	Sugar Creek	unknown; inconnu	660	50	Oliver phase
9FL100	Plant Hammond	charcoal; charbon de bois	660	70	structure 3, measuring 12 x 15 m
46MO1	Cotinga Mound	unknown; inconnu	660	70	Adena
33MU54	Eddie Paul Rockshelter	charcoal; charbon de bois	660	50	earliest occupation of site, with triangular projectile points and Peters cord-marked pottery, 0.55 m depth, the lowest occupation level
33BL15	Tower	charcoal; charbon de bois	660	60	feature 4, an elliptical refuse pit, Monongahela phase
46SU9	Island Creek	unknown; inconnu	660	14 5	Bluestone phase
BcGw-__26	Wiacek	charcoal; charbon de bois	660	80	interior house feature
36PE2	Shermans Creek	unknown; inconnu	660	30	
36UN11	St. Anthony	charcoal; charbon de bois	660	70	Feature 4
18DO117	Locust Neck	charcoal; charbon de bois	660	70	feature 16b, with shell tempered ware

VTCH46	Winooski	plant remains; restes de plantes	660	13 0	Level 2, area 5, feature A
ME5.06	Biddeford	pottery encrustation; tarte de poterie	660	40	deposits on a Ceramic Period 6 sherd
GbEI-8	Lac Huguet	charcoal; charbon de bois	660	11 0	hearth 1A, a large number of small fragments from throughout the hearth deposit, offering little chance of contamination
DaEI-6	Anse-à-la-Vache	charcoal; charbon de bois	660	60	level A, bottom of cooking pit, 49 cm depth
LIDj-1	B-1	seal bone collagen; collagène osseux de phoque	660	90	Test H-18, lowest level, 50-60 cm depth
BfDr-3	Gooseberry Point	charcoal; charbon de bois	660	50	
25CC28	Walker-Gilmore	charcoal; charbon de bois	665	55	cultural layer in either the Mullenix or the Turton member of the De Forest Formation, Keith variant
11MS-?	Loyd	cultigen; cultigène	665	10 0	feature 48, a Mississippian storage/refuse pit
46KA7	Marmet Bluffs	unknown; inconnu	665	45	
7S-G-14	Warrington	marine shell; coquillage	665	75	with Townsend ceramics
9FU1	Sandtown	charred wood; bois carbonisé	666	55	direct association with a Savannah Complicated Stamped vessel, representing North George Savannah
NkRi-3	Tiktalik	caribou bone collagen; collagène osseux de caribou	670	40	house 4, test cut 1, square 2, on floor
45SA5	Caples	charcoal; charbon de bois	670	30 0	
35HA403	Headquarters	charcoal; charbon de bois	670	80	midden
GIQp-6	St. Charles Oblate Church	charcoal and soil; charbon de bois et sol	670	12 0	Level 4, 20-25 cm depth
KePl-1	Frank Channel	charcoal; charbon de bois	670	70	hearth, unit D, 22 cm depth, with fish bone
10CR201	Redfish Lake Overhang	charcoal; charbon de bois	670	13 0	coarse sandy stratum underlying glacial till near WSU-1397, 120 cm below surface of WSU-1395
DIPk-2	Morkin	charcoal; charbon de bois	670	95	level 3
5RB804	Gnat Home	unknown; inconnu	670	27 0	
5BL65	Murray Game Drive	charcoal; charbon de bois	670	15 0	pit 4, a rock-filled pit, 20 cm depth, with corner-notched and side-notched projectile points, possibly an average of several occupations
32MZ58	Mondrian Tree	charcoal; charbon de bois	670	80	composite, zone 1, horizon 7, BU-3, F-33, F-34, F-35, F-38, F-84, F-85, 20 cm sd

32ME1	Clark's Creek	charcoal; charbon de bois	670	10 0	outer rings of a log, in feature 1, an undercut pit in test no. 1, Extended Middle Missouri
DhMg-37	Snyder Dam	charcoal; charbon de bois	670	70	hearth in river bank, 107-112 cm depth
39HU7	McClure	charcoal; charbon de bois	670	14 0	cache pit fill, 27-80 cm depth, feature 3, below the floor of House 2 in a late circular house village, Middle Missouri
39LM208	Jiggs Thompson	wood; bois	670	12 0	component B, a storage pit beneath the floor of feature 2, Initial Middle Missouri
25SM9	Bill Packer	charcoal; charbon de bois	670	70	storage pit in floor of lodge
14RY401	Griffing or Smoky Hill	charcoal; charbon de bois	670	60	feature 19, a storage pit
13ML219	Stonebrook	charcoal; charbon de bois	670	70	center post, House 1, 2.2 ft depth
3MN53	Standridge	charcoal; charbon de bois	670	60	floor of feature 12, the earliest structure
DkJc-___1	Abeki Point	charcoal; charbon de bois	670	11 0	test trench, with Peninsular Woodland ceramics, 40 cm depth
47DR-VP	Brussels Hill Cave	charcoal; charbon de bois	670	70	upper limit of underground fossiliferous deposits in a deep irregular fissure in Silurian dolomite
12MA47	Jose	unknown; inconnu	670	50	Oliver phase
20CX18	O'Neil	charcoal; charbon de bois	670	10 0	Area A, occupation zone III, a hearth, 73.2 cm depth, unit N380/W50
33LU11	Doctors	charcoal; charbon de bois	670	65	stratum representing a single cultural occupation
33SA188	Pelahatchie	human bone collagen; collagène osseux humain	670	60	supine adult male burial with a whole, incipient collared, Stafford Stamped vessel
33MN1	Greencamp	unknown; inconnu	670	70	
AcHn-__10	Belanger	charcoal; charbon de bois	670	70	Feature 1
46NI275	GAI No. 32	unknown; inconnu	670	70	
44MY11	Ingles Bottom	charcoal; charbon de bois	670	12 0	46-61 cm depth, with pottery of Radford series
AiGx-___1	Bennett	charcoal; charbon de bois	670	10 0	pit 41, directly under burial B, 105 cm depth
18WC25	Potts I	charcoal; charbon de bois	670	60	feature 2, with shell tempered ware
BgFo-___1	Glengarry Cairn	charcoal; charbon de bois	670	15 0	upper component
CeEu-10	Saint-Augustin	charbon de bois; charcoal	670	80	puits AL43, horizon B
ME9.16	Great Diamond Island	charcoal; charbon de bois	670	45	Area B, unit 1R0, feature 19, stratum IVa, with shell-tempered, fabric paddled, cord-wrapped stick and incision decorated ceramics, ceramic period 5



ME42.43	Flye Point 2	charcoal; charbon de bois	670	90	base of midden, with shell-tempered, smooth or fabric paddled, cord-wrapped stick, dentate and linear punctate decorated ceramics, ceramic period 5
BbDh-6	Eel Weir	charcoal; charbon de bois	670	14 0	possible hearth in house pit with cord-wrapped stick ceramics
MbDc-1	Niutang	seal bone collagen; collagène osseux de phoque	670	70	Test square W, 45 cm depth
23MI2	Towosaghy	charcoal; charbon de bois	675	70	
11PP2	Kincaid	charred wood; bois carbonisé	675	75	log tomb at the surface of the earliest of three successive mound stages
33HA19	Turpin	charcoal; charbon de bois	675	75	log, bottom of a refuse pit extending 2-3 ft below the surface with Fort Ancient pottery of the Madisonville focus
EISx-1	Namu	charcoal; charbon de bois	680	90	front trench, Period 6
DkSp-1	Kupti	charcoal; charbon de bois	680	75	Area B, testpit 7, 1.3 m depth, ca. 5 m asl
DgRx-5	Duke Point	charcoal; charbon de bois	680	90	Area E, component III
35JA189	Brooks	charcoal?; charbon de bois?	680	90	
45KP21	Little Boston	charcoal; charbon de bois	680	90	
CALak261	Houx	charcoal; charbon de bois	680	40	
DhRp-7	Fort Langley	charcoal; charbon de bois	680	60	Feature 222
45CH302	Stemilt Creek Village	charcoal; charbon de bois	680	70	
45ST95	St. Paul's Mission	charcoal; charbon de bois	680	10 0	
CASDi-?	Silver Strand	marine shell; coquillage	680	16 5	surface midden, station B, a Diegueño camp on light-colored, unconsolidated upper sand
48SU867	Harrower	charcoal; charbon de bois	680	50	feature 1
29RV2	Blackwater Draw 1	organic matter; matière organique	680	80	Unit G2, a zonal soil on upper layers of a dune sequence, with no associated cultural material
14OT5	Minneapolis	unknown; inconnu	680	70	House 8, pit
25BT1	Houston	charcoal; charbon de bois	680	14 0	floor of house 2
DkKp-__8	Ballynacree	charcoal; charbon de bois	680	55	house floor, transition from Laurel to Blackduck
22TU530	Bonds Village	charcoal; charbon de bois	680	11 0	House 4, west wall trench

47IA38	Mayland Cave	charcoal; charbon de bois	680	55	feature 6e, a shallow basin-shaped depression, 1.8-2.1 ft depth, with sherds of a Grand River Trailed vessel
11WT40	Lawrence	charred wood; bois carbonisé	680	11 0	feature 39, a slightly undercut refuse pit
12MY87	Morell-Sheets	unknown; inconnu	680	70	Albee phase
11MT89	Southend	charcoal; charbon de bois	680	80	lowest natural stratigraphic layer of feature 3
47WN96	Lasley's Point	charcoal; charbon de bois	680	80	Level 4, within a refuse heap, 8-10" depth, Lake Winnebago Focus
33BU33	Hine Village	unknown; inconnu	680	60	
33ER3	Taylor	bone collagen; collagène osseux	680	70	Eiden phase
33CU65	Vaughn Village	unknown; inconnu	680	90	
46SU3	Barker's Bottom	charcoal?; charbon de bois	680	16 5	Bluestone phase
46BY153	Sunshine	unknown; inconnu	680	12 0	
BIGk- 15	Whitson Lake W1	charcoal; charbon de bois	680	80	yellow, organically stained sand, 15-20 cm depth
JeEj-7	Qilalugarsiuvik = Ung.11	charbon de bois; charcoal	680	90	maison D, dans la boîte 1 associée à l'occupation thuléenne, X-8
BhDr-1	McAleenan	charcoal; charbon de bois	680	16 0	15x10 cm area, N12/W11.5, 25 cm depth, surrounded by burned fish bones
BgDr-61	Pintlowes Cove	marine shell; coquillage	680	50	unit 3, shell midden
CbDd-1	Skull Island	charred plant remains; restes de plantes carbonisés	680	70	bark lining of burial pit
NgTn-1	Saunaktuk	spruce wood (50 g); bois d' épinette	685	90	dwelling floor, unit 0-2N/6-8W, 20-30 cm depth
39ST235	Stony Point	charcoal; charbon de bois	685	60	House A, roof-fall/floor zone, a composite sample from a cutbank exposure, Initial Middle Missouri
33LE97	Mabel Hall	unknown; inconnu	685	95	
15PI10	Millard School	unknown; inconnu	685	15 0	
AKXMK056	Russian Anchorage	charcoal; charbon de bois	690	60	upper component, test pit A, stratum 3, 50 cm depth
DeSf-10	Nitinat Lake	charcoal; charbon de bois	690	60	north side, 256 cm above datum
EcQt-2	Blattner	charcoal; charbon de bois	690	80	burned pole lying along the north wall edge of Housepit 2
35UN95	Marshmeadow	charcoal; charbon de bois	690	70	camas rock oven
42MD180	Pharo Village	charred wood; bois carbonisé	690	90	granary 6
48SW2636	Little Colorado	carbonized wood; bois carbonisé	690	11 0	campsite
5RB2873	Little Horse One	charcoal; charbon de bois	690	50	feature with Desert side-notched points, Shoshonean

FhNa-35	Lloyd	bison bone collagen; collagène osseux de bison	690	10 0	cultural layer, units 5s1e and 6s0e, level 3
39HN298	East Short Pines Quarry	charcoal; charbon de bois	690	50	hearth exposed in a gully cutbank
39ST224	Cattle Oiler	charcoal; charbon de bois	690	14 0	wall post in feature 85, a rectangular house, Initial Middle Missouri
15ML68	Dedmon	charcoal; charbon de bois	690	90	Feature 38, an oval refuse pit
11WI555	Reeves	unknown; inconnu	690	60	Langford component
33LI-?	Burning Tree Mastodon	charcoal; charbon de bois	690	50	feature 3, disturbed by an animal burrow
33MU76	Philo II	charcoal; charbon de bois	690	80	
33MU160	Locust	unknown; inconnu	690	55	
AfHi-__23	Edwards	charcoal; charbon de bois	690	10 0	Square 520-495, Feature 1
36WA84	Cornplanter 2	charcoal; charbon de bois	690	10 0	refuse pit containing transitional or Late Archaic material, possibly brought to the site by proto-Iroquoian peoples
28WA580	Gray	charcoal; charbon de bois	690	50	Pit 11-83, with Overpeck Incised pottery, charred deer bone and charcoal
6HT117	Bugbee-Hathaway	unknown; inconnu	690	95	
GbEk-1	Lac Shooliau-Shini	charcoal; charbon de bois	690	90	hearth 1, from an area adjacent to a small deposit of sand and calcined bones, not sealed in a hearth deposit
ME17.11	Todd	unknown; inconnu	690	10 0	general association of shell- tempered, fabric paddled exterior/smooth interior, undecorated ceramics, ceramic period 5
5WL27	Biggs	bone collagen; collagène osseux	695	11 0	feature 2, a living floor, Central Plains, Upper Republican phase
FbMb-1	Aschkibokahn	charcoal; charbon de bois	695	17 5	lower levels of the site
33HA65	Stateline	unknown; inconnu	695	60	
33MS31	Racine	unknown; inconnu	695	45	
46OH16	Duvall	unknown; inconnu	695	55	Monongahela phase
46TA1	Henderson Rocks	unknown; inconnu	695	55	Page phase
HaGd-8	Gulf Hazard = GH- 5	charbon de bois; charcoal	695	90	maison 4
19ES196	Shattuck Farm	charcoal; charbon de bois	695	14 5	
EeRh-1	Cache Creek Burial	wood; bois	700	80	
35LK1556	Zane Church	charcoal; charbon de bois	700	50	composite sample picked from the screened material of unit F, N100/E102, quad B, level 10, 90-100 cm depth, stratum 2B
DjQj-1	Vallican	charcoal; charbon de bois	700	10 0	lower component of house-pit depression

45PO422	Flying Goose Ranch	charcoal; charbon de bois	700	70	
10GG191	Crutchfield	bone collagen; collagène osseux	700	80	feature E2, a small cobblestone feature
DjPk-1	Kenney	charcoal; charbon de bois	700	60	hearth, Layer 6, with Besant and Avonlea points
42IN100	Parowan	charcoal; charbon de bois	700	80	E16, feature 2
EcNm-8	Walter Felt	charcoal; charbon de bois	700	80	Layer 6
34.0	Brackett	unknown; inconnu	700	10 0	
39SP11	Dirt Lodge Village	charcoal; charbon de bois	700	70	feature 16, levels 7 and 8, a refuse-filled cache pit, Randall phase
13PK407	Christenson	charcoal; charbon de bois	700	14 0	winter camp on an intermediate terrace, De Forest Formation
47WN350	Old Spring	charred wood; bois carbonisé	700	50	feature 179E, a burial pit in the house floor
33SA13	Cemetery Ridge	bone collagen; collagène osseux	700	70	
33DL12	Ufferman	unknown; inconnu	700	55	
15FA176	Guilfoil	unknown; inconnu	700	50	Elkhorn
33WO74	Orleans Park	unknown; inconnu	700	50	Fort Meigs phase
33CS-?	Eppley Rockshelter	unknown; inconnu	700	80	
AfHj-__14	Roeland	charcoal; charbon de bois	700	80	Feature 104
36WM213	Kirshner	unknown; inconnu	700	60	
SgFo-1	Cliff	willow wood; bois de saule	700	70	House 10, central floor area, test unit 1, 3-4 m asl
KaFh-2	Baie Déception	caribou, hare bone collagen; collagène osseux de caribou et lièvre	700	80	structure 10, cracked animal bones found pushed into the house wall crevices
LIDv-5	Tuktumoon	caribou bone collagen; collagène osseux de caribou	700	80	cultural feature
ME14.108	Pejepscot	unknown; inconnu	700	60	stratum underlying grit-tempered, fabric paddled exterior/smoothed interior, cord-wrapped stick decorated ceramics, ceramic period 5
JeEl-3	Ariane = Dia.45	charbon de bois; charcoal	700	80	structure A, 12 m altitude
DaEk-6	Ouellet	charbon de bois; charcoal	700	70	foyer
DfSg-3	Aguilar Point	charcoal; charbon de bois	705	95	thought to date trench embankment
45YA305	Selah Creek	charcoal; charbon de bois	705	50	
32LM234	Quast	charcoal; charbon de bois	705	70	buried hearth with ceramics, lithics and faunal debris, associated with the Stutsman Focus
21LN2	Pedersen Village	bone collagen; collagène osseux	705	80	occupation level with cord-impressed Late Woodland ceramics

25CC17	Theodore Davis	charcoal; charbon de bois	705	10 0	House D
13ML155	State School	charcoal; charbon de bois	705	50	wall post in northeast corner of lodge, 39 cm deep
11MX66	Angelly	unknown; inconnu	705	95	
36SO15	Quemahoning	charcoal; charbon de bois	705	65	Monongahela
VTFR26	Boucher	charcoal; charbon de bois	705	30	feature 167A, a burned area 1 m above the burial dated by Pitt-34
AKXSL002	Miyowagh or Mayughwaaq	charred wood; bois carbonisé	710	50	House 2
AKPET219	Mable Creek Weir	wood; bois	710	50	wood-stake fish weir
35DO83	Umpqua-Eden	charcoal?; charbon de bois?	710	50	
EIPf-1	Dry Island Buffalo Jump	bone apatite; apatite osseux	710	14 0	15-20 cm depth
48LA312	Pine Bluffs	unknown; inconnu	710	11 0	Upper Republican phase
39CA3	Jones Village	charcoal; charbon de bois	710	65	Initial Middle Missouri
13PM61	Larsen	charcoal; charbon de bois	710	55	feature 10, Great Oasis - Mill Creek
47GL65	Walker-Hooper	charcoal; charbon de bois	710	45	cylindrical pit, feature 8, level 4, type site of the Grand River phase
EaJf-___1	Wabinoosh River	charcoal; charbon de bois	710	17 5	hearth in upper terrace, XU 175N 90E, Level 2, 5.1-10.2 cm depth, associated with Laurel ceramics
11K52	Washington Irving	charcoal; charbon de bois	710	60	feature 17, area A, Langford
20ME2	Backland Mound group	human bone; os humain	710	11 0	Burial 2, from a submound burial of seven individuals in a pit, the bottom 2.1 ft below the top of the mound
12MA4	Bosson	unknown; inconnu	710	50	Oliver phase
KkHh-2	Lake	bone collagen; collagène osseux	710	65	House 2, floor level at edge of sleeping platform
33AB41	Eastwall	unknown; inconnu	710	75	
36LR36	Boarts	charcoal; charbon de bois	710	90	
36WH274	Wylie 1	charcoal; charbon de bois	710	85	
DdGt-5	Bérubé	charbon de bois; charcoal (4.97 g)	710	60	puits S1,E7, niveau 2, zone B, section A à 14 cm sous la surface
36SO62	Petenbrink	unknown; inconnu	710	60	feature 92
18CA21	Wessel	charcoal; charbon de bois	710	90	feature 1, with shell tempered ware
CT294A-25	Housatonic River	charcoal; charbon de bois	710	50	associated with corn dated 690 +/- 60 BP (Beta-84973)
CkEe-5	McInnes	charcoal; charbon de bois	710	23 0	sq. 1, level 2b, 18 cm depth, in and around a concentration of rocks, an apparent hearth, feature 2
25FT16	Aiken	wood; bois	715	12 5	posthole in House 2

18FR100	Monocacy	charcoal; charbon de bois	715	90	zone 3, with quartz tempered ware, base of first cultural level
18DO43	Lankford 2	plant remains; restes de plantes	715	60	pit 3, area 3, layer 2, with shell tempered Townsend ware
DfSi-4	Ch'uumat'a	charcoal; charbon de bois	720	50	back trench, top of shell midden, under thick forest humus, N40-42/W86-88
35JA301	Ridgeline Meadows	charcoal?; charbon de bois?	720	60	
CAMrn115	San Francisco Bay Mound	charcoal; charbon de bois	720	130	deepest levels of a shell mound
45CH436	Sno Place Like Home	charcoal; charbon de bois	720	70	
10BM50	Poison Creek	charcoal; charbon de bois	720	70	
FjOd-2	Yellowsky	carbonaceous soil; sol charbonneux	720	135	small basin-shaped hearth, units 1W/1S and 2W/1S
5ST85	Vail Pass Camp	charred wood; bois carbonisé	720	90	feature 64, a stone cluster hearth assigned to Occupation VII
48GO6	Fisher	unknown; inconnu	720	80	ceramic level
39FA23	Angostura Reservoir	charcoal; charbon de bois	720	70	previously undescribed cultural complex with ceramic affiliation to Initial Variant of Middle Missouri tradition
FbMi-5	Swan River	peat; tourbe	720	60	basal peat overlying gray sandy loam, Units 26n2w/24n2w, 61-65 cm depth
32EM1	Havens	charcoal; charbon de bois	720	100	fill of feature 164 or pit 17, an oval pit in the northeast corner of House 1, Fort Yates phase, Extended Middle Missouri
32SI2	Fire Heart Creek	charred wood; bois carbonisé	720	80	long rectangular house, feature 51, representing the Fort Yates phase or the Thomas Riggs focus, Extended Middle Missouri
39HT1	Twelve-mile Creek	charcoal; charbon de bois	720	60	Feature 4, 61-76.2 cm depth, from square in house pit, 76.2-91.4 cm depth, Initial Middle Missouri
23PL13	Steed-Kisker	charcoal; charbon de bois	720	100	floor of House 3, Steed-Kisker focus
3SV15	Graves Chapel	charcoal; charbon de bois	720	70	Mound A, roof beam associated with upper house floor, Graves Chapel phase
PeJr-8	Loon	muskox bone collagen; collagène osseux de boeuf musqué	720	70	Dorset longhouse
23HI172	Blackwell Cave	charcoal; charbon de bois	720	110	feature 1, a large basin-shaped hearth
23CA1	Wakenda Village	charcoal; charbon de bois	720	100	west side of highway where late pottery is predominant
11PK-?	Joe Gay Mounds	charcoal; charbon de bois	720	70	

11F19	Morton Village	charcoal; charbon de bois	720	70	cross member, House 6, Bold Conselor phase
11MO28	Divers	charcoal; charbon de bois	720	13 0	post in west wall of Feature 15
11MS172	Bischoff	charred plant remains; restes de plantes carbonisé	720	11 0	1 m depth, with Mississippian and Cahokia Cordmarked pottery
11LS13	Grand Village or Zimmerman	charred plant remains; restes de plantes carbonisé	720	70	feature, Heally phase, Langford tradition
AdHc-___1	Boyd Lakefront	charcoal; charbon de bois	720	75	Unit A, Feature 3
36LY119	Bull Run	charred wood; bois carbonisé	720	10 0	pit NW-16B, stockade postmold 18 cm diameter, with Shenks Ferry rimsherd and lumps of raw pottery clay
28WA266	Medwin Knoll II	unknown; inconnu	720	50	with 7 fragments of maize kernels/embryos
28OC76	Osborne Island	marine shell; coquillage	720	70	burial fill
19MM222	Frank Vincent	charcoal; charbon de bois	720	10 0	feature 28, a large refuse pit traced to the base of stratum 1B, 75-100 cm depth with a shell-tempered potsherd and few other artifacts
11WH6	Wilson Mound	charcoal; charbon de bois	723	18 0	fire pit in the corner of a log tomb in Mound 6, with 7 burials and Hopewellian grave goods
5RB699	Dripping Brow Cave	unknown; inconnu	725	60	Level 9
FhNa-86	Crown	bison bone collagen; collagène osseux de bison	725	75	component 1, western block, level 2, unit 9n13w, 10-20 cm depth, with bossed pottery
EeMw-26	Lebret	charcoal; charbon de bois	725	95	Area B, level 2A (layer 3), paleosol in unit 7s/14w, 20-24 cm depth
39ST223	John Ketchen	charcoal; charbon de bois	725	50	outer rings from wall post of long rectangular house, feature 17, unit 16, Extended Middle Missouri
11S34-1	Collinsville Airport	charcoal; charbon de bois	725	75	top of west wall of a rectangular wall trench structure with the long axis oriented north-south, probably Trappist
AiGw-_124	Tara	charcoal; charbon de bois	725	85	Tara West
36CL52	State Road Ripple	unknown; inconnu	725	80	
AlGs-__10	Boys	charcoal; charbon de bois	725	95	House 1 pits
DgRw-20	Mueller Cabin	charcoal; charbon de bois	730	55	just west of a human skull in a burial ca. 80 cm below datum
DfRu-13	Montague Harbour	charcoal; charbon de bois	730	13 0	dark soil, scattered shell, Test Cut 1, S13'4", E2', 60" depth
42UT104	Spotten Cave	charcoal; charbon de bois	730	90	zone III

41.0	San Pedro Springs	charcoal; charbon de bois	730	70	Stratum I, with refuse pits, hearths, arrowpoints, and ceramics
DhMn-24	Omega	bone collagen; collagène osseux	730	80	ravine wash of cobbles mixed in clay, 15 cm depth
39HU1	Thomas Riggs	charcoal; charbon de bois	730	10 0	burned house post, house 2, in the long rectangular house component, Extended Middle Missouri
HfLq-1	Neck	charcoal; charbon de bois	730	15 0	trench 1, northeast quadrant, stratum 2, 23-28 cm depth
23JA43	May Brook	charcoal; charbon de bois	730	13 0	
13WA105	Cribb's Crib	charcoal; charbon de bois	730	60	
16OU1	Pargoud Landing	plant remains; restes de plantes	730	50	basket-loaded mound fill, square N500/W504, 97.85 m below datum
11S695	Mund House	charred plant remains; restes de plantes carbonisé	730	90	fill within a large Sand Prairie phase structure, feature 27
23NM269	Harryette	charcoal; charbon de bois	730	10 0	feature 14, a concentration of ash, fired clay, and bone, Middle Baytown
20BG14	Sand Point	charcoal; charbon de bois	730	55	mound 1, post used in the construction of a platform
20LU	Sleeping Bear	plant remains; restes de plantes	730	12 5	station 2, Sleeping Bear sand dune, on top of a Valdres moraine
20EM-?	Ponshewaing Point	charcoal; charbon de bois	730	11 0	feature 2, a hearth, 36.6-45.8 cm depth
33WA2	South Fort Village	unknown; inconnu	730	60	
33WA4	Anderson Village	unknown; inconnu	730	10 0	
20SA194	Bussinger	charcoal; charbon de bois	730	10 0	layer covering Burial 47, with 3 pots and 2 bone harpoons
AbHs-__2	Main Burial	charcoal; charbon de bois	730	11 0	burial pit
18MO3	Shepard	charcoal; charbon de bois	730	60	test pit 1, with quartz and granite tempered ware in midden, 14-21" depth
BIFg-8	Jacques	charbon de bois; charcoal	730	11 0	gros foyer allongé
19BN657	Krusen-Rainey	charcoal; charbon de bois	730	70	discrete deposit containing scallop shell, fish bone, and several kernels of carbonized maize
13ML124	Gamble	charcoal; charbon de bois	735	95	habitation on a low terrace
13BV1	Chan-ya-ta	charcoal; charbon de bois	735	95	Early Little Sioux phase Mill Creek village, feature 9, floor of one of two small rectangular structures superimposed in house depression
44BD1	Brown Johnson	charcoal; charbon de bois	735	75	dates hamlet phase?



AeHg-___3	Stafford	cultigen; cultigène	735	11 0	Test trench 4, extension F, 30-45 cm depth
AKFAI-VP	Goldstream	moose bone collagen; collagène osseux d'orignal	740	40	antler with cut-marks
45CL4	Herzog	charcoal; charbon de bois	740	80	
EeRl-7	Keatley Creek	charcoal; charbon de bois	740	70	Housepit 7, square PP, sub-square 6, stratum II, level 2, in occupation deposits under last floor, a roof beam on the floor
45SA117	Falls Creek	charcoal; charbon de bois	740	80	
CACal-?	Calaveras skull	human bone collagen; collagène osseux humaine	740	21 0	associated with the Calaveras skull discovered in 1866
DgPh-3	Point Beazer	bison bone collagen; collagène osseux de bison	740	12 0	Level 3, 130 cm depth
KdNw-2	Taltheilei Point	spruce charcoal; charbon d'épinette	740	16 0	burned twigs on beach 14 in a series of 14 beaches, 13 cm depth
EcOr-35	Ramillies	bison bone collagen; collagène osseux de bison	740	11 5	occupation 1, unit 3, 6s/0w, NE quad, 80 cm depth, associated with Feature A2, a buried rock alignment thought to be part of a drive line
39PN-?	Conata Basin	bison bone; os de bison	740	75	clay deposit, 3-3.5 ft depth, overlain by alluvial fill
13ML222	Steinheimer	charcoal; charbon de bois	740	80	posthole of House 1, <1 ft depth
13OB3	Waterman Crossing	charcoal; charbon de bois	740	90	Little Sioux phase Mill Creek habitation, 18-20" depth
3CL9	Powell Mound	charcoal; charbon de bois	740	70	center post hole in pre-mound structure, Coles Creek component, stratigraphically below Haley focus component
13MA30	Mohler Farm	charcoal; charbon de bois	740	45	feature 23, a subterranean storage pit with shell-tempered ceramics, Moingona phase
47ON48	Shannon	charcoal; charbon de bois	740	10 0	charred log, test pit 4, bottom of mound fill at depth of 2.45-2.85 ft, Lakes Phase
11OG-?	NIU-89	human bone; os humain	740	80	burial in sand and gravel knoll
12MA61	Bowen	charred wood; bois carbonisé	740	11 0	feature 88, a large rectangular refuse pit 2.14 by 1.83 m, with Fort Ancient and Late Woodland pottery, Oliver phase
12H807	Noblesville	unknown; inconnu	740	50	Oliver phase
15McY414	Bare Bones Shelter	unknown; inconnu	740	50	
33LA7?	Bolan Triangle / Reeve II	unknown; inconnu	740	55	
AfHg-___1	Calvert	charcoal; charbon de bois	740	75	Feature 216, Layer 2, assigned to Early phase

NjHa-1	Kapuvik = Jens Munk	caribou bone collagen; collagène osseux de caribou	740	10 0	dwelling no. 14
36AL39	Goodwin-Portman	charcoal; charbon de bois	740	10 0	base of feature 2, a medium-sized fire pit in a late prehistoric Monongahela site
38CH-?	Kiawah Island	wood; bois	740	10 0	35-foot long dugout canoe found on a small unnamed island in the marsh adjacent to Kiawah Island, beneath 10 ft of sand, exposed by a hurricane
PeFr-1	Mittimatalik	caribou bone collagen; collagène osseux de caribou	740	60	house, 5-8 m asl
36TI37	Cowanesque Reservoir	unknown; inconnu	740	80	
CT5-9	Beaver Brook	charcoal; charbon de bois	740	60	upper zone
19ES-?	Wheeler	charcoal; charbon de bois	740	13 0	
DbEi-2	Pointe à Crapaud	charbon de bois; charcoal	740	70	inconnu
ME154.14	Fluted Point	charcoal; charbon de bois	740	64	
33DL17	Bagley Mound	charcoal; charbon de bois	745	13 5	burned bark of log in mound
18FR17	Nolands Ferry	charcoal; charbon de bois	745	60	feature 2, with limestone tempered ware
DfRu-24	Georgeson Bay	charcoal; charbon de bois	750	90	black soil and fine broken shell, 20-30 cm N/0-3 cm E, 121-127 cm depth
45LE451	Ohana Rockshelter	charcoal; charbon de bois	750	60	
45FE45	Ksunku / Weatherford	charcoal; charbon de bois	750	90	stratum 3, Chekwo phase
26EU843	James Creek Shelter	charcoal; charbon de bois	750	50	Horizon 2, composite sample from screen, 50-60 cm below surface
10VY-?	Waterfall Village	charcoal; charbon de bois	750	70	
24MO197	County Line	charcoal; charbon de bois	750	50	component 2
24CA73	Stelling	bone collagen; collagène osseux	750	20 0	bison kill
14CY30	Woods	charcoal; charbon de bois	750	12 0	small storage pit in the floor of house 2, an earthlodge
13PM4	Kimball	charcoal; charbon de bois	750	90	Big Sioux phase Mill Creek village, square 2, square 2, 84-90" depth, probably the beginning of site occupation
13ML216	Little Pony	charcoal; charbon de bois	750	90	house
13CK15	Brewster	charcoal; charbon de bois	750	50	Little Sioux phase Mill Creek village on a high terrace, square S25/W85, 12-16" depth
23GR303	Ingram	charcoal; charbon de	750	10	

		bois		5	
47DN1	Wakanda Park mounds	charred wood; bois carbonisé	750	100	Mound 16, an oval mound, Effigy Mound culture
11MS595	BBB Motor	charcoal; charbon de bois	750	80	Stirling phase pit, feature 38
47FR143	Oak Lake	charcoal; charbon de bois	750	70	pit 6 at interface between burned pit fill and ash sand layer forming the pit boundaries, representing a Lakes phase occupation
20MA-?	Missaukee Mound 2	plant remains; restes de plantes	750	75	small, low mound containing an adult male human burial and a copper axe enclosed in beaver? skin and tied with a bast fiber cord
33FA184	Blue Valley / Bower Farm	unknown; inconnu	750	75	
46CB40	Clover	unknown; inconnu	750	90	
33GE-?	Bass Lake	unknown; inconnu	750	45	
7K-F-12	Robbins Farm	charcoal; charbon de bois	750	55	feature 1, with Potomac Creek and Keyser Farm ceramics
36WA103	Rieder	unknown; inconnu	750	70	
NY	Engelbert	dog bone collagen; collagène osseux de chien	750	70	dog burial
SfFk-4	Skraeling Island	animal remains; restes d'animaux	750	50	House 15 floor, 20-25 cm depth, in sod, soil, twigs, heather, grease, 10-11 m asl
CSFA1160	Manakaway shell midden	charcoal; charbon de bois	750	130	hearth 1 on sterile till at the base of the shell midden with potsherds of the East River tradition
KfJm-32	Meliadine 2	caribou bone collagen; collagène osseux de caribou	755	70	entrance passage of House 2, floor level
47LC34	Valley View	charcoal; charbon de bois	755	75	bottom zone of feature 84, near the western palisade, zone 8N, with Oneota ceramics
20BY32	Tobico	charcoal; charbon de bois	755	100	feature 3, level 4, unit 500R530
DiSc-1	Little Qualicum River	charcoal; charbon de bois	760	80	hearth feature, Unit 25, in dry midden
JcRw-13	Julian	charcoal; charbon de bois	760	130	component 3/4, 15 cm depth in sandy soil
42WS1349	Little Man Loc or Hurricane	unknown; inconnu	760	90	
42WN231	North Point	charcoal; charbon de bois	760	60	roof timber (FS 213) from lower fill, structure 3
14PO4	Budenbender	charcoal; charbon de bois	760	75	postmold in House 1, covered by a thin layer of undisturbed soil below the plowzone, with a jar in the form of a human head

34DL41	Lillie Creek	charcoal; charbon de bois	760	90	burned structure, 24-28" depth, on an early state in the construction of a flat-topped platform mound, Spiro Focus, Gibson Aspect
13PK1	Howard Goodhue	charcoal; charbon de bois	760	60	feature 3, subterranean storage pit with orifice 45.7 cm depth, Moingona phase
23WB60	Indian Cave 1	charcoal; charbon de bois	760	70	
21GD4	Bryan	charcoal; charbon de bois	760	90	feature 86, a subsurface storage pit, with straight-rimmed Cannon River Incised pottery
47JE244	Crescent Bay Hunt Club	charcoal; charbon de bois	760	50	feature 1, Koshkoning Focus
11S468	East St Louis Stone Quarry	charred wood; bois carbonisé	760	90	southwest corner of Sand Prairie phase grave, feature 75, near the cranium of an extended skeleton
47DA12	Dietz	charcoal; charbon de bois	760	60	feature 18, a storage or refuse pit, with collared ceramics, Kekoskee phase
12MG52	Martinsville Plaza	unknown; inconnu	760	65	Oliver phase
20BE307	Stover	charcoal; charbon de bois	760	90	feature 83, a shallow hearth with a Berrien corner-notched point
15WO107	Lindon Fork Rockshelter	unknown; inconnu	760	50	
33RO128	Blain Village	charcoal; charbon de bois	760	10 0	feature 1, Baum focus
AfHc-__2	Elliott	charcoal; charbon de bois	760	80	Feature 283
28WA15	Miller Field	charcoal; charbon de bois	760	10 0	inside a broken but complete Owasco Herringbone pot
VT	KI	charcoal; charbon de bois	760	50	feature 46, with cultigens
5GA22	Caribou Lake	charcoal; charbon de bois	765	90	shallow basin hearth originating from an erosion surface at the top of a slopewash deposit
13ML130	Johnson Farm 3	charcoal; charbon de bois	765	11 0	habitation on a low terrace
47DR73	Richter	charcoal; charbon de bois	765	50	feature 63, a garbage pit 43 cm depth, beneath sheet midden containing lithic, ceramic, faunal and floral refuse
19SU-?	Boylston Street Fish Weir	charcoal; charbon de bois	765	70	with one maize kernel
EITa-3	Watt Bay	charcoal; charbon de bois	770	50	core 1, 111 cm depth, basal cultural deposit, 109 cm asl
45FE46	Ilthkoyape	charcoal; charbon de bois	770	90	
35BA643	Westfall Overlook	sediment; sédiment	770	60	
24SB125	Lower Ramsay	bone collagen; collagène osseux	770	12 0	bison kill

42GA3138	Horse Canyon Rock Shelter	charcoal; charbon de bois	770	60	stratum 4
DkMg-1	Reston	human bone collagen; collagène osseux humain	770	180	gravel pit excavation
32MO11	Huff	charcoal; charbon de bois	770	140	house 12, pit in floor, feature 167, Terminal Middle Missouri
25FT35	Mowry Bluff	charcoal; charbon de bois	770	55	feature 32
39DV2	Mitchell	charcoal; charbon de bois	770	60	House 4, square X, 97.5-115.8 cm depth, Initial Middle Missouri
IeLk-4	Shethanei Narrows	charcoal; charbon de bois	770	80	level 2, pit 137e2n, top of grey sand layer near center of site
14GE21	Miller	charcoal; charbon de bois	770	80	feature 289, unit 121, cache pit fill
13ML145	McGee	charcoal; charbon de bois	770	60	roof beam fragment in northwest corner of lodge
13BV2	Bultman	charcoal and charred bone; charbon de bois et os carbonisé	770	55	Late Little Sioux phase Mill Creek village, square A-1, level 5, 63.5-91.4 cm depth
23SN42	Loftin 1	charcoal; charbon de bois	770	80	
47ON148	Ghost Shirt Island V	charcoal; charbon de bois	770	55	unit A, feature 2B, with Point Sauble Collared pottery, and wild rice, Lakes phase
47OU103	Cabbage Patch	charcoal; charbon de bois	770	50	feature, with collared ceramics
20.0	Butler	bone collagen; collagène osseux	770	60	
33FR895	Marsh Run	unknown; inconnu	770	60	
20SA2	Schultz	Charcoal	770	100	
33SA35	Muddy Creek	bone collagen; collagène osseux	770	80	
AaHp-__21	Cherry Lane	charcoal; charbon de bois	770	70	Feature 14
33HO37	Graham Village	charcoal; charbon de bois	770	145	feature 13, a bell-shaped pit 1.4 m deep, early Baum focus
33VI-?	Wheelabout Rockshelter	charcoal; charbon de bois	770	215	square 2-B, 15 ft depth, to date the Chesser phase
CbGw-__1	Frank Bay	dog bone collagen; collagène osseux de chien	770	170	unit 10-RSS, Level 9, dog burial 1
36SO243	Pony Farm Triangle East	unknown; inconnu	770	60	feature 1, a storage feature beneath >2 m of historic fill, with evidence for sunflower cultivation and a large amount of maize
BbGa-__2	Gordon Island North	charcoal; charbon de bois	770	70	Trench 2, Sq. 6, 5-10 cm depth
MaDv-11	Mosquito Ridge	caribou bone collagen; collagène osseux de caribou	770	120	cultural feature
EgBr-3	Laforest	charbon de bois; charcoal	770	70	foyer

1JA181	Russell Cave	charcoal; charbon de bois	772	18 0	large hearth, 6.5 ft depth
24DW1	Hagen	charred wood; bois carbonisé	775	55	log
KjNb-5	Meyer	charcoal; charbon de bois	775	10 5	main cultural level with hearth and quartzite artifacts
5LA768	Steamboat Island Fort	charcoal; charbon de bois	775	85	structure B, floor, Apishapa Phase
39ST1	Cheyenne Village	charcoal; charbon de bois	775	12 5	center post, feature 102, in a long-rectangular house, feature 34, to date oldest component at the site, Middle Missouri
IhLa-1	Caribou Hill	charcoal; charbon de bois	775	90	cultural layer
13ML136	Kuhl 2	charcoal; charbon de bois	775	55	burned roof beam lying on floor of earthlodge, beam diameter 76 mm
21BE2	Cambria	charcoal; charbon de bois	775	13 0	large village site, Cambria phase
35LK2846	Boulder Village	charcoal; charbon de bois	780	60	structure 127, a medium size semi-rectangular unit with well defined walls and house depression, a possible hearth near the west wall
42WN326	Charles Hunt	charcoal; charbon de bois	780	60	floor contact in pithouse (FS 59)
EeNj-2	Morris Church	charcoal; charbon de bois	780	50	lower organic zone 30 cm below upper zone
5WL101	Happy Hollow Rockshelter	charcoal; charbon de bois	780	90	hearth 3, upper of three components, Central Plains, Upper Republican phase
DiMv-93	Crane	bone collagen; collagène osseux	780	65	Level 12, units 96N/102W, 97N/102W and 98N/102W
39MD133	Huston-Fox	charcoal; charbon de bois	780	70	with Riggs ceramics and ceramic beads
39CO213	Travis I	charcoal; charbon de bois	780	70	feature 36, Level 3, trash-filled pit, Extended Middle Missouri
25FT17	Medicine Creek Reservoir	charcoal; charbon de bois	780	12 5	floor of House 3, feature 15, 4-6" depth
47BF45	Bluff Siding	charcoal; charbon de bois	780	70	feature 9, 30-40 cm depth, Effigy Mound culture
11MS46	McDonough Lake	charred plant remains; restes de plantes carbonisé	780	75	deep refuse pit, 42" depth, with thin, cord-marked Bluff culture sherds
15JS86	Muir	unknown; inconnu	780	60	Osborne
AaHp-__1	Dick	charcoal; charbon de bois	780	10 0	Feature 9, with an early Springwells phase Macomb Linear-Punctate variant vessel
46MA36	Hoult	unknown; inconnu	780	90	
HaGd-11	Gulf Hazard = GH-8	restes d'animaux; animal remains	780	16 0	maison 1
19BR-?	Read Farm B	charcoal; charbon de bois	780	12 0	with Levanna points
DbEj-13	Grandes-Bergeronnes VI	charbon de bois; charcoal	780	50	secteur 13, carré N9(N.0), foyer central de la structure c

DaEh-1	Ile aux Basques = Cache	charcoal; charbon de bois	780	15 0	terrace I-d, area A, test trench 1, level 4, 25-28 cm depth, in shallow shell midden with early Iroquois pottery
GcEg-4	Lac Clairambault	charcoal; charbon de bois	780	13 0	humus underlying hearth 1, a structure of reddened stones within the LF horizon or at the surface of the humus
47DR-?	Mero	pottery encrustation; tarte de poterie	781	77	charred food residue from sherds of Mero I Plain pottery
DgOv-12	Many Snakes Burial	human bone collagen; collagène osseux humain	785	65	burial
42GA34	Coombs	charcoal; charbon de bois	785	80	room 2, structure J, a 2-room surface structure
NgNc-2	Pembroke	charred bone collagen; collagène osseux carbonisé	785	12 0	House 5, 25-30 cm depth, in area of a small hearth against the house wall
39SH33	Lange/Ferguson	charcoal; charbon de bois	785	80	hearth in pink, fossiliferous silt unconformably overlying the mammoth-bearing sediments
13PM1	Broken Kettle	charcoal; charbon de bois	785	60	Big Sioux phase Mill Creek village, square 15E/5S, level 16, 229-244 cm depth, feature I
3BE-?	White Bluff	cultigen; cultigène	785	75	
11ML28	Nobel-Wieting	unknown; inconnu	785	75	Langford component
20BY-28	Fletcher	Pottery encrustation	785	85	
DiSe-7	Deep Bay	charcoal; charbon de bois	790	80	Stratum F, grey sand with fish and shell remains, 40-70 cm depth
45KL546	Nakipnik	charcoal; charbon de bois	790	60	
10AA72	Lydle Gulch	charcoal; charbon de bois	790	10 0	stratum 1, the upper component, a small concentration of rocks with an obsidian biface, side-notched, lanceolate, and corner-notched points
KdNw-4	Pethei Peninsula	charcoal; charbon de bois	790	12 0	burned twigs in a 1.3 m diameter hollow, 17-20 m above lake level
24PA504	Myers-Hindman	charcoal; charbon de bois	790	90	Level 8, a rock-lined hearth
41GR559	Boren Shelter No. 2	charcoal; charbon de bois	790	80	Feature 18
39BR101	Arp mound	charcoal; charbon de bois	790	10 0	extension 3, 70" depth, Initial Middle Missouri
13ML128	Johnson Farm 1	charcoal; charbon de bois	790	50	cache pit 13, northwest area of house, small pit 45.7 cm diam, 30.5 cm deep
21MR2	Fox Lake Village	charcoal; charbon de bois	790	70	
3AR40	Dumond	charcoal; charbon de bois	790	11 0	under Mound 6, wall posthole of Baytown house, 180-195 cm below datum
15CE27	Marshall	charred wood; bois	790	70	wall trench

		carbonisé			
11S47	Range	charcoal; charbon de bois	790	80	fill unit within Range phase pit, feature 106
12VI86	Smith-Phelps	unknown; inconnu	790	70	early Mississippian hamlet
33MU593	Copeland Island	unknown; inconnu	790	75	
AfHj-__9	Ivory Hill	charcoal; charbon de bois	790	80	Feature 3
36WH19	Boyle	charcoal; charbon de bois	790	80	Monongahela
AiGx-__39	Ireland	charcoal; charbon de bois	790	90	
36SO223	Martz Rock Shelter 2	unknown; inconnu	790	90	
36SO55	Gnagey No. 3	charcoal; charbon de bois	790	65	feature 113, in a component with reported beans
46JF5	Glen Haven	unknown; inconnu	790	110	
44FX-?	Fraser	charcoal; charbon de bois	790	100	refuse pit, 43-56 cm depth, with a few steatite-tempered sherd of the Marcey Creek series and with sand-tempered reddish sherds similar to Accokeek ware
44FX544	Taft	charcoal; charbon de bois	790	50	feature 2B with Potomac Creek pottery
KkDo-1	Peale Point	willow wood; bois de saule	790	135	House 7, 1.90S/0.60W, 1.43 m below datum, from paved house floor
25HW301	Schmidt	charcoal; charbon de bois	795	60	house on a terrace of the Lower Loup River
HaGd-4	Gulf Hazard = GH-1	charbon de bois; charcoal	795	120	maison 1
DcRu-4	Kosapsom Park	charcoal; charbon de bois	800	50	
35DO212	Times Square Rockshelter	charcoal?; charbon de bois?	800	80	
45LE222	Judd Peak North	charcoal; charbon de bois	800	70	stratum D
45SP215	Boulder Beach	charcoal; charbon de bois	800	120	
24JF110	Quinn Creek	comminuted bone; os broyé	800	60	XB:1, CMUs 14 and 15, >5-15 cm depth
FjPi-29	Strathcona	bison bone collagen; collagène osseux de bison	800	90	Level H, 46 cm depth
42WN261	Alice Hunt	charcoal; charbon de bois	800	60	floor contact in pithouse (FS 94)
5GA869	Benchmark or Horn Ranch	charcoal; charbon de bois	800	50	component II-N, hearth
FhNa-13	Bushfield East	charcoal; charbon de bois	800	90	unit 500N/526E, southeast quad, level 8, 37-40 cm depth, stratum 4 hearth
39ST30	Dodd	wood and charcoal; bois et charbon de bois	800	100	wall post in a long-rectangular house, feature 29, Initial Middle Missouri
41HY29	Greenhaw	unknown; inconnu	800	100	



34GV-?	Lacy	charcoal; charbon de bois	800	75	house post from a rectangular house, 25 x 28 ft, with central fireplace, six interior roof supports, a short eastern entranceway, Washita River Focus
21DK1	Sorg	charcoal; charbon de bois	800	10 0	limestone hearth, unit 1, 19" depth
47PE12	Armstrong	charcoal; charbon de bois	800	11 0	House 1, outside Feature 14
11JD140	Lundy	unknown; inconnu	800	70	
15JO14b	Mayo	charcoal; charbon de bois	800	10 0	Level II, sheet midden O-O, an early middle Woodside phase occupation
46PU69	Vintroux	unknown; inconnu	800	50	
36SO220	Field W-E	unknown; inconnu	800	70	feature 12
44HA22	Reedy Creek	charcoal; charbon de bois	800	65	
36CN102	Salmon or Bald Eagle	charcoal; charbon de bois	800	70	feature with reported beans, but presence of beans not confirmed by Hart and Scarry
36TI30	Antonio	charcoal; charbon de bois	800	11 0	feature 76, 88.5 cm diameter, 79.4 cm deep, with bone and rim sherds
NYSM-1163	Snell	charcoal; charbon de bois	800	10 0	pit 20, Owasco
IhFh-7	Michea = Tuktu	charred birch wood; bois de bouleau carbonisé	800	10 0	house pit 10, trench 3, level 14, the oldest house floor, 48 cm depth
19NF-?	Ponkapoag	marine shell; coquillage	800	50	
KfDf-2	Kuyait 1	conifer charcoal; charbon de conifère	800	60	Dorset midden beneath House 11, 4S/2W
32SN57	Makacega	unknown; inconnu	804	28	
23CR80	Smith Shelter	charcoal; charbon de bois	805	10 0	Zone 1
CbFd-7	La Butte	charbon de bois; charcoal (5.7 g)	805	95	puits N10, à 25 cm de la surface, associé à une pointe de Lamoka
EaSh-1	Campbell River	charcoal; charbon de bois	810	80	Level 3, fire-evident zone, 33 cm depth, associated with two chipped stone points, obsidian and quartz pieces
45SJ24	British Camp	charcoal; charbon de bois	810	80	
EeRl-52	Sallus Creek	charcoal; charbon de bois	810	75	Housepit 1, basal deposit
26CH16	Hidden Cave	plant remains; restes de plantes	810	80	stratum 2, but believed to derive from stratum 1 as the date is younger than Mono tephra that occurs above it, Underdown phase
26CK2059	Adam 2	charcoal; charbon de bois	810	50	occupation layer
42KA-?	Kanab	unknown; inconnu	810	11 0	
5LO1	Peavy Rockshelter	charcoal; charbon de bois	810	12 5	Area C, fill of feature 2, Central Plains, Upper Republican phase

29.0	Honest Injun Cave (GS3)	charcoal; charbon de bois	810	55	fire hearth in midden area in front of shelter III, the most easterly of the shelters, 45.7 cm depth
5LA22	Medina Rock Shelter	cultigen; cultigène	810	85	Level 1B, Apishapa Phase
39LM209	Langdeau Village	charcoal; charbon de bois	810	70	surface of floor, feature 10, a long-rectangular house with a wide bench extending across the front, Initial Middle Missouri
23SH19	Round Spring	human bone collagen; collagène osseux humaine	810	150	
KiJi-3	Igluligardjuk	wood; bois	810	100	Section F, house, near the juncture of the floor and lower wall
11S650	George Reeves	charred wood; bois carbonisé	810	80	support post of Lohmann phase structure, feature 19
11CT95	Becker Borrow	charred wood; bois carbonisé	810	80	floor of feature 179, immediately north of feature 180 dated by ISGS-464
20AE58	_46th Street	charcoal; charbon de bois	810	100	feature 4, level 5, 20-26" depth, a hearth, with grit-tempered ceramics related to Wayne ware
12VI64	Farrand	charcoal; charbon de bois	810	75	feature 61, a pit 1.15 m diameter, 1.45 m depth, with maize, beans, grass fiber lining, faunal remains, trianguloid points, shell-tempered sherds
20BE122	Eidson	charcoal; charbon de bois	810	90	feature 332, a firepit with Late Woodland ceramics
20SJ29	Kline 1	charcoal; charbon de bois	810	50	feature 11
33WO-?	Gunn-Eberle 2	unknown; inconnu	810	50	
15GP27	Thompson	unknown; inconnu	810	60	
9McI64	Pine Harbor	charred wood; bois carbonisé	810	110	base of a short, probably one season, occupation shell heap, an immediately pre-Spanish Lamar occupation
36LR21	Bolinger	charcoal; charbon de bois	810	75	
36AL62	Drew	charcoal; charbon de bois	810	60	Monongahela
36SO244	Centerline 159	unknown; inconnu	810	40	feature 5
18AN546	Duck Run	marine shell; coquillage	810	80	shell layer, with shell tempered ware
RI-269	Lambert Farm	dog bone collagen; collagène osseux de chien	810	45	dog burial, feature 22
19BN-VP	Cape Cod	whale bone collagen; collagène osseux de baleine	810	75	

JfEl-10	île aux Iglous = Dia.10	charbon de bois; charcoal	810	80	provenant d'un foyer de cuisine d'un habitat thulien (D); date l'occupation de la structure D et vraisemblablement tout le groupe ouest du site
BjCj-9	Delorey Island	charcoal; charbon de bois	810	70	bottom of level 3, bottom of occupation zone, 20-30 cm depth, at the bottom of the black soil zone and above sterile orange clay
5LA550	Pyeatt Shelter	cultigen; cultigène	815	12 5	Level 2, Apishapa Phase
23DV12	Shriver	charcoal; charbon de bois	815	11 0	hearth just below present ground surface
11LS50	Material Services	bone collagen; collagène osseux	815	95	Langford component
33HI16	Enos Holmes mound	charcoal; charbon de bois	815	95	midden deposit on primary mound, to date the Cole complex
FgQm-59	Site 243R	charcoal; charbon de bois	818	12 0	component V
DfSj-40	Ittatsoo North	unknown; inconnu	820	60	ca. 1 m depth
DdRu-53	Brentwood Bay	bone collagen; collagène osseux	820	50	
DhRq-21	Pitt River	charcoal; charbon de bois	820	60	Kroeker deposit, Block X, unit C18, feature 27
45ST23	Lions Island	charcoal; charbon de bois	820	80	
24BE1010	Wheat Bison Jump	bison bone collagen; collagène osseux de bison	820	30	
NaPi-2	Clachan	spruce wood; bois d' épinette	820	80	House 1, S14/W16, middle of wall, 40-50 cm depth
5LR1370	Bode's Draw	unknown; inconnu	820	80	
25HW6	Coufal	charcoal; charbon de bois	820	10 0	center post of House 20, a rectangular structure with four center posts
3WA5	Ricard Shelter	human bone collagen; collagène osseux humaine	820	11 0	flexed burial, RI-73, 90 cm depth, with bone and shell artifacts and a shell-tempered potsherd
47PI81	Double	charcoal; charbon de bois	820	90	feature 4
11MS194	Kane	unknown; inconnu	820	95	House 1, considered on typological grounds to be slightly later than House 5 dated by M-1682
47FD10	Pipe	charcoal; charbon de bois	820	60	Feature 9, a refuse pit, Grand River Focus
LeHv-1	Kamarvik	wood; bois	820	10 0	midden at the entrance to the "bone" house, 25 cm depth
15ED52	Blue Springs Hollow	unknown; inconnu	820	80	
18GA23	Friendsville	charcoal; charbon de bois	820	40	feature 50, with limestone tempered ware

TIAt-8	Maxwell	muskox bone collagen; collagène osseux de boeuf musqué	820	75	Feature 3
ME42.10	Grindle	unknown; inconnu	820	80	general association of grit- or shell-tempered, smoothed, cord-wrapped stick decorated ceramics, ceramic period 5
EdRk-5	Cow Springs	charred wood; bois carbonisé	825	85	log in dark brown fine sand, zone II, test pit E, lip of housepit, 92 cm depth, same sample as GSC-521
24BH212	Bull Elk	charcoal; charbon de bois	825	15 0	component C
DgMr-33	Boundary Dam	human bone collagen; collagène osseux humain	825	90	burial in a hillside eroded by wave action in a reservoir
13ML129	Johnson Farm 2	charcoal; charbon de bois	825	60	roof beam in north area of house, ca. 15.2 cm diameter
KgJm-8	Ahmai	caribou bone collagen; collagène osseux de caribou	825	90	exterior of House 1, below sod beside entrance passage
45KP2	Old Man House	charcoal; charbon de bois	830	50	ca. 3 m asl
35KL778	Bezuksewas Village	charcoal; charbon de bois	830	70	
45GR76	Sam Israel	charcoal; charbon de bois	830	70	
FbNp-16	Newo Asiniak	bone collagen; collagène osseux	830	75	Level 1, processing area, base of modern soil, dark brown loam, 0-10 cm depth
32ML4	Flaming Arrow	wood; bois	830	70	house 1, feature 1-5, a post, 85-120 cm below datum
41VV190	Centipede Cave	charcoal; charbon de bois	830	10 0	upper zone, 8-14" depth
25HL28	Hulme	charcoal; charbon de bois	830	50	probably from a roof rafter or wall post remnant
39RO26	Sisseton Mound	charcoal; charbon de bois	830	85	
11S642	Dohack	charred plant remains; restes de plantes carbonisé	830	80	burned lens in Dohack phase pit, feature 81
15BE22	Cleek Village	bone collagen; collagène osseux	830	90	
33LU118	Petrie	unknown; inconnu	830	75	
9RI4	White's Mound	charred wood; bois carbonisé	830	14 0	interior of pit 2, square OL230
46MS53	Roseberry Farm	charcoal; charbon de bois	830	16 0	stratum 2a, Feurt phase
36WM23	Ryan	charcoal; charbon de bois	830	80	
CeEt-9	Place Royale	charbon de bois; charcoal	830	60	foyer
CgEq-19	Royarinois	charcoal; charbon de bois	830	70	pit, longhouse 1
JfEl-4	Tuvaaluk = Dia.4	charbon de bois?; charcoal?	830	10 0	aire J
FhNc-80	Wandering Pelican	bone collagen;	835	10	cultural layer, 1 m depth

		collagène osseux		5	
DkMh-1	Stendall	bison bone collagen; collagène osseux de bison	835	65	Unit 15, Level 2, 5.1-10.2 cm depth
13ML139	Kuhl 4	charcoal; charbon de bois	835	45	post in the northwest wall area of earthlodge, mold diameter 152 mm, depth 738 mm
33SA8?	Sandusky	unknown; inconnu	835	11 5	
AKBAR013	Walakpa	charcoal; charbon de bois	840	90	area A test trench with Early Thule Natchuk and Sicco harpoon heads
AKFAI035	Chugwater	charcoal; charbon de bois	840	90	southeast area, square S2/E60, just outside feature 2, a basin- shaped hearth, 25-41 cm BD
24FH1000	Eagle Bend	bone collagen; collagène osseux	840	13 5	occupation layer
MkPk-3	Bloody Falls	charcoal; charbon de bois	840	60	structure 1, square Q-14, hearth in yellow sand, 5-20 cm below Thule occupation
10BT46	Jackknife Cave	charcoal; charbon de bois	840	12 5	Block B-5, feature 3, fireplace associated with Level V
24BH501	Elk Creek Cave	organic matter; matière organique	840	50	red paint from an exfoliating area of an anthropomorphic pictograph, the only occurrence of red paint in the cave
5GN1668	Dillon Trail	charcoal; charbon de bois	840	80	cultural feature
32SI19	South Cannonball Village	charcoal; charbon de bois	840	90	collapsed structural member on floor of House 1, a semi- subterranean habitation, Extended Middle Missouri
13PM25	Broken Kettle West	charcoal; charbon de bois	840	55	House 2, pit 5, area 1, feature 5, Great Oasis
13ML126	Kuhl 1	charcoal; charbon de bois	840	60	cache in northeast corner of earthlodge
23DA226	Divine Mound	charred plant remains; restes de plantes carbonisés	840	75	beneath a mound in a charred woven bag dated by GX-678
13PK149	Darr-Es-Shalom	charcoal; charbon de bois	840	50	feature 58 in unit 1
11JY72	Pere Marquette Lodge	charred plant remains; restes de plantes carbonisé	840	70	feature 16, Jersey Bluff phase
47DA642	Statz	charcoal; charbon de bois	840	50	feature 128, with Madison Ware, Effigy Mound culture
47WN106	Overton Meadow	charcoal; charbon de bois	840	80	feature 30
20IR1	Chippewa Harbor I	charcoal; charbon de bois	840	10 0	scattered through fill in Test 2, Level 3, 1-2 ft depth in mottled sand
15DA68-69	Foster	unknown; inconnu	840	50	
33WO4	Indian Hills	charred wood; bois carbonisé	840	10 0	test pit O-E-3, 27.5 cm depth
20MR166	Reau	unknown; inconnu	840	65	
33ER98	Hemminger	bone collagen;	840	50	Eiden phase

		collagène osseux			
KjNb-7	Duc	charcoal; charbon de bois	845	11 5	area where Levels 3 and 4 merge
21BE36	Price	charcoal; charbon de bois	845	80	secondary village, feature 1, a storage pit, Cambria phase
23MN222	Rose Schinn	charcoal; charbon de bois	845	55	feature 1, a possible fire pit directly beneath the plow zone
18FR38	Devilbiss	charcoal; charbon de bois	845	85	hearth
HaGd-10	Gulf Hazard = GH-7	charbon de bois; charcoal	845	12 0	maison 1
OaRw-2	Bison Skull	muskox bone collagen; collagène osseux de boeuf musqué	850	40	east component, surface
DgSl-61	Chesterman Beach	marine shell; coquillage	850	70	unknown, 9.1 m asl
45DO176	Avey's Orchard	charcoal; charbon de bois	850	50	feature 22, fire hearth fill, 193.5 m asl, Cayuse phase
45OK512	Bonaparte Creek	bone collagen; collagène osseux	850	70	burial
26PE366	Sandy Bank	charcoal; charbon de bois	850	50	point A
45ST45	Atstluktstin	charcoal; charbon de bois	850	40	
DjPn-62	S.S. Burmis	bone collagen; collagène osseux	850	11 0	winter camp, component 3, Crowsnest Lake and Frank subphases
NcPf-12	Beulah	caribou bone collagen; collagène osseux de caribou	850	75	House 4, N4/W0
HaPl-1	Alook	bone collagen; collagène osseux	850	75	upper B horizon
HcOn-3	Densmore	bone collagen; collagène osseux	850	11 5	three one metre squares
42SA22674	Bluff Great House	cultigen; cultigène	850	40	TU 25, level 13, stratum V, burned layer
48SW5222	Archery	charcoal; charbon de bois	850	70	south locality
24CB601	Petroglyph Canyon	charcoal; charbon de bois	850	50	test excavations into soil deposits at the base of a rock art panel, upper level, 30-35 cm depth
24CB4/5	Pretty Creek	unknown; inconnu	850	80	unit 4, feature 24, 10" depth
48SW994	Lost Soldier Creek	soil; sol	850	70	unit 10, feature 6
24RB1014	Old Homestead	charcoal; charbon de bois	850	50	slab-lined hearth in south half of square 3-5N/35-37E, 15-20 cm depth, in single-component bison kill site
48CK7	McKean	charcoal; charbon de bois	850	60	locality II, block 7, feature 31, stratum 4
32ML111	Anderson Tipi Ring	charcoal; charbon de bois	850	70	feature 21
DgMg-137	Heath Mound	wood; bois	850	90	1.5 m northwest of mound centre, driven into subsurface 15-20 cm

32SI4	Paul Brave	charcoal; charbon de bois	850	10 0	fill of feature 42, a bell-shaped pit in front of House 2, representing the Fort Yates phase, Extended Middle Missouri
23CL113	Friend and Foe	charcoal; charbon de bois	850	11 0	House 1
21GD2	Bartron	charcoal; charbon de bois	850	55	feature 76, a pit 20 cm deep, with animal bone, sherds, and antler
11S685	Holdener	charred wood; bois carbonisé	850	80	fill of pit, feature 11
33WO10	MacNichol Hill	charcoal; charbon de bois	850	40	pit 10
AeHj-__2	Dymock	charcoal; charbon de bois	850	80	component 2, pit feature 50, Layer 2
AfHi-__20	Kelly	charcoal; charbon de bois	850	80	Feature 102
44Mc14	Clarksville	charcoal; charbon de bois	850	12 5	late Middle Woodland hearth bordering on the transitional Late Woodland horizon
7S-G-21	Bay Vista	marine shell; coquillage	850	55	with Townsend ceramics
19WR517	Millbury III	charcoal; charbon de bois	850	70	about 15 m north of the cremation cluster
ME7.7	Limington	charcoal; charbon de bois	850	60	buried A soil horizon
ME90.2C	Brigham	charcoal; charbon de bois	850	55	N9/E0, feature 2, stratum 12
11V-?	Indian Springs Mound	charcoal; charbon de bois	853	75	Feature 31, refuse pit containing Late Woodland and Mississippian pottery and stone tools, maize, plant and animal food debris
EeRl-21	Seton Lake	charcoal; charbon de bois	855	80	Housepit 16, floor A
24BH1052	South Fork Bottom	charcoal; charbon de bois	855	65	occupation layer
29CX-?	Philmont Scout Ranch	charcoal; charbon de bois	855	50	roof of structure at site NP-17 on a rock ring on a high promontory overlooking North Poñil Canyon
FbNp-1	Tipperary Creek	charcoal; charbon de bois	855	70	Level 6a, Area A, unit 461s/55e, Feature A6a-1, paleosol in alluvium
15BB21	Goodman-Clay Cist	unknown; inconnu	855	65	
HbGe-5	Ile Bélanger 2	restes d'animaux; animal remains	855	95	maison 3
35LA656	Dead Horse Rockshelter	charcoal; charbon de bois	860	70	
42SV-?	Nawthis Village	charcoal; charbon de bois	860	65	pit house
5LR3953	Kaplan-Hoover	charcoal; charbon de bois	860	40	N1028.484/E884.664, elevation 85.640 m
13ML132	Institution 1	charcoal; charbon de bois	860	55	wall post in northeast corner of earthlodge, mold diameter 15.3 cm

13ML135	Institution 2	charcoal; charbon de bois	860	60	post in north wall, post diameter 8.9 cm, 27.5 cm deep
14OS305	Hart	charcoal; charbon de bois	860	10 0	feature 3, a sub-floor pit in the center of House 1
41BO15	Cleaver	freshwater mollusc shell; coquille de mollusque d'eau douce	860	50	
14DP10	Nuzum	charred wood; bois carbonisé	860	55	features 4 and 5
23MS12	Feeler	charcoal; charbon de bois	860	70	feature 37, a bell-shaped pit, Maramec Spring phase
47CR186	Mill Pond	charcoal; charbon de bois	860	80	feature 23, 98 cm depth, to date first appearance of corn with Madison Ware, Effigy Mound culture
47ON27	Robinson	human bone collagen; collagène osseux humain	860	12 0	Lakes phase
15UN95	Stull	unknown; inconnu	860	13 0	
20BE-?	Moccasin Bluff	wood; bois	860	11 0	pit 86, Trench C, levels 5, 6, and 7, with exterior lip-notched pottery and Fisher influence
15SC10	Dry Run	unknown; inconnu	860	60	
AfHi-__21	Yaworski	charcoal; charbon de bois	860	80	Feature 71
AdHc-__4	Bruce Boyd	charcoal; charbon de bois	860	70	Feature 3, Sq 495-500
19BN-?	Follins Pond	charcoal; charbon de bois	860	70	midden surround a glacial erratic
26LN1590	Civa Shelter II	charcoal; charbon de bois	864	80	unit 2A
45GH15	Minard	charcoal; charbon de bois	865	95	ca. 2.5 m asl
20MR4	Indian Trails	human bone collagen; collagène osseux humain	865	75	ossuary, Late Woodland Younger phase, multiple reburial, with Macomb Linear and Springwells Net Impressed pottery
20MB181	Verchave II	charcoal; charbon de bois	865	10 0	feature 2, base of a large deep straight-sided storage pit containing fish bones, pottery and charred vegetal material, Younger phase
AgHa-__2	Middleport	charcoal; charbon de bois	865	60	unit 78G4, midden
7S-A-1	Mispillion	marine shell; coquillage	865	75	with Townsend ceramics
19BN811	Myrick's Pond	charcoal; charbon de bois	865	95	test pit 2, 33-38 cm depth, associated with corn dated 620 +/- 59 BP (GX-19319)
DfRu-3	Harbour House	human bone collagen; collagène osseux humain	870	60	burial B2 at the junction of Trenches III and VII
45CL422	Covington	charcoal; charbon de bois	870	60	



CACCo308	Stone Valley	charcoal; charbon de bois	870	50	
45OK424	Lagoon	charcoal; charbon de bois	870	60	
26EK1667	Kittredge Creek	charcoal; charbon de bois	870	10 0	scattered cobbles above hearth, 878-880 m N, 255-257 m W
26LN-?	O'Malley Shelter	charcoal; charbon de bois	870	10 0	Level 5
42BO-?	Beatty Springs	animal remains; restes d'animaux	870	75	Layer 2
24CB1094	Valley of the Shields	charcoal; charbon de bois	870	80	occupation level, 90 cm depth, containing sandstone abraders used to create rock art on an adjacent sandstone wall
42WN230	Ninas Hill	wood; bois	870	55	uncharred upright post (FS 104)
48CR4435	White 1	unknown; inconnu	870	90	
13BN110	Meehan-Schell	charcoal; charbon de bois	870	60	feature 35, a storage pit, Great Oasis
23BY388	Jakie Shelter	charcoal; charbon de bois	870	75	square 60L5, level 5
23JE400	Bonaker	charred wood; bois carbonisé	870	60	wall post
GfJi-__2	Ouissinaougouk	charcoal; charbon de bois	870	10 0	western area, Sq. D-57, Level V, probable hearth in orange sand
47DO393	Luedke	unknown; inconnu	870	80	feature 1, Effigy Mound culture
20ST-?	Ekdahl-Goudreau or Seul-Choix	charcoal; charbon de bois	870	12 0	test pit O-SW, top level of two-component site, with Juntunen-like ceramics
20BR6	Whorley Earthwork	charcoal; charbon de bois	870	10 0	burned post no. 15 in Trench E5 of the northeast extension of the earthwork
33WA83	Oglesby-Harris	unknown; inconnu	870	80	
AfHi-__52	Willcock	charcoal; charbon de bois	870	70	Midden 51, Sq. 490-480, subseq. 19, Layer 2, 11-20 cm depth
33LA4	Chagrin River / Elak Village	wood; bois	870	60	Chagrin River alluvium, underlying an Early Whittlesey phase occupation, 5 m depth
36LU105	Gould Island	unknown; inconnu	870	60	
NiTr-2	Kittigazuit	charcoal, organic matter; charbon de bois, matière organique	875	70	charcoal, hair, feather, baleen, and grass, Main trench, Layer 5 (M-5), square Q-120 (E), 190 cm depth
GaGc-1	Rivière Kanaaupscow	charbon de bois; charcoal	875	80	dans la fosse adjacente à l'un des foyers, en association avec des os brûlés, structure 3
ME29.9	Turner Farm	charcoal; charbon de bois	875	70	stratum 1GF, First Gravel Floor, W60/S85
35CU160	Goat Island	charcoal; charbon de bois	880	50	hearth
35LNC33	Three Rox	charcoal; charbon de bois	880	80	

DcRu-23	Finlayson Point	charcoal; charbon de bois	880	70	
45LE225	Riffe Lake or Champion Bridge	unknown; inconnu	880	60	
45KI435	Mule Spring	charcoal; charbon de bois	880	75	
42TO13	Danger Cave	plant remains; restes de plantes	880	10 0	stratum 35, cultural level 5
DjOm-?	Battle Creek	soil; sol	880	10 0	alluvial material overlying buried soil with Indian remains, 0-15 cm depth in a stream bank exposure
48PA848	Platt	charcoal; charbon de bois	880	10 0	
5WL38	Hatch	charcoal; charbon de bois	880	50	unit 4, a buried hearth feature
13PM50	Paul Williams	charcoal; charbon de bois	880	50	test pit 1, 35.6 cm depth, Great Oasis
47VE154	Lawrence I Rockshelter	charcoal; charbon de bois	880	60	square 6O, level I, closely compacted hearths with triangular and side-notched points, and Madison Ware, 57 cm depth, Effigy Mound culture
11JY60	Healy or Healey	charred plant remains; restes de plantes carbonisé	880	80	feature 1, dispersed throughout pit fill, Jersey Bluff phase
11MO594	Carbon Dioxide	charred plant remains; restes de plantes carbonisé	880	80	burned area near floor of Lohmann phase wall trench structure
11CA44	Webster	cultigen; cultigène	880	60	Late Woodland agricultural village
15CL44	NA Stainless	unknown; inconnu	880	30	unit 21, level 2
15BE6	Petersburg	unknown; inconnu	880	60	Anderson?
33WA78	Pipeline	unknown; inconnu	880	45	
46MS103	Niebert	unknown; inconnu	880	55	
20GS-VP	Lennon mammoth	whale bone collagen; collagène osseux de baleine	880	75	sand
33LU86	Martin	unknown; inconnu	880	45	
20MR40	Morin	Charcoal (associated with maize and vase dentate ware [believed to date to around 700 AD])	880	11 0	
AaHq-___8	Bruner-Colasanti	charcoal; charbon de bois	880	75	Feature 169
AgHa-___3	Middleport ossuary	human bone collagen; collagène osseux humain	880	40	ossuary excavated by F.H.S. Knowles in 1912
36HU67	Petersburg Bridge	unknown; inconnu	880	50	
18ST570	Thomas Point	charcoal; charbon de bois	880	50	buried sheet midden with Townsend ceramics
GaEl-3	Lac Caniapiscau	charcoal; charbon de bois	880	80	hearth 1, from within the hearth deposit
39ST11	Fay Tolton	wood; bois	885	50	immediate vicinity of basket, feature 10, near rear of house 2, Initial Middle Missouri

13WB6	Casey's Mound group	human bone; os humain	885	10 0	adult female burial in a sub-floor pit 15" depth in a conical mound with red ochre, Marginella shells, and two conch shell tablets, Great Oasis
AfHh-___2	Pond Mills	charcoal; charbon de bois	885	80	Midden 303, Sq. 490-240, subsq 10, Layer 5, 28-36 cm depth
46MR1	Grave Creek Mound	unknown; inconnu	885	85	
GiQa-3	Slump	charcoal; charbon de bois	888	80	Level 3
45GR445	Salishan Mesa	charcoal; charbon de bois	890	10 0	
48CR4001	Espy-Cornwell	plant remains; restes de plantes	890	70	seed beads associated with burial B, a primary crevice interment of a young child
24RB1020	Ellison's Rock	charcoal; charbon de bois	890	50	rockshelter, feature 33, a type IV fire-cracked rock and debris cluster, unit 26.9S/38.5W
14BU55	Two Deer	charcoal?; charbon de bois	890	60	
11S693	Hofstetter	charred wood; bois carbonisé	890	70	tree post remnant, 300 cm depth, on floor of Emergent Mississippian structure 4
15FU67	Running Slough	charred wood; bois carbonisé	890	90	midden, Dorena
47WP70	Sanders 3	charcoal; charbon de bois	890	65	village, feature 1, 2.0-2.6 ft depth, above floor of House 1, with bone, cord-impressed body sherds and cord-marked body sherds, Effigy Mound culture
47SB202	Bachmann	charcoal; charbon de bois	890	50	large fire pit containing a few chert flakes but no diagnostic artifacts
12MA1	Oliver Farm	charred wood; bois carbonisé	890	10 0	feature 22, a basin-shaped pit beneath more recent alluvial deposits, Oliver phase
15CL51	Froman	unknown; inconnu	890	70	Everman phase
33PI?1	Deer Creek State Park	unknown; inconnu	890	80	burial
BjDu-17	Diggity	charcoal; charbon de bois	890	80	unit H11, feature 3, a hearth, level 2, 15 cm depth, with burned bone fragments, pottery and flakes
5MF435	Duffy Shelter	unknown; inconnu	895	75	
32SN113	Tahuka	charcoal; charbon de bois	895	40	
36BD90	Bedford Village	unknown; inconnu	895	65	
18KE38	Groves #1	marine shell; coquillage	895	85	
AKXBD020	Village (RaEc-2)	charcoal; charbon de bois	900	90	Level 1, 0-5 cm depth, top of the red loess, just below a yellow-brown stratum, N15-20/E10-15

DdSe-23	Cheewaht River (906T)	marine shell; coquillage	900	50	midden 4 m asl, 35-37 cm depth
EcRi-1	Drynoch Slide	charcoal; charbon de bois	900	50	hearth feature, a hemispherical-shaped firepit, excavated in a clayey sandy diamicton and covered by about 16 cm of fine sand
45ST102	Christina	charcoal; charbon de bois	900	50	
39BU2	Smiley-Evans	charcoal; charbon de bois	900	70	feature 18, level 3, a large fired bell-shaped roasting pit, Initial Middle Missouri
23RA302	Lick Lake	charcoal; charbon de bois	900	50	feature 2, a vertical sided pit with expanded base
20MK-?	Tamlin	charcoal; charbon de bois	900	85	test pit 8
AgHb-___1	Porteous	charcoal; charbon de bois	900	70	House 5, pit 46, 46 cm depth
DcGt-4	Roger Marois	charbon de bois; charcoal	900	50	structure 2
BcDb-1	Whynacht Cove	charcoal; charbon de bois	900	50	shell heap, uppermost of three levels
5MN654	Cottonwood Pueblo	charcoal; charbon de bois	905	65	
12CL-?	Prather	charcoal; charbon de bois	905	70	Area C, level 10, with a wall-trench house at the basal level of the site
18DO42	Lankford 1	charcoal; charbon de bois	905	60	pit 3, area 3, layer 4, with shell tempered Townsend ware
AKKOD044	Anton Larsen Bay	charcoal; charbon de bois	910	60	slate box on house floor 3A
35LA1105	South Slough 4	wood; bois	910	50	weir stake, western weir feature
26PE-?	Brown Cave	plant remains; restes de plantes	910	80	Z-twist matting
DiPi-4	Pincher Creek	bison bone collagen; collagène osseux de bison	910	80	Level 5, 190 cm depth
FkPg-42	Scotford	charcoal; charbon de bois	910	80	36-40 cm depth
48UT1186	Bessie Bottom	unknown; inconnu	910	80	component 2
5CF84	Jasper Quarry = Trout Creek	unknown; inconnu	910	50	
EdMq-1	Moose Bay Burial Mound	wood; bois	910	70	burial mound, central support post
39CO6	Jake White Bull	charcoal; charbon de bois	910	50	village on high cut bench, Extended Middle Missouri
13WD88	Cowan	corn; maïs	910	70	Great Oasis
13CD10	Rock Run Shelter	charcoal; charbon de bois	910	55	floated from soil sample, 8-10" below the original surface level of the shelter, square 49-50X, 52-53Y
47RI-?	Syttende Mai	unknown; inconnu	910	50	feature 14, with collared ceramics

47DO27	Nitschke mound	charcoal; charbon de bois	910	55	stone altar, Mound 21, panther effigy, with a burial, 0.8 ft depth, Effigy Mound culture
GIW-___5	Ile de l'Ourson 1	caribou bone collagen; collagène osseux de caribou	910	40	eroding from the base of a peat layer ca. 30 cm thick along the west side of an island
47KN-?	Pike River	charcoal; charbon de bois	910	50	11-12 cm depth
15McY292	Tough Tree Shelter	unknown; inconnu	910	60	
20IS-VP	Oscoda whale	whale bone collagen; collagène osseux de baleine	910	65	in 1.5 m of sand, from excavation in SW corner of schoolhouse
46LG156	MacDonald Field #4	unknown; inconnu	910	50	
46PU100	Corey	unknown; inconnu	910	50	
28ME125	Old Barracks	plant remains; restes de plantes	910	60	feature 3, a large pit feature, level 4
AlDm-1	Bain	charcoal; charbon de bois	910	60	unreported provenience
20CX-?	Eagle Island	charcoal; charbon de bois	915	80	hearth
EISx-10	Fougner Bay	marine shell; coquillage	920	60	beach face, 5-10 cm above beach surface
45LE413	Yuyutia	unknown; inconnu	920	50	
10IH369	Island Bar Midden	charcoal; charbon de bois	920	45	floor of a housepit
5WL1997	Three O'Clock Shelter	charcoal; charbon de bois	920	60	unit 6
23BO303	Gordon Tract	unknown; inconnu	920	60	Boone phase
47SK292	Hulburt Creek	charcoal; charbon de bois	920	50	10-40 cm below the planting surface, to date the construction of ditched field agriculture
47JE201	Bethesda Lutheran Home	unknown; inconnu	920	60	feature 79, level 4, a bell-shaped pit with five strata representing fill episodes and wall collapse, Kekoskee phase
33SC17	Scioto County Home	unknown; inconnu	920	60	
33AD-?	Serpent Mound	charcoal; charbon de bois	920	70	obtained by flotation from stratum 3, mound fill
AKSIT244	Daxatkanada	marine shell; coquillage	925	70	column 3, 30-38 cm depth, the deepest level of the terrace excavated in 1985
AKFAI091	Owl Ridge	charcoal; charbon de bois	930	50	unit 6/7
24PR627	Highwalker	charcoal; charbon de bois	930	40	hearth at south edge of site, ca. 8 cm depth, with pottery and small side-notched and corner-notched projectile points
LA-18400	Garnsey	charcoal; charbon de bois	930	40	feature
48LA304	Seven Mile Point	charcoal; charbon de bois	930	60	Upper Republican phase
23SH81	Owl's Bend	charcoal; charbon de	930	60	

		bois			
3CG636	Mangrum	charcoal; charbon de bois	930	50	feature 13, an irregular pit, 28-73 cm depth, with Barnes, Neeley's Ferry, and Varney wares
33GR670	Owens Rockshelter	unknown; inconnu	930	65	
39BR16	Swanson	wood; bois	935	55	House 2, post C, outer rings, Initial Middle Missouri
7S-H-18	Prickly Pear Island	marine shell; coquillage	935	55	feature 3, with Townsend ceramics
MeTp-4	Martin Zheh	charcoal; charbon de bois	940	50	Layer 31
5RB1463	Hummingbird Rockshelter	unknown; inconnu	940	50	sheltered camp
24TE36	Lonely Hearth	charcoal; charbon de bois	940	40	hearth pit fill, 10-20 cm depth
47DA411	Rosenbaum rockshelter	charcoal; charbon de bois	940	55	feature 2 with ceramic vessel of Aztalan Collared type plus four small triangular projectile points, Kekoskee phase
BfGa-__11	Wyght	charcoal; charbon de bois	940	40	Sq. K10, Feature 6, with ceramics
AgHk-__32	Van Bree	charcoal; charbon de bois	947	50	feature 45, central cluster, with Early Ontario Iroquois type vessels
23RA136	Flowers	charcoal; charbon de bois	1055	50	feature 11, a basin-shaped pit with chert debitage
35DO182	Standley	charcoal; charbon de bois	1060	50	
46HK34	Watson Farm	unknown; inconnu	1060	55	Watson phase
ME61.17	Great Spruce Island	unknown; inconnu	1060	50	direct association of shell-tempered, smoothed, cord-wrapped stick and circular punctate decorated ceramics, ceramic period 4
38PN2	I.C. Few	charcoal; charbon de bois	1065	60	feature III, associated with burial 15
EiBg-1	Blanc Sablon 1	charbon de bois, humus et sol; charcoal, peat and soil	1068	45	dans un humus enfoui contenant des éclats de taille, à environ 221 pouces sous la surface
35CS136	Coquille Point	charcoal; charbon de bois	1070	60	
GkQn-100	Karpinsky	charcoal; charbon de bois	1070	55	adjacent squares E12, E13, and F12, the latter directly associated with artifacts
48CR1880	Universal State 1	charcoal; charbon de bois	1070	60	
15SC154	DeGaris	unknown; inconnu	1070	60	terminal Late Woodland
33LN13	Franks / Mill Hollow	human bone collagen; collagène osseux humain	1070	50	burial 2
14DO19	Hatcher	charcoal?; charbon de bois	1075	65	
47IA80	Gottschall Rockshelter	unknown; inconnu	1075	70	zone I, level 5, Effigy Mound culture
DdSe-11	Cheewaht River (331T)	marine shell; coquillage	1080	50	midden 3 m asl, 53-60 cm depth

20IB1	Indian Mound Park	charcoal; charbon de bois	1080	75	occurrence 545R500, Level 2, cap of burial mound
RIWA9	Oaklawn Steatite Quarry	charcoal; charbon de bois	1080	75	ash deposit, 5 ft depth, directly above a platform stone pipe
FbNr-1	Tschetter	bone collagen; collagène osseux	1085	80	cultural layer, Test pit 1, Plan 6, 42.7 cm depth
AKAFG004	Aleut Town	charcoal; charbon de bois	1090	80	hearth at the south end of excavation, in fill overlying and possibly a century younger than the South house floor
MiTr-1	Tsiigehtchic	fish bone collagen; collagène osseux de poisson	1090	50	levels 20 and 21, composite sample, units 9 and 10
DgSl-?	First Radar Beach Midden 927T	charcoal; charbon de bois	1090	60	midden 5 m asl, 165 cm depth
35GM91	Morris	charcoal; charbon de bois	1090	60	hearth
42WN996	Hillside Cache	wood; bois	1090	55	FS 25 from storage cist B
42UN170	Whiterocks Village	charred wood; bois carbonisé	1090	60	structure 2
48FR2064	Sandtrap	charcoal; charbon de bois	1090	80	hearth
13DA110	Kuehn	charcoal; charbon de bois	1090	50	Great Oasis
NiJp-4	Netsilik River 2	caribou bone collagen; collagène osseux de caribou	1090	55	House 6, unit 11c, 20 cm depth
11GE20	Audrey	charcoal; charbon de bois	1090	70	burned house remains
11JY151	Camden Hollow	charred plant remains; restes de plantes carbonisé	1090	70	feature 3, Jersey Bluff phase
BeDq-11	Newton's Point	charcoal; charbon de bois	1090	40	Area A, unit F80, Feature 1, bottom of basin-shaped feature, 52 cm below datum
Z:12:5	Ventana Cave	charcoal; charbon de bois	1095	55	Volcanic Debris layer
AKXSL001	Hillside	willow wood; bois de saule	1100	70	House 3
EISx-5	King Island	marine shell; coquillage	1100	65	surface exposure on a high terrace
35CO34	Ede	charcoal; charbon de bois	1100	60	
EeRk-4	Bell	charcoal; charbon de bois	1100	80	Housepit 13, 40 cm depth
45KT28E	Sunset Canyon	bone collagen?; collagène osseux?	1100	65	
10OE60	Givens Hot Spring	charcoal; charbon de bois	1100	60	House 1, with Elko series and Rosegate points
10OE1674	Nahas Cave	charcoal; charbon de bois	1100	80	hearth in west wall, unit S2/W2, 45-55 cm depth, with Camas Creek II phase artifacts
24LN1036	Haul Bridge	charcoal; charbon de bois	1100	80	occupation layer
EcPl-1	Old Women's buffalo jump	charcoal; charbon de bois	1100	80	Layer 13, sq. A-5, decomposed hair, hide and

					bison bone resembling peat
24HL188	Meissner	human bone collagen; collagène osseux humain	1100	70	cairn 2, with a secondary human burial
48LN1296	Shute Creek	human bone collagen; collagène osseux humain	1100	70	area E, burial, feature 194
48SW3729	Killpecker Dune	charcoal; charbon de bois	1100	60	
FdNm-16	Lucky Strike	bone collagen; collagène osseux	1100	90	south area, concentration area 2
32DU955C	Big Black	charcoal; charbon de bois	1100	60	Block 2, 805N/E342, 72-77 cm depth, feature 6, a charcoal-stained area deep in the Folsom component
DkMd-3	Gompf	bison bone collagen; collagène osseux de bison	1100	65	Unit B, Level 3, bottom of bone bed, 20-30 cm depth
34BK44	Edwards II	charred wood; bois carbonisé	1100	80	feature 3, a pit in a single- component Custer focus site
34DL1	Reed	charcoal; charbon de bois	1100	75	north side of the south house, ca. 14" depth, Gibson Aspect
14BO319	Roth	charcoal?; charbon de bois	1100	90	
3BE174	Albertson	charcoal; charbon de bois	1100	75	stratum 3
23PI77	Bundy	unknown; inconnu	1100	70	
11JY290	O'Donnell	charred plant remains; restes de plantes carbonisé	1100	70	feature 5, level 7, dispersed flotation sample, Adams variant
20WA336	Brandon	human bone collagen; collagène osseux humain	1100	50	burial in a subterranean chamber lined with cobbles and boulders
46WD1	Blennerhassett Mansion	unknown; inconnu	1100	70	
36WH415	Avella Mound	unknown; inconnu	1100	90	
211-1-1	Hudson River	charcoal; charbon de bois	1100	70	
AKSIT130	Windy Smokehouse Village	marine shell; coquillage	1110	60	column 4, 20-28 cm depth
45WH477	Newhalem Creek Rock Overhang	charcoal; charbon de bois	1110	10 0	
EePi-1	Amber burial	bone collagen; collagène osseux	1110	85	burial
24CH68	Lost Terrace	charcoal; charbon de bois	1110	10 0	level 1, feature 2, 1.85 m depth
24BH1726	Benson's Butte	charcoal; charbon de bois	1110	70	feature 5-74, a fire or refuse pit, 8N/34W, level I, 27-37 cm depth
DgMI-1	Glen Ewen Burial Mound	charred wood; bois carbonisé	1110	90	burial mound, intrusive burial, dates secondary burial in mound periphery
39DE5	Winter	charcoal; charbon de bois	1110	70	feature 4a, part of feature 4, Level 2, a large cache pit sampled at 62-92 cm depth
23BO950	Hinkson Creek	unknown; inconnu	1110	60	Boone phase



3CH14	Powell Canal	bone collagen; collagène osseux	1110	10 0	feature 3
11ST123	Smiling Dan	charcoal; charbon de bois	1110	70	feature 87, level 1, lower 10 cm of a shallow pit excavated into a side slope of the valley at the base of the surface A horizon, Adams variant
47RI59	Neefe	charcoal; charbon de bois	1110	10 0	feature 1, transitional period between Middle and Early Woodland
11MO880	Woodland Ridge	unknown; inconnu	1110	70	Patrick phase
11MS1437	Vaughn Branch	unknown; inconnu	1110	70	Patrick phase
11LS14	LaSalle County Home	unknown; inconnu	1110	90	feature 18, Des Plaines complex, possibly mixed with earlier materials, or Starved Rock component
47DO399	Weisner III	unknown; inconnu	1110	80	feature 36, with collared ceramics, Kekoskee phase
RcHw-1	Muskox Fiord	whale bone collagen; collagène osseux de baleine	1110	80	structural component of a house
15BE249	Watson Gravel	unknown; inconnu	1110	35	
20MR154	Indian Island No. 4	charcoal; charbon de bois	1110	85	pit 1, with a charred maize kernel, diagnostic ceramic and lithic artifacts, in the lowest cultural stratum
AcHm-__31	Van Bommel	charcoal; charbon de bois	1110	70	Feature 18
BbGk-11	Myles Burial Site	charcoal; charbon de bois	1110	40	Burial A, 82 cm BD
AlGh-__32	Lakeshore Lodge	charcoal; charbon de bois	1110	60	ashy sand, Unit N23W9, hearth, 5th cultural stratum, 156-159 cm depth
ME43.46	Tinker Island 1	charcoal; charbon de bois	1110	60	8S/1W, north half of square, with various Late Ceramic artifacts
15CR73	Grayson	unknown; inconnu	1112	48	Everman phase
11J-?	Raymond	charcoal; charbon de bois	1115	75	stain 9 cm thick, 42 cm depth, with Raymond cord-marked ceramics
DjSp-1	Yuquot	charcoal; charbon de bois	1120	80	Zone III, stratum IIIc, decomposing mussel shell, ca. 8 m asl
35LA1104	Half Moon Weir	peat; tourbe	1120	70	buried peat layer
35UM1	Umatilla	charcoal; charbon de bois	1120	70	hearth in house
26HU102	Last Supper Cave	sheep bone collagen; collagène osseux de mouflon	1120	60	packrat midden at the rear of the cave, 6-12" depth
26PE118	Trego Hot Springs	charcoal; charbon de bois	1120	60	feature 8, square 5N/9W, Level 4, Horizon 2d, uppermost horizon in unit 2, house pit fill with small points like Elko but arrow rather than dart sized
35BA347	King Creek	unknown; inconnu	1120	50	
10CW38	Indian Creek	charcoal; charbon de bois	1120	85	unit 5, 80 cm depth, a concentration of charcoal and fire-cracked rock

42BO268	Swallow Shelter	charcoal; charbon de bois	1120	110	bottom of stratum 9, a basal date for Fremont strata, a discrete concentration of charcoal
42WS503	Red Cliffs	unknown; inconnu	1120	50	
5RB733	Pedestal House	unknown; inconnu	1120	60	open camp with a Rose Spring point
48SW1455	Deadman Wash	charcoal; charbon de bois	1120	80	component 9, 50 cm depth
24PH794	Henry Smith	charcoal; charbon de bois	1120	100	unit 3, composite sample from bone layer 1c
48LA1033	Sorensen Shelter	charcoal; charbon de bois	1120	80	
32SN207	Jamestown	charcoal; charbon de bois	1120	70	mound D, feature 6, a hearth
34SQ11	Horton	charcoal; charbon de bois	1120	100	feature 4, Trench M, burned midden with materials comparable to Gibson-aspect Caddoan, the earlier of two components
11F2167	Norris Farm 36	charcoal; charbon de bois	1120	70	burial 45, collapsed grave roof, Bold Conselor phase
11PK993	Pittsfield Prison	charcoal; charbon de bois	1120	70	feature 2-01P/01
11GE4	Koster East	charred plant remains; restes de plantes carbonisé	1120	70	feature 1040, levels d-g, the lower levels of a Late Bluff pit, Jersey Bluff phase
47PT29-1	Bigelow 1	charcoal; charbon de bois	1120	55	Mound 4, a conical mound, feature 1, 1.0-1.4 ft depth, Effigy Mound culture
20SA393	Birch Run Road	Charcoal (associated with Human Bone and Zea Mays kernel)	1120	90	
33LU6	Waterworks Mound	charcoal; charbon de bois	1120	55	hearth feature at base of burial mound representing Middle to Late Woodland transition
46KA105	Jarvis Farm	unknown; inconnu	1120	110	Buck Garden phase
36CN2	Kress	unknown; inconnu	1120	100	
BgDr-5	Carson	charcoal; charbon de bois	1120	65	Section B, N34-35/W14-15, 39 cm depth, hearth Feature 12, Assemblage 2
BdCw-1	Skora = Whites Lake	charcoal; charbon de bois	1120	80	Feature 6, adjacent to mound
11MS2-2	Cahokia	charcoal; charbon de bois	1125	75	House 21, feature 217, floor of a rectangular post structure with long axis northwest-southeast, with Old Village sherds but Bluff type construction
AKBAR-?	Bimirk	caribou bone collagen; collagène osseux de caribou	1130	40	Natchuk type harpoon head (cat. no. IX-F: 3626) from a purchased collection
AKKOD145	Uyak	charcoal; charbon de bois	1130	70	hearth in house pit 2

DhSe-2	Shoemaker Bay	charcoal; charbon de bois	1130	85	Zone A, bands of black soil and crushed shell, up to 50 cm thick, containing the remains of Component II
45KP108	Carlson Spit	charcoal; charbon de bois	1130	80	
24HL8	Avocet	charcoal; charbon de bois	1130	110	roasting pit
24FR760	Vestal	charcoal; charbon de bois	1130	50	feature 18, a hearth
48CR2353	Medicine House	charcoal; charbon de bois	1130	50	test unit 1, feature 1
DiMv-38	Jots	bison bone collagen; collagène osseux de bison	1130	80	Level 3, unit 106N/143E, SW quad, feature 1, an ash pit
DILg-33	The Forks	charcoal; charbon de bois	1130	110	hearth in clay-silt, unit 21K35D, 1 m below railway fill
14SH101	Richland	charcoal; charbon de bois	1130	60	feature 1, a crematorium with a Scallorn arrow point
23PU383	Dead Deer	charcoal; charbon de bois	1130	80	feature 12, a large rock hearth, Maramec Spring phase
13JK20	Henry Schnoor Rockshelter	charcoal; charbon de bois	1130	60	square N5B, level 5, 48.3-63.5 cm depth, with the bundle burial of a small child
3.0	Banks	human bone; os humaine	1130	75	burial 86 at summit of primary mound 3, with seeds and cloth material
46FA7	Mount Carbon Village	charcoal; charbon de bois	1130	120	feature 90, square 180E/190S, a circular cooking pit with very late Armstrong pottery, transition to Buck Garden pottery
HbGe-4	Ile Bélanger 1	restes d'animaux; animal remains	1130	95	maison 2
KgDI-4	Newell Sound 4	animal remains; restes d'animaux	1130	50	hearth stone in house 1
EbDj-2	Rivière au Bouleau	charbon de bois; charcoal	1130	90	niveau B
42WN337	Playa	charcoal; charbon de bois	1135	65	charred roof timber (FS 46) in lower fill of pithouse
MILg-2	Sherman Inlet 1	caribou bone collagen; collagène osseux de caribou	1135	55	House 1, unit 8d, 35 cm depth
18CH58	Loyola Retreat	charcoal; charbon de bois	1135	95	Level 1, with shell tempered ware
19SU75	Telephone Trench	charcoal; charbon de bois	1135	55	unit 21, level 5, 32-37 cm depth with a Jack's Reef corner notched point, a perforator, a scraper, several utilized flakes, and ceramic sherds
35CU34	Indian Sands	charcoal; charbon de bois	1140	80	
35LK542	Lake Abert	charcoal; charbon de bois	1140	110	
DjPI-145	Kettles Jump	bison bone collagen; collagène osseux de	1140	90	20-30 cm depth

		bison			
DIOn-3	Larson	charcoal; charbon de bois	1140	90	Level 2, 70-110 cm depth
48SW2590	Maxon Ranch	charcoal; charbon de bois	1140	100	component IV, feature 5
5RB2829	White Rock	charcoal; charbon de bois	1140	50	stratum 6, unit C, with Rose Spring points and Douglas Creek Gray ware
24MC71	Nickles Kill = Twitchell	bone collagen; collagène osseux	1140	100	bison kill
41TV48	Pumkinseed Shelter	charcoal; charbon de bois	1140	90	2 samples combined, squares 100 and 101, 0-0.5 ft depth, Austin Focus
GdKn-3	Gods Lake	charcoal; charbon de bois	1140	80	test trench 1, section 3, feature 1, 1 m E, 15 cm S, 13 cm depth
11P4	Rench	charcoal; charbon de bois	1140	70	feature 52, a corn pit
46LG5	Man	unknown; inconnu	1140	55	
BcFx-__38	West Grenadier 36H40	charcoal; charbon de bois	1140	60	stone-filled hearth, 1.75 m diameter, with two distinct layers of beach cobbles
7S-F-68	Two Guys	charcoal; charbon de bois	1140	60	test unit 9, level 2, feature 2, a charcoal concentration
BhFl-1a	Pointe-du-Buisson, Station 1	charbon de bois; charcoal	1140	110	Hector-Trudel
BgDr-60	Lighthouse Cove	marine shell; coquillage	1140	105	Unit 2, Layer 2
EiBg-10	Blanc-Sablon 10	charbon de bois; charcoal	1140	60	structure 1 (foyer)
23JA85	Sperry	charcoal; charbon de bois	1145	60	
EISx-4	Windsor Cove	marine shell; coquillage	1150	75	surface exposure on a high terrace
DgRr-2	St. Mungo Cannery	human bone collagen; collagène osseux humain	1150	50	burial C1b2
EeRl-4	Bridge River	charcoal; charbon de bois	1150	80	Housepit 51, floor A
45GR306	Wahluke	charcoal; charbon de bois	1150	110	
26WA205	Shiners site I	plant remains; restes de plantes	1150	100	coiled basketry fragment, the predominant type of basketry at the site, Lovelock culture
5RB726	Brady	unknown; inconnu	1150	50	
FB9366	Pendejo Cave	burned wood; bois brûlé	1150	100	Zone B, unit W1N0, single large piece of wood
24PH2886	King	charcoal; charbon de bois	1150	50	XU-5, occupation 3
5GN212	Iola	charcoal; charbon de bois	1150	70	cultural feature
5JF142	LoDaiska	charcoal; charbon de bois	1150	75	square J9, 58-60" depth, a concentration but not a hearth, Parker phase
5PE648	Recon John Shelter	charcoal; charbon de bois	1150	60	grid A-1, level 5, stratum D/F

25HO23	Kelso	charcoal; charbon de bois	1150	100	feature 2, a hearth at 5.6 ft depth in a single-occupation level buried beneath a sand dune up to 12 ft deep
11-?	Margurite Shippey	charred wood; bois carbonisé	1150	70	feature 1, level 1, Adams variant
23RA224	Murphy	charcoal; charbon de bois	1150	70	feature 18, a basin-shaped pit, with a reconstructable pottery vessel and some faunal remains
47CR310	Quarter Mile Shell Midden	charcoal; charbon de bois	1150	70	base of an extensive shell midden, 120 cm depth, Effigy Mound culture
13JN3	Hadfield's Cave	charcoal; charbon de bois	1150	55	Feature 16, square 113, level 5, 22.9-30.5 cm depth, from lowest cultural zone in the site, Effigy Mound
47GT157	Preston Rockshelter	charcoal; charbon de bois	1150	60	square 12N/36W, 1.5 m depth, Effigy Mound culture
46.0	Trent Rockshelter	unknown; inconnu	1150	50	
18KE50	Andelot #18	marine shell; coquillage	1150	65	
SgFm-3	Longhouse	walrus bone collagen; collagène osseux de morse	1150	100	surface, Knud Peninsula, beside Dorset long house, 8-9 m asl
BhDt-4	Simpson's Farm	marine shell; coquillage	1150	90	
GcEl-1	Lac Delorme	charcoal; charbon de bois	1150	140	hearths 3-4, associated with calcined bones from several different soil lenses, the hearth having been disturbed, probably by cryoturbation
BgDq-6	Weir	charcoal; charbon de bois	1150	80	component 4, west mound
23MN380	Victor Bridge	charcoal; charbon de bois	1155	60	
AKTLM021	Upper Susistna River	charcoal; charbon de bois	1160	100	
35CLT13	Ave. Q	charcoal; charbon de bois	1160	60	testpit 2, level 3
DcRu-12	Maplebank	charcoal; charbon de bois	1160	70	
35CO16	Whill Wetz Village	charcoal; charbon de bois	1160	80	
45GR88	Windy Spring Cave	turtle bone; os de tortue	1160	100	square 1211, 24-30" level, and square IV, 36-42" level, the oldest culture bearing stratum, with polyhedral cores, microblades, grinding slabs and manos
10CA17	Ashtrap Rockshelter	charcoal; charbon de bois	1160	80	feature 1
24TT83	Corey Ranch	bone collagen; collagène osseux	1160	80	feature 15
24PA407	Anzick	unknown; inconnu	1160	90	in the vicinity of the site
48UT390	Austin Wash	charcoal; charbon de bois	1160	50	stratum B, rock-filled fire pit
5DL775	Glade Road	charcoal; charbon de bois	1160	50	feature 2, 62-65 cm depth

24RB1069	Dusty Shelter	charcoal; charbon de bois	1160	60	feature 4B
NiNg-17	Cadfael	caribou bone collagen; collagène osseux de caribou	1160	125	test cut inside southeast end wall of the southeasterly-most of three long structures, in the thin humus layer, 0-15 cm depth
11JY240	What-a-View	charred wood; bois carbonisé	1160	70	feature 1-02, Jersey Bluff phase
11MS108	Linkeman	unknown; inconnu	1160	70	Sponemann phase
11J814	Little Muddy Rock Shelter	charcoal; charbon de bois	1160	60	
46KA6	Tompkins Farm	unknown; inconnu	1160	100	Buck Garden phase
BcFx-___5	Squaw Island South	charcoal; charbon de bois	1160	70	Test Sq. 1, NW corner, hearth, 10 cm depth
24CH452	Thompson Bottom	charcoal; charbon de bois	1165	85	occupation layer, 0.9 m depth
EaOd-1	Gull Lake	charcoal; charbon de bois	1165	80	Layer 21, Zone 4, poorly sorted sand, silt, and clay with pebbles, 6" (15 cm) below bison skull 7 in square 26R18
21CA1	Scott	charred plant remains; restes des plantes carbonisé	1165	120	shallow firepit with charred mammal bone, ash, and cord-marked body sherds
15FA11	Drake Mound	plant remains; restes de plantes	1168	150	bark preserved by copper salts, burial 7, lying on bottom of pit, the central feature of this site, Adena
AKCRG381	Wolf's Lair	wood; bois	1170	60	carved plank in sea cave
10LN74	Tomcat Cave	charcoal; charbon de bois	1170	60	Area A, stratum I, dark brown silt, sagebrush charcoal (80% organic)
42JB2	Nephi Mounds	charred wood; bois carbonisé	1170	85	dwelling 2, mound 2
42EM74	Crescent Ridge	charcoal; charbon de bois	1170	100	structure 1
48LN1468	Taliaferro	charcoal; charbon de bois	1170	60	component VI, house F30, fill
48SW3740	Big Sandy Reservoir	carbonized wood; bois carbonisé	1170	90	
5RB3060	New Site Hamlet	unknown; inconnu	1170	100	
24RB878	Foresite	charcoal?; charbon de bois	1170	60	feature 6B
DgLq-1	Star Mound	bison bone collagen; collagène osseux de bison	1170	70	pit D, a 1 m deep pit at the center of the mound, below human bones of skeleton #14 which was about half way below the mouth of the pit
21OT51	Dead River site B	charcoal; charbon de bois	1170	120	feature 9, 10 cm depth in sandy soil, with Blackduck ceramics and a burned turtle carapace
23CL118	Butcher	charcoal; charbon de bois	1170	150	feature 301, a shallow, basin-shaped pit

					Craig Mound, a burned area in the basal section of the mound, the saddle section just south of the central ceremonial chamber
34LF1	Spiro	charcoal; charbon de bois	1170	75	
23PI76	Chapuis	unknown; inconnu	1170	60	
11C-?	Leadders Mounds	charcoal; charbon de bois	1170	120	Mound 10, crematory A, 8.5 ft diameter, 24" depth, with 3 burials, a baked clay pipe, Canteen Cordmarked sherds, and a charred bone pendant
11MO608	Fish Lake	charred wood; bois carbonisé	1170	100	fill of Patrick phase keyhole-shaped structure, feature 9
8OK11	Buck	charcoal; charbon de bois	1170	140	Level 2, 20.3-35.6 cm depth, in perimeter of mound, with Weeden Island pottery
33HO1	Ash Cave	plant remains; restes de plantes	1170	100	bundle of grass in a refuse layer ca. 2-3" depth in an ash bed 2-3 ft deep, with broken pottery, grass, gourd rinds, pumpkin, and a sandal
46PU2	Turkey Creek Mound	charcoal; charbon de bois	1170	60	Adena mound, 2.4 m depth
46PU99	Parkline	unknown; inconnu	1170	50	Parkline phase
28GL8	Raccoon Point	charcoal; charbon de bois	1170	100	charcoal-filled pit, 17-26" depth, with Early Woodland argillite points, fully grooved axe, steatite sherds, steatite-tempered pottery
ME41.40	Kidder Point	unknown; inconnu	1170	100	general association of grit-tempered, smoothed, pseudo scallop shell decorated ceramics, ceramic period 4
BgDr-11	Teacher's Cove	charcoal; charbon de bois	1170	100	barklined pit, Feature 3a, in housepit 1, N29.5/W28.5, 45 cm depth
23CY64	Arnold Research Cave	skunk bone collagen; collagène osseux de mouffette	1171	54	
47WP26	Sanders 1	charcoal; charbon de bois	1175	55	fill of House 2, with Dane Incised, Madison Cord-impressed, Madison Plain, and other pottery types, Effigy Mound culture
7S-G-30a	Slaughter Creek	charcoal; charbon de bois	1175	75	feature 6, with Mockley and Coulbourn ceramics
DiSo-9	Loon Cave	charcoal; charbon de bois	1180	60	component I, top of zone C
EeRl-12	Lillooet	charcoal; charbon de bois	1180	110	cache pit at the north end of the site
24GA660	Antonsen	bone collagen; collagène osseux	1180	110	bison kill, Area C, stratigraphically below I-7027
42GA102	Sheep Horn Alcove	cultigen; cultigène	1180	70	
DIOn-2	Ross Creek	charcoal; charbon de bois	1180	140	hearth in alluvium, 3.7 m depth, 4.9 m above the creek level, associated with bison bones and Avonlea artifacts

39HU213	St. John	charcoal; charbon de bois	1180	60	loose lens of charcoal and sand with Great Oasis Plain and Incised rimsherds
EfKv-39	LM-8	bone collagen; collagène osseux	1180	10 5	component 3, associated with a bossed rimsherd
47CR100	Mill Coulee	charcoal; charbon de bois	1180	70	shell midden with mainly Lane Farm Cord-Imprinted pottery, same provenience as WIS-1692, Mill phase
11PK2	Irving	charcoal; charbon de bois	1180	12 5	square B, to date Late Hopewell or Late Woodland level
47RI81	Rehbein I	charcoal; charbon de bois	1180	40	features 7 and 12, mound 5, secondary cremation burials in a linear mound, Effigy Mound culture
47DO155	Kolterman Mound	charcoal; charbon de bois	1180	12 5	Mound 18, cremation in heart region of otter effigy mound with Madison Cord impressed pottery, Effigy Mound culture
9MU100	Sixtoe	freshwater shell; coquille de mollusque d'eau douce	1180	70	Pit A, Feature 18, excavation unit H, Etowah III
33WA92	Wood 73	unknown; inconnu	1180	15 5	
15PE50	Enoch Fork Rockshelter	unknown; inconnu	1180	70	
CbHs-___5	Renard	charcoal; charbon de bois	1180	90	southwest corner of Sq. 595W18, Level 6, 20-24 cm depth, with Feature 2
BcHi-___7	Thede	charcoal; charbon de bois	1180	90	large pieces of charcoal recovered during excavation, Area A, feature 70-10, square E36/N12, with >700 Saugeen focus sherds
5LA1416	Sopris	charcoal; charbon de bois	1185	80	feature 90, hearth, Sopris phase
DhLo-1	Calf Mountain	bone collagen; collagène osseux	1185	85	a road ditch cutbank with a Late Plains Woodland vessel having an S-shaped rim and cord-wrapped rod decoration
23CL199	Yeo	charcoal; charbon de bois	1185	65	
EiBg-4	Blanc-Sablon 4	sandy peat; tourbe sablonneuse	1188	10 5	horizon containing "Boreal Archaic" implements and flint chips, 45 cm depth
45JE6	Bugge Spit	charcoal; charbon de bois	1190	70	
35CL22	Posy Ridge	charcoal; charbon de bois	1190	80	
48TE1067	Gull Island	charcoal; charbon de bois	1190	80	feature 100b
EfOk-16	Estuary	charcoal; charbon de bois	1190	17 0	Level 2, hearth in paleosol developed in silt, 100 cm depth
48FR113	Crooks Creek	charcoal; charbon de bois	1190	80	bulk medium carbon
48CR4114	Sheehan	charcoal; charbon de bois	1190	60	component 2, feature 6



14JF331	Anderson	charcoal?; charbon de bois	1190	90	
21KC3	Smith	charcoal and bone; charbon de bois et os	1190	55	feature 16 charcoal and feature 18 bone, level 6
47BT2	Spencer Lake	charcoal; charbon de bois	1190	60	Mound 1, feature 10
33LU391	Missionary Island 1	unknown; inconnu	1190	14 0	
46SU72	Schoolyard	unknown; inconnu	1190	70	Lick Creek phase
28HU530	Derewal	sediment; sédiment	1190	40	
18KE33	Cole #1	marine shell; coquillage	1195	85	top of deposit
45KI23	Duwamish No. 1	burned wood; bois brûlé	1200	60	4.5 m asl
EfQu-19	Tate	charcoal; charbon de bois	1200	75	house pit 1, test pit 3, hearth in the lower of two components
CASDi149	C.W. Harris	charcoal; charbon de bois	1200	10 0	trench 4, blocks 2-3, level 5
24LN1041	LAURD project	charcoal; charbon de bois	1200	60	occupation layer
FaNp-19	Hartley	bison bone collagen; collagène osseux de bison	1200	65	dark gray to black sandy loam, unit 290n/106e, 5-12 cm depth
32MN301	Evans	charcoal; charbon de bois	1200	85	component I, Level 5
41HL1	Twilla	bone collagen; collagène osseux	1200	10 0	bison kill
GLLu-4	Notigi Lake UNR 23	charcoal; charbon de bois	1200	13 0	Unit 114n94w, Level 6, 11 cm depth
39MH102	Bonander	charcoal and corn; charbon de bois et maïs	1200	11 0	Great Oasis
13ML176	Wall Ridge	charcoal; charbon de bois	1200	70	outer rings of a central support post, feature 12, of an earthlodge
23GR711	Prospect Spring	charcoal; charbon de bois	1200	50	feature 4
11MS517	Sponemann	unknown; inconnu	1200	90	Sponemann phase
33FR8	Zencor / Scioto Trails	unknown; inconnu	1200	60	
33AT429	Connett Mound 4	charcoal; charbon de bois	1200	14 5	feature 31, a shallow basin located outside the mound perimeter
46PU258	Harris	unknown; inconnu	1200	50	Parkline phase
SgFm-4	Eskimobyen	walrus bone collagen; collagène osseux de morse	1200	70	House 1, cooking area, from right-hand corner, immersed in fatty debris, 8.35 m asl
DeRv-15	Bird's Eye Cove Shelter	charcoal; charbon de bois	1205	80	among fire-cracked rocks, N7-9, E0, 2.88 m below Datum A, 0.10-0.15 m depth
36CE122	C-7-12	unknown; inconnu	1205	80	
AKKEN045	Clam Gulch	plant remains; restes de plantes	1210	50	Mound 1, bark, grass and twigs from two areas 10 cm apart in same layer 64 cm depth

ObRo-2	Jackson	pottery encrustation; tarte de poterie	1210	10 0	House 1 floor, from inner and outer surfaces of Barrow curvilinear rimsherd
45WH34	Ferndale	charcoal; charbon de bois	1210	10 0	sloping edge of intrusive depression vertically and horizontally distinct from firepit that yielded RL-273, a possible dwelling, ca. 8 m asl
OhRh-1	Nelson River	muskox bone collagen; collagène osseux de boeuf musqué	1210	11 0	main chamber of a two- chambered semi-subterranean house
35MU24	Blue Lake Park	charcoal; charbon de bois	1210	90	
35DO422	Island Campground	charcoal?; charbon de bois?	1210	70	
45LE410	Deceptive Beauty Rockshelter	charcoal; charbon de bois	1210	70	
26CH18	Lovelock Cave	human feces; fèces humaine	1210	15 0	coprolite from undisturbed trash in cave, with Rose Spring corner-notched point
26EK-?	Bonneville Estates Rockshelter	unknown; inconnu	1210	12 0	dry layer containing perishables and Eastgate projectile points in a badly disturbed rockshelter
48SW3736	Cedar Canyon Southwest	carbonized wood; bois carbonisé	1210	50	
24RB267	Sly Bison Kill	charcoal; charbon de bois	1210	13 0	bone bed
5BL94	Coney Lake	charcoal; charbon de bois	1210	80	feature D, a rock- and charcoal-filled roasting pit
FhNb-29	Inkster Island	paleosol; paléosol	1210	60	unit 83S/96E, southwest quadrant, level 1
14DP11	Kelley	charcoal; charbon de bois	1210	10 0	Hopewell component
11PK506	Woodpecker Bluff	charcoal; charbon de bois	1210	70	feature 3
3PO54	Hyneman	charcoal; charbon de bois	1210	13 0	feature 6, a refuse pit, early Hyneman phase
11MS1353	Cunningham	unknown; inconnu	1210	80	Rosewood/Mund phase
42UN-?	Thorne Cave	charcoal; charbon de bois	1215	85	Level 4
11L-?	Medusa Mound Group	human bone apatite; apatite osseux humain	1215	10 0	burial in homogeneous clay mound fill, 30 cm depth
SiHw-1	Buchanan Lake	willow charcoal; charbon de saule	1215	95	Feature 1, a small box hearth, Unit 4d, 35 cm depth
AKCHK035		charcoal; charbon de bois	1220	60	test 3 in apparent habitation depression
CAButS157	Oroville	charcoal; charbon de bois	1220	10 0	composite sample, 30-36" level, Unit L-24, Trench C
FdOt-9	Wells	bone collagen; collagène osseux	1220	80	Level 2, 17 cm depth
5RB2921	Big Slab Hearth	charcoal; charbon de bois	1220	60	hearth in open camp
5JF463	Dutch Creek	charcoal; charbon de bois	1220	60	feature 3, a rock-filled hearth, 40-82 cm depth, with two corner-notched arrow points

					and a cord-marked sherd
FgMc-2	Oscar Point (PAH5)	bone collagen; collagène osseux	1220	75	glacial "till," Test unit 2A, W1 Terrace, 6-12 cm depth
DiLw-12	Wapiti Sakihtaw	bone collagen; collagène osseux	1220	75	upper Levels 2-3, 5-15 cm depth
23PL43	Aker or Aring Pearl	charred plant remains; restes de plantes carbonisés	1220	120	bottom of deep pit about 5 ft depth
11F2713	Liverpool Landing	charred plant remains; restes de plantes carbonisé	1220	70	Maples Mills phase
11A-?	Meyer-McClellan	charred plant remains; restes de plantes carbonisé	1220	70	feature 30, a pit containing 67 Sepo-type sherds but no maize
47LC45	Lower Sand Lake	charcoal; charbon de bois	1220	70	Middle Woodland Trempealeau/Millville phase midden deposit
47VE640	Viola Rockshelter	charcoal; charbon de bois	1220	70	feature 3, a deep pit with the west half eroded down a slump block, with ceramics exhibiting Havana-ware characteristics
15BE8	McCabe Mound	bone collagen; collagène osseux	1220	90	
15WO75	Rock Bridge Shelter	unknown; inconnu	1220	70	Newtown phase
46KA9	Marmet	unknown; inconnu	1220	80	Parkline phase
33WN209	Farmer's Castle	unknown; inconnu	1220	65	
18AG144	Paw Paw	charcoal; charbon de bois	1220	155	feature 1, with limestone, quartz, and chert tempered ware
ME154.7	Blue Ribbon	charcoal; charbon de bois	1220	120	feature 1, a fire-cracked rock concentration
AIDf-3	Port Joli #8	charcoal; charbon de bois	1220	100	cultural layer interpreted as a burned wigwam
NiNg-3	Ballantine	peat; tourbe	1225	135	trench 1, sq. 8, 13-20 cm depth, at lowest part of peat layer
CACCo138	Hotchkiss	charcoal; charbon de bois	1229	200	middle phase 1, burial 18, Late Horizon
AKKTZ023	Deering	charcoal; charbon de bois	1230	40	central hearth, Hse
FfPi-100	Fullerton	charcoal; charbon de bois	1230	130	square B, in a pit dug from a level containing Oxbow points, but lacking physical stratigraphy, 55-70 cm depth
LcPc-7	Windy Point	charred wood; bois carbonisé	1230	180	log lying horizontally, Unit C, middle terrace, 15 cm depth
DIPb-2	Cranford	bison bone collagen; collagène osseux de bison	1230	80	20-30 cm depth
24MA1144	Cherry Creek	sediment; sédiment	1230	90	zone 3, a buried A horizon, 28-45 cm depth, in overbank deposits overlying alluvial fan deposits

24PA301	Eagle Creek	charcoal; charbon de bois	1230	16 0	sunken hearth in upper part of Level III but correlated with Level II
5EA799	Yarmony	charcoal; charbon de bois	1230	60	134N/104E, 10-20 cm depth, stained soil feature in either the uppermost portion of stratigraphic unit 4 or in lower unit 5, above House 1
5DA603	Jackson Creek	charcoal; charbon de bois	1230	60	soil horizon IIIPPCA, post-Piney Creek alluvium, containing a Woodland occupation
39CH4	Wheeler Bridge	wood; bois	1230	12 0	Mound 1, to date construction of the mound, Loseke
13AN207	Hawk Mound Group	charcoal; charbon de bois	1230	18 0	feature 2, a burial in Mound 3, 58 cm depth
23CO156	Algoa	unknown; inconnu	1230	60	feature 7, a sealed undisturbed pit containing maize and other botanical remains, Boone phase
11S92	Stolle Quarry	plant remains; restes de plantes	1230	11 0	feature 9, a pit intrusive into basin fill and through the floor of House 1, with cordmarked, grog-tempered pottery, Patrick phase
47DR2	Heins Creek	pottery encrustation; tartre de poterie	1230	15 0	burned food adhering to interior of sherds from buried humus zone 1-2 ft thick, ca. 4.5 ft beneath aeolian sand and 10 ft Lake Michigan
33GA16	Bob Evans Rockshelter	unknown; inconnu	1230	22 0	
36ME-VP	Clarksville deer	deer bone collagen; collagène osseux de cerf	1230	10 0	silt in bed of Pymatuning Creek, 10 ft depth
JeEk-2	Ungava = Ung.24	tourbe; peat	1230	13 5	paléosol qui précède une rupture d'équilibre morphogénétique, sans association culturelle
BeCs-3	Brown	charcoal; charbon de bois	1230	70	hearth, 40x35x7 cm, east half of unit 106N/100W
EiBg-XVI	Rivière de Blanc-Sablon	charbon de bois; charcoal	1230	80	foyer
26WA200	Shinners site C	plant remains; restes de plantes	1240	80	Lovelock wickerware, Area 2, 42-48" depth
GgQq-7	Wood Bog	peat; tourbe	1240	10 0	15-20 cm depth
42UN271	Goodrich	charred wood; bois carbonisé	1240	85	structure 2
24RB1145	Rockshelter East	charcoal; charbon de bois	1240	70	feature 6E
24RB1012	Colt 45 Shelter	charcoal; charbon de bois	1240	10 0	component 2, feature 3
24WX30	Goheen	charcoal; charbon de bois	1240	60	test pit 1, a living floor centered on a shallow, unlined basin-shaped hearth

39ST16	Breeden	charcoal; charbon de bois	1240	75	fill of feature 14, a subfloor cache pit in the southwest corner of feature 1, a long rectangular house of component C
16.0	Tunica Bayou	charcoal; charbon de bois	1240	65	natural levee deposit with material of the Troyville period, 28-35 cm depth
23SC50	Hilltop	charcoal; charbon de bois	1240	100	Pit A, with sherds of large cord-marked Canteen and Korondo vessels and one dentate-stamped sherd, Patrick phase
EjJd-___6	Wasp Sting	charcoal; charbon de bois	1240	80	Feature 1, Level 2, in coarse sand with a concentration of Laurel ceramics, Hudson Bay Lowland flakes, and cores, 5-18 cm depth
15UN28	Slack Farm	unknown; inconnu	1240	50	early Late Woodland
46KA27	St. Albans	unknown; inconnu	1240	60	
46OH9	Hughes Farm	charcoal; charbon de bois	1240	90	feature 13, part of a late Watson/early Monongahela hamlet
CaGn-___1	Radiant 3	charcoal; charbon de bois	1240	130	Sqs. I27, I28, with cord-malleated sherds, 10-20 cm depth
CT41-51	Dill Farm	unknown; inconnu	1240	185	
DbEf-4	Saint-Fabien-sur-Mer 4	charbon de bois; charcoal	1240	80	niveau 3, sable jaunâtre contenant des pierres anguleuses éclatées par la chaleur et des lentilles noires contenant du charbon de bois
DcEd-1	Rimouski	charbon de bois; charcoal	1240	80	puits 16N-29E, niveau Ae+Bf, 23 cm de la surface
47DR81	Porte des Morts	pottery encrustation; tartre de poterie	1242	52	charred food residue from vessel F/8-12, an unnamed braced-rim or pseudo-collared cord-marked vessel
15PO26-27	Rogers Rockshelter	plant remains; restes de plantes	1245	60	
36CE35	Fisher Farm	plant remains; restes de plantes	1245	70	associated with corn
AKNOA002	Cape Krusenstern	charcoal; charbon de bois	1250	100	House 18
DgRs-2	Tsawwassen	human bone collagen; collagène osseux humain	1250	60	Zone D, burial D-26, N8/W9, in pit from Layer DB
41HC3	Sanford Ruin	charcoal; charbon de bois	1250	90	
DkLg-1	Lord	bone collagen; collagène osseux	1250	90	cultural layer
13HR28	Hanging Valley	charcoal; charbon de bois	1250	90	feature 1, square 5, level 2
11ST144	Campbell Hollow	charcoal; charbon de bois	1250	70	feature 3, dispersed through a refuse pit containing Bauer Branch series pottery, Adams variant
11JY242	Gates of Piasa	charcoal; charbon de	1250	70	feature 4, Early Bluff phase

		bois			
11MS866	Widman	unknown; inconnu	1250	90	Patrick phase
11MN163	Liverpool Lake	charred plant remains; restes de plantes carbonisé	1250	90	feature 94-10, Maples Mills phase
47GL63	Utley mound group	charcoal; charbon de bois	1250	55	Mound 1, described as a panther effigy, Effigy Mound culture
EcIt-___4	Grendel	charcoal; charbon de bois	1250	60	hearth in stratum III, 21-24 cm depth
33JA160	Stanhope Cave	charcoal; charbon de bois	1250	85	
20MR5	Sissung	Charcoal (associated with Zea Mays kernel)	1250	12 0	
18AN279	Rose Haven	charcoal; charbon de bois	1250	90	feature 4, with shell tempered Mockley ware and Selby Bay projectile points
CT75-?	Cedar Lake	unknown; inconnu	1250	10 0	
24CH73	Mile 62	bone collagen; collagène osseux	1255	14 5	occupation layer, 2.7 m depth
13DW-VP	Willard Cave	deer bone collagen; collagène osseux de cerf	1255	55	small cavity 259 cm below surface of south talus slope, possibly younger material covered by slumping of talus deposits
AKTLM128	Jay Creek Ridge	charcoal; charbon de bois	1260	80	
AKXBD135	Garden (RaEc-1)	spruce charcoal; charbon d'épinette	1260	90	upper part of red-brown stratum, S15-20/W20-25
DfRu-42	Welbury Point	human bone collagen; collagène osseux humain	1260	80	tightly flexed burial in a midden deposit
CACCo151	El Sobrante	charcoal; charbon de bois	1260	11 0	
EeRl-6	West Fountain	charcoal; charbon de bois	1260	85	Housepit 7, 55 cm depth
EiPp-16	Hunter Valley	bone collagen; collagène osseux	1260	50	occupation 1
42EM73	Windy Ridge Village	charcoal; charbon de bois	1260	12 0	structure 1
IgOo-1	Big Bay	charcoal; charbon de bois	1260	17 0	unit C, stratum III, 23"S/104"W, in a circular deposit 15 cm in diameter, 38 cm depth
DjOn-8	Elkwater Lake	burned soil; sol brûlé	1260	10 0	square 54Q, 65-105S/45- 110W, 22 cm depth
24BL1152	Herdegen's Birdtail Butte	bison bone collagen; collagène osseux de bison	1260	80	Layer 11
5MF1	Mantle's or Cliff Canyon Cave	plant remains; restes de plantes	1260	15 0	basketry, Fremont level
24PR402	One Bear	charcoal; charbon de bois	1260	40	prepared hearth basin at north end of site, ca. 15 cm depth, with large side-notched projectile points
5BL69	Scratching Deer	charcoal; charbon de bois	1260	95	fill of a hearth, Hogback phase

DgMs-53	Mad Dog	bison bone collagen; collagène osseux de bison	1260	80	cairn
14GL401	Herl	charred bone; os carbonisé	1260	12 0	feature 2, a shallow trash pit connected by a short trench to feature 2A, 0.4-1.4 ft depth
13CK62	Beals	charcoal; charbon de bois	1260	10 0	
23CO499	Stauffer	charcoal; charbon de bois	1260	80	Boone phase, feature 27
47CR560	Arnold/Tainter Cave	charcoal; charbon de bois	1260	60	charcoal rock painting resembling a caribou but apparently representing a deer
46PU60	Amos Power Plant	unknown; inconnu	1260	11 0	Buck Garden phase
33SU92	Greenwood Village	charcoal; charbon de bois	1260	80	TU 19 and 20, feature 10, section C, 82 cm depth
AfHi- 121	Boresma	charcoal; charbon de bois	1260	90	square 175-70, feature 2, a large basin-shaped pit containing corded, dentate- stamped and one rocker stamped sherd
NiHa-1	Kaersut Island	walrus bone collagen; collagène osseux de morse	1260	10 0	terrace 6.5 m asl
PeHa-1	Saatut II	caribou bone collagen; collagène osseux de caribou	1260	90	Saatut II, house 1, square 5
36WM453	Backstrum 1	charcoal; charbon de bois	1260	50	feature 45
19BN387	Indian Neck	human bone collagen; collagène osseux humain	1260	13 0	
CaDu-8	Cronkite	charcoal; charbon de bois	1260	90	alluvial silty sand, test trench 3, pit 4, 40 cm depth
CAMad107	Buchanan Reservoir	charcoal; charbon de bois	1265	95	large ash lens with several projectile points, to date end of lower component occupation and beginning of upper component
10NP108	Spalding	charcoal; charbon de bois	1265	70	House 1, with small side- notched points
FbNs-2	Rousell	bone collagen; collagène osseux	1265	75	Test Pit 4, 18-27 cm depth, in a dark brown sandy horizon overlying massive yellow-tan sand
21MA6	Haarstad Mound	human bone collagen; collagène osseux humain	1265	12 0	Arvilla phase
AfHi-__3	Neeb	charcoal; charbon de bois	1265	80	with Princess Point-like pottery
AKXSL010	Kitnepaluk	plant remains; restes de plantes	1270	80	wood, fur and bone from grave 58
AKTNX-VP	Tetlin bison	bison bone collagen; collagène osseux de bison	1270	55	male bison skull
35WS125	Paquet Gulch Bridge	charcoal; charbon de bois	1270	90	

10CR197	Quill Cave	charcoal; charbon de bois	1270	90	Layer 2, with small corner-notched points, bison and mountain sheep
42SV662	Backhoe Village	charcoal; charbon de bois	1270	10 0	occupation layer
42GA288	Triangle Cave	cultigen; cultigène	1270	70	
48SW3726	La Fonte Canyon	carbonized wood; bois carbonisé	1270	80	hearth
5RB2958	Sand Shadow	charcoal; charbon de bois	1270	80	wall zone of the floor in house 3, with a Rose Spring point and Douglas Creek Gray ware
24GF423	Split-Rock	human bone collagen; collagène osseux humain	1270	40	interment in sand beneath a sandstone caprock with flaked, ground and perforated stone, mollusc shell, and a bone knapping tool assemblage
23PL1	Renner	charcoal; charbon de bois	1270	12 5	four different pits in the same excavation trench
23.0	Trolinger Spring	charcoal; charbon de bois	1270	10 0	circular pit hearth in disturbed Peoria loess
11A51	Scenic Vista	charred plant remains; restes de plantes carbonisé	1270	70	feature 42, a Late Woodland refuse pit, Fall Creek phase
20NE106	Carrigan Mound A	charred wood; bois carbonisé	1270	12 0	Mound A, bottom of burial pit in direct association with burial
33ER401	Speer	bone collagen; collagène osseux	1270	60	
BaGn-__72	Buttar	charcoal; charbon de bois	1270	11 5	Main Area A, unit N26/E3, feature 1, with many flakes and a scraper fragment but no diagnostic artifacts
GI0c-20	Martin Chartier 3	charcoal; charbon de bois	1275	75	cultural level 3, hearth
11MA-?	Steuben	charcoal; charbon de bois	1275	10 0	village area, level 5 of strata pit, with pottery from Hopewell to early Late Woodland age
22MCs16	Bynum	plant remains; restes de plantes	1276	15 0	base of mound B
AKXPH003	Ipiutak	caribou bone collagen; collagène osseux de caribou	1280	60	
CAYol13	Verona	human bone collagen; collagène osseux humaine	1280	15 0	
CACal99	Winslow Cave	bone collagen; collagène osseux	1280	10 0	
42DC49	Gilbert	charred wood; bois carbonisé	1280	60	structure 2
5RB3657	Alimony Alcove	charcoal; charbon de bois	1280	60	hearth, feature D
24BH253	Bill Green	charcoal; charbon de bois	1280	55	feature 5, a shallow oval firepit in the only occupation noted at the site
EcNj-7	Garratt	charcoal; charbon de bois	1280	60	Level 6, paleosol in alluvium, unit 22L1, 0.67 m depth
5BL876	Indian Mountain	charcoal; charbon de	1280	19	ring 1



		bois		5	
20HO-?	Calumet Ancient Pit	charcoal; charbon de bois	1280	14 0	10 ft depth
BeGb-___1	Inderwick	charcoal; charbon de bois	1280	10 0	Sq. 018, with Genesee points, worked steatite and one undecorated sherd
SiFi-4	Franklin Pierce	muskox bone collagen; collagène osseux de boeuf musqué	1280	50	feature 1, a subrectangular dwelling
BgDq-7	Northeast Point	charcoal; charbon de bois	1280	80	unit 7, living floor
CcCp-7	Sutherland	charcoal; charbon de bois	1280	10 0	shell midden, organic soil, test 1, 20 cm depth, 40 cm from shore
FhNj-15	Intake	bone collagen; collagène osseux	1285	80	upper of two cultural layers, units 5S/17E, 5S/15E, 6S/15E and 7S/16E
5LA1211	Leone Bluff	charcoal; charbon de bois	1285	80	feature 59, pit, Sopris phase
15JF237	Arrowhead Farm	charcoal; charbon de bois	1285	70	bottom of a circular pit
AiHc-__75	Henry Morgentaler	charcoal; charbon de bois	1285	25 0	Locus B hearth
EeRk-16	Lower Bell	charcoal; charbon de bois	1290	85	Housepit 1, basal deposit
10CR547	Jimmy Smith Lake	wood; bois	1290	70	rock structure
DkPj-27	Calderwood	bison bone collagen; collagène osseux de bison	1290	90	unit 21, 34-40 cm depth, layer 3
48JO357	Middle Fork	charcoal; charbon de bois	1290	70	hearth
5JF6	Willowbrook	charcoal; charbon de bois	1290	10 0	Level 4, hearth 3, a Hogback phase habitation component, Parker phase
HiLp-1	Kame Hills	charcoal; charbon de bois	1290	15 0	damp sand, Units 515 and 520, Level 2, hearth Feature 2-75, 1-6 cm depth
IiLk-1	Duck Lake Narrows	charcoal; charbon de bois	1290	11 0	near the bottom of an occupation layer
13PM91	Rainbow	charcoal; charbon de bois	1290	16 0	presumably Horizon D
23PL2	Deister	charcoal; charbon de bois	1290	10 0	Hopewell component
23PU64	Merrell Cave	unknown; inconnu	1290	80	pit feature, Maramec Spring phase
23RA151	Muskrat Run	charcoal; charbon de bois	1290	65	
11C119	Carlin	charcoal; charbon de bois	1290	70	feature 19, levels 8-11, White Hall phase
11JY243	Lonesome Pit	charred plant remains; restes de plantes carbonisé	1290	70	feature 1, Early Bluff phase
11S634	Alpha 3	charred wood; bois carbonisé	1290	80	fill of Patrick phase pit, feature 6
20SC40	Draper Park	unknown; inconnu	1290	50	
BgDs-4	Eidlitz	charcoal; charbon de bois	1290	80	hearth in square E16.5-17/S0.5-1.0, 35-40 cm depth
42IN40	Evans Mound	charcoal; charbon de	1295	90	structure 14

		bois			
DkPj-1	Head-Smashed-In Buffalo Jump	charcoal; charbon de bois	1300	70	area 11, unit 9, pit feature containing lithics, fired rock, pottery, and clamshell, 10-34 cm depth
48SW5057	Buffalo Hump	charcoal; charbon de bois	1300	10 0	house F48, feature 49
39BF233	Side Hill Mound	human bone; os humain	1300	90	feature 1, cremation in Mound 1, 1.5-2.0 ft depth, with Truman Plain Rim pottery, Loseke
23CR149	Pot Shelter	charcoal; charbon de bois	1300	11 0	Level 7
23RI192	Fourche Creek	charred plant remains; restes de plantes carbonisés	1300	70	
11C383	Mortland Island	charcoal; charbon de bois	1300	70	feature 214, level 4A, White Hall phase
15LV-?	Branstetter Shelter I	charcoal; charbon de bois	1300	16 0	dense organic midden >1 m deep, 80-90 cm depth, with limestone-tempered pottery
20ME1	Riverside	charcoal; charbon de bois	1300	20 0	feature 10, a burial, possibly flexed, well below old soil zone with faint stain of ochre and a few scraps of copper
20MR161	Gard Island No. 2	human bone collagen; collagène osseux humain	1300	75	burial 3a
20WN1	Fort Wayne Mound	human bone; os humain	1300	12 0	burial 14, with Wayne Cross-hatched vessel, to date earliest burial group in mound
33ER85	Seaman's Fort	unknown; inconnu	1300	60	Green Creek phase
ME15.238	Vogel Point	charcoal; charbon de bois	1300	50	association with corded ceramics and Susquehanna tradition bifaces
DaEi-8	Turcotte-Lévesque	beluga bone collagen; collagène osseux de béluga	1300	70	organic level just below the plough zone, directly associated with 152 Middle Woodland sherds
15LA4	Dow Cook	unknown; inconnu	1302	45	
CAMad117	Schwabacker	human bone collagen; collagène osseux humaine	1305	80	
DiMv-61	Peg	bison bone collagen; collagène osseux de bison	1305	85	Level 18, unit 500S/500E, SE quad, 190-200 cm below datum
7S-C-17	Cedar Creek	marine shell; coquillage	1305	55	with Hell Island ceramics and Jack's Reef projectile points
AKPET395	Woody Island	wood; bois	1310	60	wood stake in fish trap complex 1
MITk-2	Vidiitshuu Leetak	charcoal (3.90 g); charbon de bois	1310	29 0	just east of Structure 2, Area A, 18 cm depth, in hearth
CASMa-?	Stanford Man I	human bone collagen; collagène osseux humaine	1310	85	burial in brown sand, 250 cm depth, with a cut and polished bird radius, no evidence of midden or occupational debris

OdPp-2	Co-op	bear bone collagen; collagène osseux d' ours	1310	40	House 5-W, detritus near entrance
24CA-no#	Zeller	bison bone collagen; collagène osseux de bison	1310	80	pothunter's pit profile
24CB202	Sorenson	charcoal; charbon de bois	1310	10 0	component 6, feature 25
DiMd-7	Mullett	bison bone collagen; collagène osseux de bison	1310	10 0	soil / till, bone bed
23MI8	Hoecake	charcoal; charbon de bois	1310	13 0	combined samples from Tomb A (2212) and Tomb B (2213) in Story Mound
46SU67	Spring	unknown; inconnu	1310	10 0	Lick Creek phase
7NC-E-41	Delaware Park	charcoal; charbon de bois	1310	15 5	with Hell Island ceramics, Calvert and Rossville projectile points
ME14.18	Great Moshier Island C	unknown; inconnu	1310	90	general association of grit- tempered, smoothed, rocker dentate (large) and cord- wrapped stick decorated ceramics, ceramic period 4
ME42.1	Nevin	bone collagen; collagène osseux	1310	22 5	section 1C.3/10E, just below plow line, 1st shell layer
5LR252	Spring Gulch	charcoal; charbon de bois	1315	70	feature 5, one of higher hearths in level 3, Franktown Focus
12HN2	Commissary	charcoal; charbon de bois	1315	10 5	pit, 33 cm depth, with early Late Woodland vessel
DhLw-1	Richards village	bone collagen; collagène osseux	1320	13 0	unreported provenience
13JF52	Hickenbottom	charcoal; charbon de bois	1320	65	directly above stone capped secondary burial, feature 1
11A1020	Wet Willie	charcoal; charbon de bois	1320	70	pit feature, La Crosse phase
BgDs-6	Sand Point = Sandy Point	charcoal; charbon de bois	1320	90	housepit 2
FhNa-69	Eastcott Flat	bone collagen; collagène osseux	1325	85	cultural level 2, gold/brown sandy clay
23GR10A	Turner Station	charcoal; charbon de bois	1325	13 0	
13CT26	Marching Bear Mound Group	charcoal; charbon de bois	1325	10 0	Mound 77, an area of scattered charcoal and burned earth in hearth region of bear- shaped burial mound, 1'-2' depth, Effigy Mound culture
7NC-D-36	Red Lion	charcoal; charbon de bois	1325	85	hearth
35CLT66	Earl Dune	charcoal; charbon de bois	1330	50	
10IH85	Russel Bar	unknown; inconnu	1330	10 0	cultural compoment
DIOp-2	Ross Glen	bone collagen; collagène osseux	1330	16 0	level 1, 66 g from the site- wide scatter plus 25 g from ancillary feature 3
48CR2215	Great Divide Basin	unknown; inconnu	1330	13 0	

DhMg-39	Riverview Mound	wood; bois	1330	90	covering of burial pit, excavated into subsoil to 77 cm depth
11A162	Kuhlman Mounds	charcoal; charbon de bois	1330	70	Mound 4, north lobe, unit 4/5, level 2, 24 cm depth, atop pavement rocks of a charnel structure, 60 cm from ISGS-874
47CR127	Pedretti III	charcoal; charbon de bois	1330	70	feature 2, levels 4 and 5, square 5, 30-50 cm depth, presumably a Lane Farm phase component
11PK18	Stilwell	charcoal; charbon de bois	1330	120	feature 9, a storage-refuse pit, lower 18" of fill, extending 14-52" depth, White Hall phase
DfJn-__1	Cressman	charcoal; charbon de bois	1330	190	test pit 7, sand, Level 4, hearth, >25 cm depth
11S629	Columbia Quarry	charred wood; bois carbonisé	1330	70	fill of Patrick phase feature
12GR29	Lattas Creek	unknown; inconnu	1330	60	Allison-LaMotte component
33WA112	King Road	unknown; inconnu	1330	145	
33FR155	Water Plant	charcoal; charbon de bois	1330	70	feature 21
NhHd-1	Alarnerk	walrus bone collagen; collagène osseux de morse	1330	100	terrace 6.5 m asl
33LA-?	Norma Grantham	unknown; inconnu	1330	150	
DgDq-1	Cap-Chat	charbon de bois; charcoal	1330	105	section sud, puits 8S30E, à environ 90 cm de la surface, couche d'occupation 2 (couche 4)
33RO55	Russell Brown	charcoal; charbon de bois	1335	70	mound 3, feature 13, a fire pit at the base of the mound near the center, 24" depth
DeRt-2	Pender Canal	human bone collagen; collagène osseux humain	1340	150	Late Midden deposit, 29.00S/25.50W, 50-70 cm depth, Burial 85-4
26WA528	Mule Ears Cave	unknown; inconnu	1340	110	level 30
26PE450	Sand Island	charcoal; charbon de bois	1340	60	feature 6
EaMg-12	Miniota	charcoal; charbon de bois	1340	90	hearth in cultural layer
32SI1	Boundary Mound	wood; bois	1340	150	Mound 2, burial pit fill
RaJu-3	Maze	caribou bone collagen; collagène osseux de caribou	1340	40	gravel among flagstones in a paved area
11JY136	Unexpected	charred plant remains; restes de plantes carbonisé	1340	70	feature 1, Early Bluff phase
46MS112	Kirk Mound	unknown; inconnu	1340	85	Adena
20MR162	Gard Island # 2	Human Bone (Associated with Zea)	1340	80	

20IS-?	Goodwin-Gresham	charcoal; charbon de bois	1340	11 0	feature 12, a hearth at 0.9 ft depth with Late Point Peninsula material
FiPp-2	Cormie Ranch	charcoal; charbon de bois	1345	61	occupation 2, location 1, 20'N/5'E, in bottom of feature 4, a bone-boiling pit associated with the middle occupation
14PH4	Woodruff Ossuary	charcoal; charbon de bois	1345	24 0	burial site, Keith phase
28HU-?	Byram	charcoal; charbon de bois	1345	13 5	
ME111.5	Oxbrook Stream	charcoal; charbon de bois	1345	80	feature 1, with ceramics and lithic artifacts
CaCf-3	Ben Francis	charcoal; charbon de bois	1345	85	near the bottom of the occupation layer
AKXSL-?	Okvik	whale bone collagen?; collagène osseux? de baleine	1350	30	grave cover
GjPx-6	Hidden Creek	bone collagen; collagène osseux	1350	31 5	N3/W4, level 3
26WP69	Kachina Cave	charcoal; charbon de bois	1350	70	unit C-10, feature 2, stratum IV, pine nut cache in juniper-bark-lined pit
NcPd-2	Lady Franklin Point	dog bone collagen; collagène osseux de chien	1350	60	House 12, 4 m asl
FbPf-1	Muhlbach	charred bison? bone collagen; collagène osseux de bison? carbonisé	1350	15 0	square B14, bone bed matrix, zone C, 50 cm depth
24MA565	Steel's Pass	charcoal; charbon de bois	1350	70	unit 2, 40-50 cm, level 3
5ME-?	Unawweep	charcoal; charbon de bois	1350	20 0	hearth in alluvium, 6 ft depth
48SW1242	Locality 4b	unknown; inconnu	1350	70	testing component IV
EjOc-3	Herschel Petroglyph	bone collagen; collagène osseux	1350	80	soil matrix partly overlying monolith #1
48FR2230	Sweetwater Rock	charcoal; charbon de bois	1350	60	hearth
48SW5981	Lost Minkey	charcoal; charbon de bois	1350	90	feature 2, a hearth
KeNi-5	Evergreen	charcoal; charbon de bois	1350	80	in sand, Level 1b
EINp-8	Fitzgerald	bison bone collagen; collagène osseux de bison	1350	14 0	kill area, unit 90s/85e, SE quad, Level 2
FhNc-32	Lewis	deer and beaver bone collagen; collagène osseux de cerf et castor	1350	75	test pits 0N/3E, 0N/4E, 1S/4E, and 2S/3E, 24-55 cm depth
11A500	Fall Creek	charcoal; charbon de bois	1350	70	excavated feature, Fall Creek phase
11A1000	Buffalo	charcoal; charbon de bois	1350	70	feature 5, La Crosse phase
DcEe-2a	Cap-à-l'Original 1, Section A	charbon de bois; charcoal	1350	90	trois échantillons réunis ensemble dont 2 proviennent de la couche 2c et un de l'intérieur du foyer, niveau

					d'occupation c
AKXHP308	Punyik Point	charcoal; charbon de bois	1360	20 0	R-15, north half, Layer 3, a distinct occupation layer below an Ipiutak-Norton house, continuous with the floor of an early Denbigh house
10OE565	Bachman	charcoal; charbon de bois	1360	80	
24CH202	Shanahan Cairn	bone collagen; collagène osseux	1360	90	cairn with Plains side-notched points, pendants, beads, claws, bone, clam shell, tubular pipes, a grooved maul and cord-impressed ceramics
5BL68	Mt. Albion	charcoal; charbon de bois	1360	18 0	circular stone enclosure associated with a drift fence in a drive-lane complex
5DA124	Rainbow Creek K:12:7	charcoal; charbon de bois	1360	20 0	inside a ceramic jar in windblown sand, Parker phase
DgMs-43	Target	bone collagen; collagène osseux	1360	75	1.55 m below surface in paleosol with cultural material
EaLa-3	Bjorklund	human bone collagen; collagène osseux humain	1360	80	component 2, unit S55/E30, Feature 6-74, Level 15, bone within pit feature
13JK21	Robert Battey Rockshelter	charcoal; charbon de bois	1360	50	square F2, levels 4 and 5, 14-18" depth
47DA3	Outlet	charred human bone; os humain carbonisé	1360	70	burial 3, mound 5, the reburial of several individuals near the central portion of the mound, with a large quartzite blade of Hopewell style
47WN207	Sauer Resort	charcoal; charbon de bois	1360	90	feature 24, a refuse pit, with fish bone and scales, clam shell, Lake Winnebago Trilled ceramics, a scapula hoe, and a ground stone celt
15LV199	McGilligan Creek	unknown; inconnu	1360	70	early Late Woodland
15GP14	Hansen	charcoal; charbon de bois	1360	70	feature 98, Later Newtown component
20MR-?	Gibraltar	human bone collagen; collagène osseux humain	1360	50	with a complete Gibraltar cordmarked vessel, a large ovate biface, a Jack's Reef point base, and a necklace of 109 copper and 7 marginella shell beads
33ER1	Esch Mound II	unknown; inconnu	1360	70	
18KE106	Kent Co. #4	marine shell; coquillage	1360	65	
EgKx-1	Wanipigow	burned bone apatite; apatite osseux brûlé	1365	17 5	Wanipigow Lake area, Unit 7, Bf3 horizon, 30 cm depth
DhRI-16	Scowlitz	human bone collagen; collagène osseux humain	1370	60	Mound 1, Burial 1
42SA-?	Dust Devil Cave (NA7613)	cultigen; cultigène	1370	70	C10, VIb

5MN653	Wagon Bend	charcoal; charbon de bois	1370	65	
5LR263	Lykins Valley	charcoal; charbon de bois	1370	17 5	west bank, hearth A, exposed in backhoe test, 198 cm depth
24CT30	Mill Iron	charcoal; charbon de bois	1370	60	60 m southwest of Locality 1, sandstone slab-lined fire hearth 43 cm below the top of the S5 surface
25RW28	Doyle	charcoal; charbon de bois	1370	10 0	refuse pit, 76-91 cm above house floor, Keith variant
34BK46	Certain	bone collagen; collagène osseux	1370	80	bison bone bed, exposure downstream from Trench C
32SN22	Jamestown Mounds	human bone collagen; collagène osseux humain	1370	17 0	component 2, mound A1, feature 12, an ossuary, a burial with evidence of hydatid disease
11JY249	San Troper	charcoal; charbon de bois	1370	70	feature 2, Early Bluff phase
PgHb-1	Nunguvik	burned bone collagen; collagène osseux brûlé	1370	12 0	House 71, fireplace in lower level, southeast corner, 25 cm depth
18AN143	Luce Creek	charcoal; charbon de bois	1370	12 0	square 1, with shell tempered Mockley ware
33HA9	Haffner-Kuntz	charcoal; charbon de bois	1375	75	with shell and bone, 3.5-4 ft depth
33LN7	Leimbach	charcoal; charbon de bois	1375	18 0	feature 19, a refuse pit with pottery and a triangular point, also associated with corn
19FR15	WMECO	charcoal; charbon de bois	1375	15 5	feature 32, with a Levanna point
45PI72	Dupont Southwest	charcoal; charbon de bois	1380	50	
MkPk-7	Lapointe	charcoal, burned caribou bone; charbon de bois, os de caribou brûlé	1380	10 5	square E-11, hearth (charcoal), burned bone from hearth and surface of site
FIOv-1	St. Bride's burial	bone collagen; collagène osseux	1380	65	burial
5RB2828	Narrow Ridge	charcoal; charbon de bois	1380	14 0	unit B hearth, feature 4, with Douglas Creek Gray ware and Malad obsidian
39BK7	Oakwood Lakes	bone collagen; collagène osseux	1380	29 0	summer camp on a lake shore buried in aeolian sand and silt
13MA41	Milo's Silo	charcoal; charbon de bois	1380	10 0	feature 1, bottom of a roasting pit
11S435	Mund	charred plant remains; restes de plantes carbonisé	1380	80	fill of Mund phase pit, feature 85
47SK5	Raddatz Rockshelter	charred wood; bois carbonisé	1380	10 0	firebed in level 6, 20-24" depth, with two large side-notched projectile points
15GP15	Bentley	unknown; inconnu	1380	60	Newtown phase
15MA97	Dreaming Creek	unknown; inconnu	1380	60	
BjFj-3	Place-Royale	charbon de bois; charcoal	1380	10 0	zone de combustion composée de limon rubéfié de couleur jaune-beige à la périphérie et rouge orangé au centre

IgPc-2	Peace Point	charcoal and bone collagen; charbon de bois et collagène osseux	1385	12 5	100 cm depth
13LA71	Helen Smith	charcoal; charbon de bois	1385	55	Level 3, Feature 3, northeast corner of square F, a steep-sided pit containing bone, charcoal, ceramic and lithic artifacts
DgSk-54	Schooner Trail (316T)	charcoal; charbon de bois	1390	50	midden 20 m asl, 50 cm depth
NkRh-3	Pearce Point	bear bone collagen; collagène osseux d'ours	1390	65	house 4, half embedded in sterile sand beneath the cultural layer
CAOra-?	Buck Gully 1	marine shell; coquillage	1390	80	shell layer, ca. 4.75 m below sea level, with a human skull 4.95 m below sea level
48SW4381	Paradox Ridge	unknown; inconnu	1390	50	
23PL73	Sibley	unknown; inconnu	1390	80	
21KC2	McKinstry	charcoal; charbon de bois	1390	55	mound 1C, feature 17
23MN796	Cave	unknown; inconnu	1390	60	
23OR49	Morgan Spring #3	charcoal; charbon de bois	1390	22 0	
11S653	Steinberg	charred wood; bois carbonisé	1390	80	fill of northeast half of Rosewood phase pit, feature 14
11S632	Alpha 1	charred wood; bois carbonisé	1390	80	fill from east half of Rosewood phase pit, feature 45
15CR57	Carroll Shelter	unknown; inconnu	1390	60	Newtown phase
CeCc-4	Geganisg	charcoal; charbon de bois	1390	95	pit, possible dwelling boundary, lanceolate point base, 26-33 cm depth
11MX-?	Baumer	plant remains; restes de plantes	1395	10 0	remnant of a storage? pit originating 9-10" below the surface, with artifacts of the Baumer Focus
CAMad159	Jones	human bone collagen; collagène osseux humaine	1400	90	
26WA197	Empire Cave	plant remains; restes de plantes	1400	15 5	Lovelock wickerware, site 39, section D, 12-24" below datum
10LN-?	Fortress Cave	wapiti bone collagen; collagène osseux de wapiti	1400	40	antler tine
DjPf-4	Blood Coulee	bison bone collagen; collagène osseux de bison	1400	90	buffalo jump
EiNs-4	Sjovold	bison bone collagen; collagène osseux de bison	1400	19 0	Layer IV-V, units 1-3, buried soil horizon, Ahb3, 70-79 cm depth
41VV218	Bonfire Shelter	charcoal; charbon de bois	1400	13 0	Fiber layer, feature 25, a hearth
DhMg-7	Brockinton	bison bone collagen; collagène osseux de bison	1400	10 0	dark gray clayey silt, Level 10, lowest occupation level



14CF332	Gilligan	charcoal; charbon de bois	1400	25 0	occupation zone with a Hopewellian potsherd
23BE149	Saba Shelter	charcoal; charbon de bois	1400	10 0	
23BO-?	Brynjulfson Cave 1	charcoal; charbon de bois	1400	20 0	soil mixed with bone debris, 3-5 m from cave entrance, ca. 1 m above floor
11A116	John Roy	charred plant remains; restes de plantes carbonisé	1400	70	feature 5, a maygrass-knotweed-chenopod seed mass with sunflower seeds, White Hall phase
12ST-?	Brems	charcoal; charbon de bois	1400	15 0	pit eroding out of dunes
15JF187	SARA	charcoal; charbon de bois	1400	70	pit feature
33LU33	Oak Openings 4	charcoal; charbon de bois	1400	80	hearth feature 2, with sherds, fire-cracked rock and calcined bone, Providence phase
NiHg-1	Abverdjar	walrus bone collagen; collagène osseux de morse	1400	10 0	terrace 8 m asl
19BR56	Bay Street I	charcoal; charbon de bois	1400	12 5	with Fox Creek points
KdDq-9	Nanook	plant remains; restes de plantes	1400	80	square OL15, 40 cm depth, in permafrost, should pre-date occupation
CeDf-6	Canoe	charcoal; charbon de bois	1400	60	hearth with unidentifiable pottery, small fish bones, and seeds
AKSIT135	Ganax Noowoo	marine shell; coquillage	1405	70	erosional profile, ca. 50 cm depth
DIPk-3	Trout Creek	bone collagen; collagène osseux	1405	12 0	level 1
5AM3	Hazeltine Heights	human bone collagen?; collagène osseux humaine	1405	10 0	burial 6, of 7 flexed burials in pits, with bird humerus bead, 77 mammal bone beads, 3 Olivella shell beads, 5 Unio shell pendants, Parker phase
BaGn-__16	Dawson Creek	charcoal; charbon de bois	1405	60	Feature 11, 0-10 cm depth
AKSIT299	Anteyuq	marine shell; coquillage	1410	10 0	column 3, 0-10 cm depth, in an 80 cm thick midden on a terrace at the foot of the knoll
35MA141	Shannon-Plummer	charcoal; charbon de bois	1410	50	
EeRl-19	Fountain	charcoal; charbon de bois	1410	11 0	burial 86-6
45FE44	Shonitkwu / Andreas	charcoal; charbon de bois	1410	90	feature 1, an oven
10AA68	Dry Creek Rockshelter	charcoal; charbon de bois	1410	70	Level 3, a tan colored hard packed claylike occupation layer with a Rose Spring corner-notched and an Eastgate expending-stem point
U:10:3	Red Mountain	charcoal; charbon de bois	1410	12 0	charred logs at base of trash midden with Vahki Plain and Vahki Red pottery

41HI8	Blum Rockshelter	charcoal; charbon de bois	1410	12 0	square J-7, 75" depth, just above the bottom of the deepest occupation zone, Austin Focus, Central Texas Aspect
23HI216	Phillips Spring	wood; bois	1410	60	unit G, from the base of the stratum, 110-120 cm depth
20CS6	Summerville Mounds	human bone collagen; collagène osseux humain	1410	90	incomplete, disturbed, flexed burial, ossuary 1, Brainerd phase
20MR151	Indian Island # 4	Charcoal (associated with Zea Mays kernel)	1410	95	
33OT8	North Bass Island	charcoal; charbon de bois	1410	65	clayey matrix, 30-60 cm depth, from crypt with cremations
DcEx-1	Métabetchouan	charbon de bois; charcoal	1410	60	dans le fond d'une fosse dont le sommet a été rasé par les crues, entre 45 et 50 cm sous la surface
Y:6:9	Mohawk Mountain MAV-4	charcoal; charbon de bois	1415	60	feature 10, a roasting pit in area 1, in an open upper bajada, dual component aceramic site
42RI1	Woodruff Bison Kill	charred bison bone; os carbonisé de bison	1415	90	bone deposit
11S638	Alpha 7	charred wood; bois carbonisé	1415	75	fill of the west half of Rosewood phase pit, feature 4
35KL677	Williamson River Bridge	charcoal; charbon de bois	1420	15 0	
CASis4	Nightfire Island	charcoal; charbon de bois	1420	90	stratum 13
CAIny-?	Little Lake Borrow Pit	charcoal; charbon de bois	1420	70	
24BW182	Toston	charcoal; charbon de bois	1420	60	occupation layer
42KA178	Gates Roost	cultigen; cultigène	1420	70	
5MT4215	Cascade House	charcoal; charbon de bois	1420	80	
TMM-41172	Pratt Cave	wood; bois	1420	60	
KkLn-4	Migod	charcoal; charbon de bois	1420	70	sand, 8N/2E, Level 4
21OT7	Orwell	charcoal; charbon de bois	1420	10 0	Mound 9, with central multiple burials
3B-?	Montgomery #4	cultigen; cultigène	1420	80	
OaJn-2	Thom Bay 1	seal bone collagen; collagène osseux de phoque	1420	16 0	entrance of House 2, sq. 2.4, 30-40 cm depth
11BR2	Baehr-Gust	charcoal; charbon de bois	1420	50	feature 90-II, bag number 90-263
47DA533	Camp Indianola	charcoal; charbon de bois	1420	70	feature P, a Late Woodland occupation believed contemporary with stockade
9CLA1	Mandeville	charcoal; charbon de bois	1420	75	Mound A, 6-12" depth, layer 3, Swift Creek occupation or Mandeville II
BkCq-10	Cox/Swanson	charcoal; charbon de bois	1420	70	Test pit 2, Level 4, 22-24 cm depth

DhOc-8	Tipi Cluster	charcoal; charbon de bois	1425	29 5	post in tipi ring no. 1, feature 4
39CH9	White Swan	charcoal; charbon de bois	1425	11 0	feature 21 of mound, to date the mound, Loseke
15ED42	Patch Rockshelter	unknown; inconnu	1425	10 0	
33PI9	Florence Mound	charcoal; charbon de bois	1425	25 0	
DjSf-22	Kingfisher	marine shell; coquillage	1430	50	unit 4, locality 2, urchin feature, 30 cm depth
35WH122	Mitchell Cave	charcoal; charbon de bois	1430	90	
EE:12:1	Lehner	wood; bois	1430	16 0	one or two buried pits exposed in bulldozer trench, 1 m depth, upper part of unit G, with no associated artifacts
24BH1046	Spring Creek Petroglyph	charcoal; charbon de bois	1430	13 0	occupation layer 14-15" depth
42UN95	Caldwell Village	charred wood; bois carbonisé	1430	70	timber in Pithouse 7
48SW7101	Bairoil	charcoal?; charbon de bois	1430	60	habitation feature on a terrace, providing a maximum age for a Late Prehistoric burial found nearby
QeJu-1	Resolute M-1	bone collagen; collagène osseux	1430	40	House N, E4/S5, in gravelly humus associated with Feature Q, a buried rock feature
DcKc-__1	Lady Rapids	charcoal; charbon de bois	1430	60	probably Laurel house structure in Area A, units N1/W7, N1/W18, and N2/W18, associated with dentate stamped pottery
23PU235	Sadie's Cave	unknown; inconnu	1430	50	feature 8, Maramec Spring phase
13LA12	Gast Farm	unknown; inconnu	1430	70	one hectare ring midden, Weaver horizon, Gast phase
33LU394	Missionary Island 4	bone collagen; collagène osseux	1430	10 0	
33AD39	Grimes	charcoal; charbon de bois	1430	11 0	hearth
19MM139	Lagoon Pond	charcoal; charbon de bois	1430	60	near bottom of culture layer, square O7, preceramic, probably Archaic
JfEl-1	Cordeau = Dia-1	charbon de bois?; charcoal?	1435	70	aire M
AKXPM001	Hot Springs	unknown; inconnu	1440	75	
AKCRG434	Trocadero Bay	wood; bois	1440	60	wood-stake fish weir or trap
45WT134	Hatiuhpuh	charcoal; charbon de bois	1440	13 0	
SBCM-128	Ridge	charcoal; charbon de bois	1440	50	probable cooking area, N4/E4, subquad D, 30-40 cm depth
IfPo-1	Wentzel Lake	charcoal; charbon de bois	1440	10 0	organic lens, 25 cm depth
11PK477	Elledge	charcoal; charbon de bois	1440	70	feature 17-04E, White Hall phase
12PO2	Mann	charcoal; charbon de bois	1440	50	feature with Middle Woodland artifacts and charred squash rinds

15SH18	Old Bear	unknown; inconnu	1440	10 0	
15BE33-36	Rogers	charcoal; charbon de bois	1440	13 0	Pit 4, 5 ft deep, 4 ft diameter, the bottom lined with fired stones and a hard black substance, with thick easily crumbled pottery
33SA-?	Hereford Hill	bone collagen; collagène osseux	1440	70	Gibraltar phase
AKAMR001	Onion Portage	charcoal; charbon de bois	1445	11 0	Band 2, Level 2
FhNa-63	Root	bison bone collagen; collagène osseux de bison	1445	11 0	lower cultural layer, 70 cm depth
NH31-20-5	Belmont-Tilton	charcoal; charbon de bois	1445	13 0	hearth
35DS34	Paulina Lake	charcoal; charbon de bois	1450	70	natural fire?
5MT4654	Beaver Trap Shelter	plant remains; restes de plantes	1450	16 0	packrat midden 1002-2, rock shelf
24RB1176	Area 2	charcoal; charbon de bois	1450	80	feature 3
25GO2	Wallace	unknown; inconnu	1450	60	Valley variant
JjLl-1c	Lamb Pegeelak	charcoal; charbon de bois	1450	50	Zone A, square 4, hearth
39RO23	DeSpiegler	human bone collagen?; collagène osseux humain	1450	11 0	burial 27, a flexed primary burial with dentate-stamped pottery
QjJx-10	Tasiarulik	caribou bone collagen; collagène osseux de caribou	1450	60	north area, tent ring feature 30
13ML-?	Pleasant Ridge	charcoal; charbon de bois	1450	90	stream channel alluvium, Mullenix Member, De Forest Formation
23PU200	Nevins Cairns	human bone collagen; collagène osseux humaine	1450	90	mound 4, Maramec Spring phase
47TR31	Schwert mound group	charcoal; charbon de bois	1450	60	feature 2, a refuse pit at 3.0 ft depth, at bottom of buried Middle Woodland village under burial mound 26, Hopewell
12GR122	Heaton Farm	unknown; inconnu	1450	60	Allison-LaMotte component
KcFr-3A	Ohituk	willow charcoal; charbon de saule	1450	13 0	area A, unit N13/E7, level 1, with the remains of a hearth originally surrounded by flagstones
BfGa-__24	Driscoll	pottery encrustation; tarte de poterie	1450	30	9 cm depth, cord-wrapped stick interior punctate rim
AKNOB002	Iyatayet	charred wood; bois carbonisé	1460	20 0	cut PA, upper Norton levels
DgPl-4	Narrows	unknown; inconnu	1460	12 0	
DhPj-31	Manyfingers	bison bone collagen; collagène osseux de bison	1460	75	Terrace 1, Level 11, Test 5, 126 cm below datum
FeOm-1	Folkin Lake	bone collagen; collagène osseux	1460	10 0	burial, 50-55 cm depth

48SW3737	Firehole Rockshelter	carbonized wood; bois carbonisé	1460	10 0	
FgNi-24	Harper Valley	charcoal; charbon de bois	1460	10 0	upper level, unit 90n/22e, 50- 55 cm BS
DIMa-1	Stott	human bone collagen; collagène osseux humain	1460	65	Burial XV-A:97
23SA128	Fisher-Gabert	charcoal; charbon de bois	1460	10 5	feature 25
47RO15	Beloit Mound Group	charcoal; charbon de bois	1460	75	mound 6, on floor of oval mound, Effigy Mound culture
46PU4	Winfield Locks	unknown; inconnu	1460	60	
12VI122	Higgenbottom	unknown; inconnu	1465	12 5	Allison-LaMotte component
33RO108	McGraw	charcoal; charbon de bois	1469	65	midden, unit C-1
AKXCL010	Avingak	caribou bone collagen; collagène osseux de caribou	1470	80	test excavations northwest of Campbell's excavations, with plano-convex core
NiTs-4	Satkualuk	caribou bone collagen; collagène osseux de caribou	1470	60	test unit 5, feature containing charcoal, in deflated area of the site
CAMod-?	King's Dog	charcoal; charbon de bois	1470	60	Pit M-11, 48" depth
35WA865	Cache Creek	charred wood; bois carbonisé	1470	12 0	
EdOn-7	Shaw burial	bison bone collagen; collagène osseux de bison	1470	90	burial within and beneath medium-sized stone cairn
24CB1090	Bear Shield	organic matter; matière organique	1470	75	subvarnish, en toto pecked bison petroglyph
EeNg-6	Bethune	bison bone collagen; collagène osseux de bison	1470	45	burial in shallow pit, disturbed by cultivation
14MH-?	Bean Hollow	charcoal; charbon de bois	1470	75	numerous small particles, 6- 12" level, with Woodland, Central Plains, and Coalescent sherds
11GE456	Newbridge	charred plant remains; restes de plantes carbonisé	1470	70	feature 107, level L, White Hall phase
11GE-?	Helton	charcoal; charbon de bois	1470	13 0	feature 2, level A, hearth debris in bottom of pit, White Hall phase
33HI11	William Schultz Mound	unknown; inconnu	1470	80	
6HT116	Myette or Bancroft 2	unknown; inconnu	1470	20 0	
KdDq-2	Sandy	willow charcoal; charbon de saule	1470	11 0	third or bottom layer, combined from three different 5-foot squares
UcAg-1	Wood River	caribou bone collagen; collagène osseux de caribou	1470	30	feature 2, group 2, partly buried in dwelling feature, 5 cm depth
15WA981	Plum Springs	unknown; inconnu	1475	14 5	
AKSOL-?	Qitchauvik	wood; bois	1480	60	
45SP241	Riblet Point	charcoal; charbon de	1480	14	

		bois		0	
48SW998	Abel Creek	charcoal; charbon de bois	1480	70	unit 1, feature 3
KkLn-2	Grant Lake	peat; tourbe	1480	12 5	Trench I, 6 m east of square D, 66 cm depth, 35.6 cm below occupation level
11MO722	Leingang	charred wood; bois carbonisé	1480	80	fill of west half of Rosewood phase pit, feature 96
33ER-?	Dillon	charcoal; charbon de bois	1480	10 5	feature 13, a refuse pit, Gibraltar phase
36BV292	Connoquenessing	charcoal; charbon de bois	1480	70	feature 52
CcCm-12	MacDonald	bone collagen; collagène osseux	1480	16 0	Area A, Test pit 1, Level 4, 31 cm depth, with rim sherds
EfQu-10	Blind Bay Rock Shelter	charcoal; charbon de bois	1485	90	Zone IV, beneath a fallen slab of schist in the middle cultural zone, 2.8-3.0 m N, 1.2-1.35 m E, 1.21 m below datum
23MN542	Tom Miskell	charcoal; charbon de bois	1485	70	
28WA528	Snyder	charcoal; charbon de bois	1485	30	
CAHum129	Tsahpekn	charcoal; charbon de bois	1490	10 0	
GaQs-1	Smoky	charcoal; charbon de bois	1490	14 0	unit 25, along the second baseline, associated with a circular stain, 25 cm depth
45ST94	Fishery or Takumkst	charcoal; charbon de bois	1490	11 0	
48SW3741	Amphitheatre	carbonized wood; bois carbonisé	1490	60	feature 2, a hearth
5DA123	Helmer Ranch K:12:6	charcoal; charbon de bois	1490	16 0	habitation component exposed in an arroyo cut, Parker phase
39PN102	Sod Table	charcoal; charbon de bois	1490	70	squares E38/N20, E39/N20, E40/N20, and E39/N21, east portion of site
13CT1	Turkey River Mound Group	charcoal; charbon de bois	1490	50	Burial 1 and 2, Mound 38 (cremated skulls), probably part of same mortuary program as articulated burials 3-11 located at base of mound with red ochre
12SU13	Daugherty-Monroe	charcoal; charbon de bois	1490	10 5	feature 7, a pit 135 cm diameter and 145 cm deep, with Embarrass Cordmarked and Embarrass Simple Stamped sherds, Allison-LaMotte component
46PU31	Buffalo #2	charcoal; charbon de bois	1490	70	feature 1, an earth oven, unit B-10
33RO22	Liberty Earthworks	charcoal; charbon de bois	1490	65	Edwin Harness Mound, feature 17, a pit through the main floor outside and west of the North Section
36FA262	Crawford-Grist	charcoal; charbon de bois	1490	60	combined samples from Feature 4, a shallow basin in Trench 6, and Feature 71, an ovoid basin in Trench 3

CT75-60	Hamburg Cove	unknown; inconnu	1490	10 0	
DhDn-2a	Du Ruisseau, Station A	charbon de bois; charcoal	1490	21 0	base de l'humus au sommet de la couche d'occupation constituée de sable brun foncé; aucune association culturelle directe
KeDe-14	Willows Island 4	plant remains; restes de plantes	1490	60	stable, test pit 16, 200N/13E, midden, 20 cm depth
42WN420	Cowboy Cave	charcoal; charbon de bois	1495	60	stratum 5a, feature 183, a pit in red wind-blown sand
15LO11	Savage Cave	unknown; inconnu	1495	65	
35DO412	Coffee Creek Bridge West	charcoal; charbon de bois	1500	60	
35JA302	Hairpin Thistle	charcoal; charbon de bois	1500	80	
26LA1	Toquima Cave	charcoal; charbon de bois	1500	13 0	west wall of trench 11, 40 cm below datum
24RB262	Vegematic	charcoal; charbon de bois	1500	70	feature 1
5PE278	Bellwood or Graneros	charcoal; charbon de bois	1500	55	bell-shaped pit in dwelling, Graneros Focus, with small corner-notched arrow points, 121 cordmarked sherds with sand and limestone temper
23PL29	Brenner-Keller Mounds	charcoal; charbon de bois	1500	12 5	fire-burned area in lower levels of mound
DjKp-___3	Meek	charcoal; charbon de bois	1500	17 0	hearth feature in the Laurel stratum, associated with a storage pit 60 cm away, possibly part of a Laurel house structure
21SB1	High Island Mound	wood; bois	1500	15 0	decayed logs over the central burial pit beneath a conical mound, Malmo focus
RbJr-1	Porden Point Brook	whale bone collagen; collagène osseux de baleine	1500	75	House 7, between flagstones of floor area
11JY70	Macoupin	charcoal; charbon de bois	1500	13 0	redeposited in pit fill, feature 44b, with 8 Havana-ware and 2 Crab Orchard Fabric-Imprinted sherds
11F106	Scovill	charred wood; bois carbonisé	1500	12 0	feature 33, a refuse-filled pit with Weaver ware
33MU304	Hunter I	unknown; inconnu	1500	70	
BdHi-___1	Donaldson	human bone collagen; collagène osseux humain	1500	80	Burial D
EeRl-19	Fountain	charcoal; charbon de bois	1505	70	Locus 3, feature 17, a small oven with burnt evergreen cones and ash, 127 cm depth, the basal cultural deposit in the southern half of the site
41LU1	Lubbock Lake	charcoal; charbon de bois	1505	50	trench 95, substratum 4B
ME31.17	Great Gott	charcoal; charbon de bois	1505	21 5	feature 1, with a Vinette ceramic sherd

FgQm-1	Cold Sulphur Springs (284R)	charcoal; charbon de bois	1508	110	occupation layer with no diagnostic artifacts
33CN10	Cowan Creek mound	charcoal; charbon de bois	1509	250	subfloor fireplace just outside house structure, Adena
DhRs-1	Marpole	charcoal; charbon de bois	1510	90	undisturbed Marpole II deposits
DgRs-2	Tsawwassen	human bone collagen; collagène osseux humain	1510	60	Zone C, burial C-3, unit 9/0, Trench C, in shallow pit
35LK2846	Boulder Village	charcoal; charbon de bois	1510	70	structure 106, one of four stone circles joined by contiguous walls, composite sample from level 7 (30-35 cm) and level 9 (40-45 cm depth)
26PE3a	Crypt Cave	animal remains; restes d'animaux	1510	100	twisted bird skin robe from a well preserved mummy burial
26EK25	Deer Creek Cave	charcoal; charbon de bois	1510	140	site 196, trench C, pit 2, 12-18" depth, with points, scrapers, disc beads, antler flakes
DIPk-3	Trout Creek	bone collagen; collagène osseux	1510	105	level 2
42SA-?	Dust Devil Cave (NA7613)	charcoal; charbon de bois	1510	80	hearth buried 120 cm beneath the surface in sandy Quaternary detritus beneath a cliff
5MT2192	Pheasant View Hamlet	charcoal; charbon de bois	1510	70	pit structure 1, loc. 13, surface 1, Sagehen phase
48SW1692	Great Divide Basin	sediment; sédiment	1510	90	stratum A2, component 1
24BH1726	Benson's Butte	charcoal; charbon de bois	1510	60	feature 18-76, a basin-shaped rock-lined pit, 2-3N/37-38W, level I, 40-50 cm depth
24PR601	Coyote House	charcoal; charbon de bois	1510	60	hearth 10-30 cm depth in south side of cribbed log structure
48LA303	Petsch Springs	charcoal; charbon de bois	1510	160	
24WX30	Goheen	charcoal; charbon de bois	1510	90	test pit 1, a living floor centered on a shallow, unlined basin-shaped hearth
5WL1997	Three O'Clock Shelter	charcoal; charbon de bois	1510	70	unit 7, with a stone platform feature
DhMg-7	Brockinton	bison bone collagen; collagène osseux de bison	1510	80	coarse yellow sand overlying clayey silt, Level 9
DhLw-1	Richards village	bone collagen; collagène osseux	1510	150	lower occupation level, Level 4-5, 16-20 cm depth
EcKt-15	Tulabi Falls Portage	charcoal; charbon de bois	1510	200	hearth, Unit 16, Level E, 13 cm depth, in humus
11JD11	Camaro	charcoal; charbon de bois	1510	75	feature 6
11S650	George Reeves	charred wood; bois carbonisé	1510	70	Mund phase pit, feature 310
11S47	Range	charcoal; charbon de bois	1510	80	fill of Patrick phase pit, feature 4484



15GP14	Hansen	charcoal; charbon de bois	1510	70	structure 2, postmold 120, probably Early Newtown component
33HA17	Sand Ridge	charcoal; charbon de bois	1510	10 0	unit A, level 12, a midden deposit, 1.3 m depth, Newtown
20MR161	Gard Island No. 2	human bone collagen; collagène osseux humain	1510	80	burial 4
AfHo-__7	Blue Water Bridge South	charcoal; charbon de bois	1510	50	K3 pier location, Layer 11 but possibly in a feature intrusive from Layer 10
33RO108	McGraw	charcoal; charbon de bois	1510	80	unit D-1, midden ca. 2 ft depth, covered by 2 layers of flood deposits
46PU4	Winfield Locks	unknown; inconnu	1510	50	
36BV292	Connoquenessing	charcoal; charbon de bois	1510	80	feature 52
ME90.2D	Sharrow	plant remains; restes de plantes	1510	80	stratum 4, feature 22, with grit-tempered, smoothed, incised, cord-wrapped stick and circular punctate decorated ceramics, ceramic period 3
EeRk-4	Bell	charcoal; charbon de bois	1515	90	Housepit 19, floor A, 40 cm depth, directly over the only living floor
EeRk-7	Gibbs Creek	charcoal; charbon de bois	1515	80	Housepit 3, basal deposit
KjNb-6	Junction	charcoal; charbon de bois	1515	11 0	Area C, Level 2 (correlated with Area A, Level 3), in sand
CT75-?	Cedar Lake	unknown; inconnu	1515	85	
ME90.2C	Brigham	charcoal; charbon de bois	1515	40	N9/E0, feature 4, stratum 11, general association of grit-tempered, smooth, rocker dentate (large) decorated ceramics, ceramic period 3
JcDf-1	Killinek 4	tourbe; peat	1515	60	dans un dépotoir dorsetien érodé par la mer et perturbé dans sa partie supérieure par des établissements historiques
AKXPH003	Ipiutak	wood; bois	1520	20 60	
35BA529	Pinesnag	unknown; inconnu	1520	0	
42GA102	Sheep Horn Alcove	cultigen; cultigène	1520	10 0	
48FR113	Crooks Creek	charcoal; charbon de bois	1520	70	unit 4, feature 3
24DW85	Mini-Moon	charcoal; charbon de bois	1520	70	cultural level 1, 40-60 cm depth
5DA265	Bayou Gulch	charcoal; charbon de bois	1520	50	feature 10, Parker phase
41GR559	Boren Shelter No. 2	charcoal; charbon de bois	1520	90	Feature 24
DjMd-4	Owti	bison bone collagen; collagène osseux de bison	1520	65	silty sand, paleosol, cultural layer 2, 90 cm depth
13ML124	Gamble	charcoal; charbon de bois	1520	10 0	habitation on a low terrace

23PL2	Deister	charcoal; charbon de bois	1520	85	Hopewell component
23PL1	Renner	charcoal; charbon de bois	1520	10 0	pit 7, level 4, 18-24" depth, associated with village debris
23MN638	Crooked Creek	unknown; inconnu	1520	70	
47GT1	Stonefield	charcoal; charbon de bois	1520	70	feature 4, 13" below surface of feature, Hopewell
11P4	Rench	charcoal; charbon de bois	1520	17 0	feature 175, a Weaver phase pit
20CH2	Naomikong Point	pottery encrustation; tarte de poterie	1520	40 0	scraped from interior of pseudo-scallop shell potsherds from midden Level 1
33RO55	Russell Brown	charcoal; charbon de bois	1520	90	mound 3, feature 13, a fire pit at the base of the mound near the center, 24" depth
33LI-?	Burning Tree Mastodon	charcoal; charbon de bois	1520	60	feature 2
46JA59	Buffington Island 1	unknown; inconnu	1520	80	
AgHb-___2	Mohawk Chapel	charcoal; charbon de bois	1520	80	unit N112/E104, Feature 40
CaGn-___1	Radiant 3	charcoal; charbon de bois	1520	60	Sq. K24, among Middle Woodland sherds, 15.2-22.9 cm depth, stratigraphically above peak Middle Woodland zone
28ME114	Sturgeon Pond	unknown; inconnu	1520	18 0	the middle one of three buried surfaces
ME9.16	Great Diamond Island	charcoal; charbon de bois	1520	55	Area B, unit 4R0, feature 5, stratum IIIb, with grit-tempered, smoothed, rocker dentate (large) decorated ceramics, ceramic period 3
45FR40	Harder	charcoal; charbon de bois	1525	12 5	House 4, earliest excavated house floor
DIOu-7	Wallwork	charcoal; charbon de bois	1525	60	cultural layer
11HN252	Rutherford Mound	charcoal; charbon de bois	1525	10 0	floor of mound in square 25R10, Hopewell
AKXMK106	Tiny Island Village	charcoal; charbon de bois	1530	80	upper component, test pit A, stratum 4, 80 cm depth
AKCRG381	Wolf's Lair	charcoal; charbon de bois	1530	50	campsite area along east wall of sea cave
DhRp-7	Fort Langley	charcoal; charbon de bois	1530	60	Feature 219
35BA347	King Creek	unknown; inconnu	1530	50	
10NP108	Spalding	charcoal; charbon de bois	1530	19 0	House 1, with small side-notched points
MkPk-9	Willowherb	caribou bone collagen; collagène osseux de caribou	1530	80	surface of blowout over an area of 200 sq. m
48LN760	Zieglers Wash	carbonized wood; bois carbonisé	1530	80	hearth
39BR101	Arp mound	charcoal; charbon de bois	1530	12 0	Extension 31, unit I, cache pit, feature 10, from pit base, Loseke
11A116	John Roy	charred plant remains; restes de plantes	1530	70	feature 1, White Hall phase

		carbonisé			
13JN3	Hadfield's Cave	charcoal; charbon de bois	1530	55	Feature 46, square 99, level 5, 22.9-30.5 cm depth, one of the deepest levels in cultural zone at far north end of site, Effigy Mound
11GE482	Apple Creek	charred wood; bois carbonisé	1530	70	feature 451, level D, White Hall phase
12PO2	Mann	charcoal; charbon de bois	1530	45	feature in earthwork no. 9, the largest of the Mann site mounds
11S639	Rosewood	charred wood; bois carbonisé	1530	80	fill of west half of Rosewood phase pit, feature 87
23MI8	Hoecake	unknown; inconnu	1530	80	
9CLA1	Mandeville	charcoal; charbon de bois	1530	130	Mound B, feature 5, 4.5 ft above the mound base with a redeposited human cremation, Mandeville II, late Hopewell
33WO9	Dodge	charcoal; charbon de bois	1530	60	pit 5, with an extended adult burial
15PI7	Sim's Creek	charred wood; bois carbonisé	1530	105	Feature 17, an earth oven, 8.5 cm depth
7NC-?	Holly Oak	marine shell; coquillage	1530	110	engraved whelk shell found in a peat bog in 1864
28OC4	Tuckerton Shell Mound	marine shell; coquillage	1530	55	shell tool, shell mound, 8 ft depth, extracted by a mechanical coring device
CcCt-1	Rustico Island	charcoal; charbon de bois	1530	70	lower occupation, below midden
DIPd-3	Ross	charcoal; charbon de bois	1535	190	hearth between sections P10 and P11
EcNm-8	Walter Felt	charcoal; charbon de bois	1535	80	Layer 10
DjSp-1	Yuquot	charcoal; charbon de bois	1540	110	Zone III, stratum IIIc, black organic soil and decomposed shell, ca. 8 m asl
45LE225	Riffe Lake or Champion Bridge	unknown; inconnu	1540	50	
CASis4	Nightfire Island	charcoal; charbon de bois	1540	100	stratum 15
CAMad159	Jones	human bone collagen; collagène osseux humaine	1540	110	
CASBr4449	Fort Irwin	charcoal; charbon de bois	1540	70	
EhPv-?	Banff	charcoal; charbon de bois	1540	100	occupation 5
DkPj-1	Head-Smashed-In Buffalo Jump	charcoal; charbon de bois	1540	70	Layer 5, Spit 1d, 134-160 cm depth
NcPd-2	Lady Franklin Point	whale bone collagen; collagène osseux de baleine	1540	70	House 17, 4 m asl
10BT62	Saw Mill Canyon	soil; sol	1540	130	compact dark brown humus with angular rubble and pea gravel, test pit 4B, level 1, 10-24 cm depth

48UT397	Near Church Butte	carbonized wood; bois carbonisé	1540	80	charcoal stain
48SW1242	Locality 4b	unknown; inconnu	1540	90	midden 1, component IV
24RB878	Foresite	charcoal?; charbon de bois	1540	80	feature 7
29.0	Honest Injun Cave (GS3)	charcoal; charbon de bois	1540	70	pit house 1, burned post
23CO156	Algoa	unknown; inconnu	1540	55	Boone phase
13LA12	Gast Farm	unknown; inconnu	1540	90	one hectare ring midden, Weaver horizon, Gast phase
11MS1353	Cunningham	unknown; inconnu	1540	70	Rosewood/Mund phase
47DA3	Outlet	charred human bone; os humain carbonisé	1540	70	burial 3, mound 5, the reburial of several individuals near the central portion of the mound, with a large quartzite blade of Hopewell style
9RI4	White's Mound	charred wood; bois carbonisé	1540	27 0	feature 33, square OL240, with partially burned half of human cranium
BcHi-__3	Nodwell	fish bone collagen; collagène osseux de poisson	1540	55	House 8, composite sample
GcFb-2b	Lac Vincelotte	charbon de bois; charcoal	1540	10 0	dans le foyer F-1
CgEq-19	Royarnois	charcoal; charbon de bois	1540	80	deep trench wall, longhouse 1
BhDc-2	Davidson Cove	charcoal; charbon de bois	1540	11 0	a lens, completely encased in lithic debitage, at the interface between reddish-black humus and dusky red compact silt, in the shore face profile
26HU102	Last Supper Cave	plant remains; restes de plantes	1545	36 0	strata 2-3, organic strata above Mazama ash
CAOra-?	Buck Gully 1	marine shell; coquillage	1545	35 0	
5GA22	Caribou Lake	charcoal; charbon de bois	1545	90	shallow basin hearth originating from an erosion surface at the top of a slopewash deposit
5LA1416	Sopris	charcoal; charbon de bois	1545	80	feature 79, pit, Sopris phase
KkJg-1	Silumiut	animal remains; restes d'animaux	1545	13 5	House 13 midden, level 3, 50- 60 cm depth
47OZ26	Klug	charcoal; charbon de bois	1545	65	square 28L5, 24.4 cm depth
18DO117	Locust Neck	charcoal; charbon de bois	1545	60	feature 13
33LI250	Newark Campus	unknown; inconnu	1547	10 0	feature 4
NkRi-3	Tiktalik	bone collagen; collagène osseux	1550	40	house 5, on floor
EeRl-7	Keatley Creek	charcoal; charbon de bois	1550	60	Housepit 12, roof beam in contact with floor, Square B, sub-square 11, stratum III (floor)
45LE209	Koapk or Cowlitz Falls	charcoal; charbon de bois	1550	10 0	
35WS125	Paquet Gulch	charcoal; charbon de	1550	10	

	Bridge	bois		0	
35UN52	Stockhoff	unknown; inconnu	1550	90	
26WP230	Amy's Shelter	charcoal; charbon de bois	1550	70	Brown III zone, C10/C11 balk, 15-40 cm depth, beginning of late prehistoric period with small corner-notched or barbed projectile points
DkPj-35	Dersch locality	bison bone collagen; collagène osseux de bison	1550	90	Level 3, 57 cm depth
42GA3132	Casa del Fuego	charcoal; charbon de bois	1550	60	burned pithouse with both Elko and Rosegate (Rose Springs) points
24PA504	Myers-Hindman	bone collagen; collagène osseux	1550	70	Level 7
EE:8:25	Murray Springs	charcoal; charbon de bois	1550	90	hearth, 1.55 m depth, under two Cochise milling stones, between pollen samples 14 and 15
EE:12:1	Lehner	charcoal; charbon de bois	1550	12 0	fireplace buried in alluvial fan near mouth of Lehner arroyo, exposed in bulldozer trench, upper part of unit G, with no associated artifacts
5RB2921	Big Slab Hearth	unknown; inconnu	1550	70	
KeNi-4	Whitefish Lake	charcoal; charbon de bois	1550	60	Level 4, in sand, Area C, 0N/4W
24RB1176	Area 2	charcoal; charbon de bois	1550	50	feature 1
5LR200	T-W Diamond	charcoal; charbon de bois	1550	34 0	hearth on the floor of a tipi ring, feature 11, 15 cm depth
QjJx-10	Tasiarulik	caribou bone collagen; collagène osseux de caribou	1550	50	central area, midden feature 78, a linear organic patch, 22 m long by 4 m wide
21OT7	Orwell	charcoal; charbon de bois	1550	10 0	Mound 4, near central multiple human burials overlain by bison burials
13CF101	M.A.D.	charcoal; charbon de bois	1550	90	cultural layer
14WY1	Trowbridge	charcoal; charbon de bois	1550	10 5	feature KU-8, a trash-filled storage pit, Hopewell component
11A1000	Buffalo	charcoal; charbon de bois	1550	70	pit feature, La Crosse phase
11PK18	Stilwell	charcoal; charbon de bois	1550	12 0	feature 14, a storage-refuse pit, 18-30" depth in fill extending 12-42" depth, White Hall phase
11BR2	Baehr-Gust	charcoal; charbon de bois	1550	50	feature 25 (1989), bag number 89-120
12HN-?	White	charcoal; charbon de bois	1550	15 0	pit S1/W3, feature 3, 13.95 cm depth, isolated timber not associated with artifacts, possibly intrusive
AdHo-___1	Weiser	carbonized wood; bois carbonisé	1550	70	Units 50, 52, S16, in midden below sand
IcGm-4	Inukjuak River 3	charbon de bois; charcoal	1550	11 0	8 cm sous la surface, puits E-1, non remanié

BIGk-__19	Whitson Lake	charcoal; charbon de bois	1550	19 0	Sq. W2A-Q111, in sand, 28-33 cm depth, with quartz chips and a scraper
7K-F-17	Island Field	human bone collagen; collagène osseux humain	1550	60	burial 60
GcEl-26	Rivière Caniapiscau	charcoal; charbon de bois	1550	12 0	hearth 1, scattered fragments from within two contemporaneous hearth deposits
BgDr-48	Partridge Island	charcoal; charbon de bois	1550	50	basin-shaped living floors and pit features, Unit 1
AKSIT132	Pillsbury Point	marine shell; coquillage	1555	90	column 1, 110 cm depth, base of column
24DW1001	Whiskey Hill	charcoal and burned bone; charbon de bois et os brûlé	1555	60	hearth exposed in the profile of the south side of the southernmost gully, directly associated with a Besant point
13PM91	Rainbow	charcoal; charbon de bois	1555	13 5	
23CP1	Mellor	charcoal; charbon de bois	1555	60	unit C, middle portion of upper midden deposits in trench 9
16.0	Tunica Bayou	charcoal; charbon de bois	1555	70	natural levee deposit with material of the Troyville period, 80-90 cm depth
33BU205	Todd Mound	unknown; inconnu	1555	60	
33JA159	Rais Rockshelter	charcoal; charbon de bois	1555	15 5	Unit E-3, 10-12 ft below floor
DfSj-40	Ittatsoo North	unknown; inconnu	1560	70	
35CLT66	Earl Dune	charcoal; charbon de bois	1560	50	
45PC101	North Nemah River midden	charcoal; charbon de bois	1560	50	
JcRw-3	Klondike	bone collagen; collagène osseux	1560	12 0	Area B, Component 3, square 53, 7.35S/6.0W, 10 cm below top of mineral soil
45KI59	Tualdad Altu	charcoal; charbon de bois	1560	50	4.2 m asl
OdPp-2	Co-op	bear bone collagen; collagène osseux d'ours	1560	65	House 2, ancient horizon beyond living area, covered by sediment wall
5RB454	Hanging Hearths Shelter	charcoal; charbon de bois	1560	70	hearth E, 2.91 m depth, with no diagnostic artifacts
EkNv-36	Billet	charcoal; charbon de bois	1560	16 0	Area C-3, units 173-L29 and 173-L30, basin-shaped hearth
5GA151	Granby	charcoal; charbon de bois	1560	70	hearth, feature 2, superimposed by feature 4
KkLn-4	Migod	charcoal; charbon de bois	1560	80	sand, 10N/4E, Level 2a
DILg-33	The Forks	charcoal; charbon de bois	1560	10 0	organic black silt, unit 21K25G, 1.85 m below railway fill
23CE152	Bowling Stone Mound	charred plant remains; restes de plantes carbonisés	1560	14 0	burial mound with limestone-tempered pottery of uncertain affiliation
23SA128	Fisher-Gabert	charcoal; charbon de bois	1560	10 0	feature 20

47BN161	Striped Steer	charcoal; charbon de bois	1560	70	Feature 3, possibly Middle Woodland component not represented in artifact assemblage
11PK751	Axedental	charred plant remains; restes de plantes carbonisé	1560	70	feature 11-04D, -04E, -05D, -05E, -05F, White Hall phase
11S629	Columbia Quarry	charred wood; bois carbonisé	1560	90	fill of Mund phase pit, feature 24
12SU13	Daugherty-Monroe	charcoal; charbon de bois	1560	70	feature 8, a pit 125 cm diameter and 140 cm deep, with Embarrass Cordmarked and Embarrass Simple Stamped sherds, Allison-LaMotte component
1JA181	Russell Cave	charcoal; charbon de bois	1560	10 0	burial in a mound 100 yds north-northeast of the cave, 4'2" depth, one of 12 burials found in the mound with no associated artifacts
33RO385	Sabre Farms	unknown; inconnu	1560	70	
15BE23	Gaines Mound	charcoal; charbon de bois	1560	10 0	Tomb 4, with extended burials 11 and 12, and cremation burial 13, on outer extremity of an elliptical mound, with a tube pipe and copper beads, Adena
33MU304	Hunter I	unknown; inconnu	1560	60	
46MR13	Fairchance	charcoal; charbon de bois	1560	80	small Middle Woodland mound, Fairchance phase
JeEj-7	Qilalugarsiuvik = Ung.11	restes d'animaux carbonisés; charred animal remains	1560	95	maison B, G-21-22, sur une dalle dans la zone axiale
BgDs-6	Sand Point = Sandy Point	charcoal; charbon de bois	1560	95	housepit 2
ElNp-8	Fitzgerald	bison bone collagen; collagène osseux de bison	1563	45	
KfNt-1	Waldron River	charcoal; charbon de bois	1565	90	burned twigs in a buried hearth from rock hollow of Area A, 13 cm depth
36FR31	Fort Loudoun	unknown; inconnu	1565	12 0	
18ST53	Abells Wharf	charcoal; charbon de bois	1565	90	feature 40, with shell tempered ware
47CR560	Arnold/Tainter Cave	charcoal; charbon de bois	1568	50	exposure beneath the roof collapse in chamber 1
AKKOD026	Monashka Bay	charcoal; charbon de bois	1570	60	firepit
DgSk-54	Schooner Trail (316T)	charcoal; charbon de bois	1570	50	midden 20 m asl, 125 cm depth
DgRv-3	Dionisio Point	charcoal; charbon de bois	1570	70	House 2, associated with a zoomorphic bowl
KIRk-1	Blackwater Lake	charcoal; charbon de bois	1570	60	Test pit 1, 1-25 cm depth, associated with microblades
24MA1604	Spanish Creek	sediment; sédiment	1570	70	stratum II, A3 horizon, marking the continuing deposition of aeolian silt, 25-

					30 cm depth
42GA288	Triangle Cave	cultigen; cultigène	1570	80	
42GA103	Pantry Alcove	cultigen; cultigène	1570	70	
GG-69-18	Pittman	charcoal; charbon de bois	1570	80	pithouse
5RB3655	Full House	unknown; inconnu	1570	60	context 7
48JO357	Middle Fork	charcoal; charbon de bois	1570	60	hearth
14GR301	Curry	charcoal; charbon de bois	1570	23 0	adult burial in a village site, Keith phase
EaLa-3	Bjorklund	human bone collagen; collagène osseux humain	1570	60	component 2, feature 6-74, individual Z17
23MN732	Pigeon Roost Creek	charcoal; charbon de bois	1570	26 0	horizon 2
47BF45	Bluff Siding	charcoal; charbon de bois	1570	60	feature 1, level 5, 40-50 cm depth
11PK477	Elledge	charcoal; charbon de bois	1570	70	feature 15-01A, White Hall phase
11GE20	Audrey	charcoal; charbon de bois	1570	70	feature 601, level II-E, F, G, H, I, White Hall phase
20KE20	Lac LaBelle	animal remains; restes d'animaux	1570	10 0	leather bag, preserved by copper salts, a cache with over 100 copper beads strung on a twisted cord, a large crescentic knife, and fabric
5RB123	Burke	charcoal; charbon de bois	1575	13 5	
13PK149	Darr-Es-Shalom	charcoal; charbon de bois	1575	60	feature 55 in unit 1
13CT26	Marching Bear Mound Group	charcoal; charbon de bois	1575	10 0	Mound 77, an area of scattered charcoal and burned earth in hearth region of bear-shaped burial mound, 1'6"-2'10" depth, Effigy Mound culture
33MN1	Greencamp	unknown; inconnu	1575	10 0	
DcRv-1	Ash Point	charcoal; charbon de bois	1580	10 0	dark sandy soil and gravel with ash, between floors 2 and 3, 26" depth
DcRt-10	Willows Beach	charcoal; charbon de bois	1580	70	
45SJ25	Garrison Bay	charcoal; charbon de bois	1580	60	
DgRs-30	Water Hazard	wood; bois	1580	60	fiber cordage from dredge spoil on a golf course
DfRs-3	Whalen	charcoal; charbon de bois	1580	14 0	upper horizon, 0.9-1.2 m depth
45WH24	Birch Bay	charcoal; charbon de bois	1580	12 0	hearth feature, 21-40 cm depth, with finely broken shell and bits of mammal bone, ca. 10 m asl
35KL605	Beatty Pit Quarry	freshwater mollusc shell; coquille de mollusque d'eau	1580	80	



		douce			
CAMrp105	Crane Flat	charcoal; charbon de bois	1580	80	Pit 22C, 36-42" depth, with Elko series points
26NY301	Gatecliff Shelter	charcoal; charbon de bois	1580	90	horizon 4/5, hearth
10CL3	Veratic Rockshelter	charcoal; charbon de bois	1580	80	layer 22, Blue Dome phase
5GN42	Soap Creek or Ponderosa	charcoal; charbon de bois	1580	70	cultural feature
EaNg-1	Avonlea	charred bison bone; os de bison carbonisé	1580	10 0	cultural layer 20-40 cm depth, overlain by aeolian fine sand
FhNa-13	Bushfield East	paleosol; paléosol	1580	11 5	paleosol, Level 3, 70-80 cm depth
23BE125	Rodgers Shelter	charcoal; charbon de bois	1580	70	horizon 1
47GT53	Millville	charcoal; charbon de bois	1580	55	sandy loam fill of feature 115, a refuse pit with smooth and cord-roughened body sherds, Hopewell
11MO722	Leingang	charred wood; bois carbonisé	1580	80	fill of Rosewood phase pit, feature 1
11S632	Alpha 1	charred wood; bois carbonisé	1580	80	fill from south half of Rosewood phase pit, feature 39
11CT95	Becker Borrow	charred wood; bois carbonisé	1580	10 0	loess clay fill of feature 70, an oval pit with concave walls and flake floor with post mold, superimposed by Mississippian wall trenches
46PU99	Parkline	unknown; inconnu	1580	50	
ME30.42	Goddard	charcoal; charbon de bois	1580	65	0-10N/70-75W, with Fox Creek bifaces
11OG-?	NIU-89	human bone apatite; apatite osseux humain	1585	12 0	burial in sand and gravel knoll
41HE1	Big Rock Shelter	charcoal; charbon de bois	1587	13 3	Woodland level
35CS11	Cape Arago	charcoal; charbon de bois	1590	50	
45PI7	Purdy I	charcoal; charbon de bois	1590	70	
35DS485	Gamehut Obsidian Flow	charcoal; charbon de bois	1590	60	upper paleosol
26WA3051	John Dryden Cave	human bone collagen; collagène osseux humaine	1590	80	burial A
48LN1296	Shute Creek	charcoal; charbon de bois	1590	70	area E, feature 74
5MT4614	Prairie Dog Hamlet	charcoal; charbon de bois	1590	90	pit structure 1, segment 2, strat 9 fill, Sagehen phase
48SW6275	Cully's Dump	soil; sol	1590	70	bulk medium carbon, possible house pit
DiOc-2	Tipi Summit	charcoal; charbon de bois	1590	80	cobble-lined hearth in tipi ring no. 3

5DA603	Jackson Creek	charcoal; charbon de bois	1590	70	soil horizon IIIPPCA, post-Piney Creek alluvium, containing a Woodland occupation
47TR35	Second Lake village no. 1	charcoal; charbon de bois	1590	60	feature 3, a refuse pit at 1.4 ft depth, Level 3, with Havana tradition pottery, Hopewell
47IA38	Mayland Cave	charcoal; charbon de bois	1590	55	square B4, level 14, 3.9-4.2 ft depth, just below a distinct faunal change that may reflect a local change in the vegetation cover
33ER3	Taylor	wood; bois	1590	70	Green Creek phase
46MR96	Bluebird	unknown; inconnu	1590	10 0	Watson phase
7NC-E-41	Delaware Park	charcoal; charbon de bois	1590	75	with Calvert and Rossville projectile points
BIDn-26	The Meadows	charcoal; charbon de bois	1590	40	hearth?
24CB1090	Bear Shield	organic matter; matière organique	1595	60	subvarnish, en toto pecked anthropomorph petroglyph
BjCj-9	Delorey Island	charcoal; charbon de bois	1595	80	bottom level of the site
45CA201	Sand Point	charcoal; charbon de bois	1600	75	ca. 15 m asl
35KL677	Williamson River Bridge	charcoal; charbon de bois	1600	70	
26CH18	Lovelock Cave	human feces; fèces humaine	1600	50	NS0/W30
10IH1017	Upper Landing	unknown; inconnu	1600	70	Feature 9
DjPk-1	Kenney	charcoal; charbon de bois	1600	11 5	hearth, Layer 8, 90 cm depth, with Besant points
BB:13:59	Roberts	charcoal; charbon de bois	1600	70	hearth 1, 163 cm depth, with no associated cultural material but probably Cochise
24HL946	Laulo	sediment; sédiment	1600	80	feature B7, analytic unit 4
24CB84	False Cougar Cave	charcoal; charbon de bois	1600	90	stratum IB, 30 cm below datum
24RB267	Sly Bison Kill	charcoal; charbon de bois	1600	10 0	FK-2
24DW140	South Bank	charcoal; charbon de bois	1600	85	hearth
32ME13	High Butte	charcoal; charbon de bois	1600	14 5	feature 2, a stone ringed hearth
25GO2	Wallace	unknown; inconnu	1600	50	Valley variant
13BN121	Sparks	charcoal; charbon de bois	1600	55	features 19 and 13, storage pits or basins
47IA1	Governor Dodge Rockshelter	charcoal; charbon de bois	1600	55	probable hearth in feature 3, a dark bone-rich layer, 0.9-1.2 ft depth, with dentate rocker-stamped pottery, Hopewell
20EM-?	Ponshewaung Point	charcoal; charbon de bois	1600	13 0	Level 4, S370/E0
33MY23	Lichliter Village	charcoal; charbon de bois	1600	12 5	postholes and firepits in house sites
15MM30-32	Camargo Mound	unknown; inconnu	1600	60	Adena

33RO22	Liberty Earthworks	charcoal; charbon de bois	1600	65	Edwin Harness Mound, feature 30, in the Middle Section
46KA165	Charleston Town Center	unknown; inconnu	1600	65	Armstrong phase
AfHi-_121	Boresma	charcoal; charbon de bois	1600	80	square 180-75, feature 6, a pit containing corded, dentate-stamped and trailed pottery
DdGt-5	Bérubé	charbon de bois; charcoal	1600	90	concentration de charbon située à la limite inférieure d'une dépression, immédiatement au-dessus de la strate rougeâtre
18KE130	Plummer #50	marine shell; coquillage	1600	65	
CT54-23	Carrier	unknown; inconnu	1600	80	
19MM222	Frank Vincent	charcoal; charbon de bois	1600	60	feature 5, a small pit originating at the base of stratum 1B, 68 cm depth, with Levanna type points and cord-decorated shell-tempered pottery
ME84.53	Stratton	charcoal; charbon de bois	1600	70	associated with artifacts
BkDm-14	Jemseg Crossing	charcoal; charbon de bois	1600	60	semi-subterranean house
EiBg-11	Delta à Blanc-Sablon	charbon de bois; charcoal	1600	15 0	concentration R1, carré FN-96, sous végétation
45GR144	Mesa 12	charcoal; charbon de bois	1605	90	
24GA660	Antonsen	bison bone collagen; collagène osseux de bison	1605	90	bison kill, Area C, Level 3, 8E/26S, 30-40 cm depth
5LA1211	Leone Bluff	wood; bois	1605	80	feature 1-75, post 9, Sopris phase
13DW-VP	Willard Cave	bone collagen; collagène osseux	1605	65	Level 1
AKSIT330	Chaik Bay Weir	wood; bois	1610	60	wood-stake fish weir
EfSq-2	Hopetown Village	charcoal; charbon de bois	1610	13 0	component II
EdRk-7	Lochnore Creek	charred wood; bois carbonisé	1610	95	Zone I, floor of housepit 4, 63 cm depth
NiPx-5	Amundsen Gulf 10	charcoal; charbon de bois	1610	10 0	a bilobate tent ring
26WA197	Empire Cave	plant remains; restes de plantes	1610	80	coiled basketry fragment, test pit 4, 12-14" depth, Lovelock culture
5EA128	Dotsero	charcoal; charbon de bois	1610	55	hearth, feature 2
23PL4	Young	charcoal; charbon de bois	1610	15 0	stone vault, 43-51 cm depth
23PL120	Young Mound	charred wood; bois carbonisé	1610	13 0	burned rock zone, below 12-18" of humus with Late Hopewell pottery
47IA80	Gottschall Rockshelter	charcoal; charbon de bois	1610	70	feature 19, sample 84C12, a Millville phase hearth
11S693	Hofstetter	charred wood; bois carbonisé	1610	90	fill of feature 7, with concentration 20-30 cm depth

11AX253	Pettitt	charcoal; charbon de bois	1610	80	
20AE61	Brainerd	human bone; os humain	1610	130	Trench A, 73.7-152.4 cm depth, an ossuary in a low mound with remains of >30 individuals, with no associated artifacts, Brainerd phase
46MS121	Childers	charcoal; charbon de bois	1610	90	feature 15, dispersed charcoal
46WD38	Blennerhassett Village	unknown; inconnu	1610	90	Watson phase
46SU3	Barker's Bottom	unknown; inconnu	1610	60	Bluestone phase
PeHa-1	Saatut II	caribou bone collagen; collagène osseux de caribou	1610	80	Saatut I, square 7, midden
BfGa-__24	Driscoll	charcoal; charbon de bois	1610	175	hearth pit, feature 1, 10-15 cm depth
36MR43	Shawnee Minisink	charcoal; charbon de bois	1610	100	squares 5 and 9, level 8, 85 cm depth
BlFh-1	Lanoraie	charbon de bois; charcoal	1610	160	fragments de bois et de charbon prélevés d'une fosse et d'une trace de piquet, structure 402, à environ 127 cm sous la surface
FbNp-1	Tipperary Creek	bison bone collagen; collagène osseux de bison	1615	80	Level 13, Area D, unit 451s/72e, paleosol in alluvium
13AM100	Fish Farm Mound Group	charcoal; charbon de bois	1615	90	cemetery, Mound 17
7K-F-2	Frederica	unknown; inconnu	1615	45	an Adena-related site
AKSIT283	Wilson Cove Fort	charcoal; charbon de bois	1620	60	deepest cultural levels
DhRr-6	Belcarra Park	charcoal; charbon de bois	1620	90	Belcarra Park II component
35JA27	Johan II	charcoal; charbon de bois	1620	80	stratum 2
45SP215	Boulder Beach	charcoal; charbon de bois	1620	150	
FdOt-9	Wells	bone collagen; collagène osseux	1620	65	Level 5, 45 cm depth
24CH669	Hoffer	charcoal; charbon de bois	1620	90	Area B, unit 19N/21W, Level 24, occupation BII
5MT2854	Aldea Sierritas Hamlet	charcoal; charbon de bois	1620	60	pit structure 1, loc. 44, strat 7-3, Sagehen phase
48SW998	Abel Creek	charcoal; charbon de bois	1620	70	
FbNp-16	Newo Asiniak	bone collagen; collagène osseux	1620	75	from 25 cm level in 40 cm-thick bone bed in kill area
48LA312	Pine Bluffs	unknown; inconnu	1620	90	0.8 m depth
32ML111	Anderson Tipi Ring	charcoal; charbon de bois	1620	70	feature 174
EaMg-12	Miniota	bone collagen; collagène osseux	1620	75	clay matrix, 150 cm depth
32SI17	Ben Standing Soldier	wood; bois	1620	150	feature 28, post 138, House 5, 67-133 cm depth, Extended Middle Missouri
3BE-?	White Bluff	cultigen; cultigène	1620	70	
23MN796	Cave	unknown; inconnu	1620	90	

47VE512	Zoots	charcoal; charbon de bois	1620	70	feature eroded from creek bank containing flakes and mussel shell
47CR100	Mill Coulee	charcoal; charbon de bois	1620	70	feature 4, immediately adjacent to a large clamshell pit, feature 3, 5 cm below plow zone in square 3, Millville phase
11C383	Mortland Island	charred plant remains; restes de plantes carbonisé	1620	70	feature 201, White Hall phase
22LA542	Clear Creek	charcoal; charbon de bois	1620	90	with ceramic association that would place it between the two occupation zones at the Boyd site
33RO27	Hopewell Mound Group	charcoal; charbon de bois	1620	14 0	mound 17
BiGb-?	Boomcamp 1	human bone collagen; collagène osseux humain	1620	12 0	red ochre burial disturbed by road construction
36BU23	Lower Black's Eddy	charcoal; charbon de bois	1620	12 0	
EbDj-3	Rivière au Bouleau	charbon de bois; charcoal	1620	34 0	sur la surface de sable et recouvert d'humus, à environ 15 cm de la surface
47BT50	Altern Mound	plant remains; restes de plantes	1624	13 5	Mound 10, burial pit 1
42UN-?	Thorne Cave	charcoal; charbon de bois	1625	95	Level 5
32SI6	Porcupine Creek	bone collagen; collagène osseux	1625	80	
3PH-?	Helena Crossing	charcoal; charbon de bois	1625	75	Mound C, floor of Tomb D, Marksville variant of Hopewell culture
36WA29	Mound 3	unknown; inconnu	1625	11 0	
BfFv-__1	McIvor	freshwater mollusc shell; coquille de mollusque d'eau douce	1625	85	Midden IV
7S-D-10	Wolfe Neck	charcoal; charbon de bois	1625	16 0	with Mockley ceramics
AKPET203	HRA Fish Weir	wood; bois	1630	50	wood-stake fish weir
35CU34	Indian Sands	charcoal; charbon de bois	1630	70	
DhRt-6	Locarno Beach	charcoal; charbon de bois	1630	80	unit 3, layer 8
45FE45	Ksunku / Weatherford	charcoal; charbon de bois	1630	80	strata 2A and 3 mixed, Level 4, 30-40 cm depth, with Sinaikst period materials
45PO137	Davis Creek	charcoal; charbon de bois	1630	90	
GC-663	Little Jug	charcoal; charbon de bois	1630	90	surface of floor F-78 in pithouse F-225
5MT4215	Cascade House	charcoal; charbon de bois	1630	80	
47LC95	Tremaine	charcoal; charbon de bois	1630	50	feature 8, N140/W50, 50-60 cm depth, with no diagnostic artifacts

13CD10	Rock Run Shelter	charcoal; charbon de bois	1630	60	with wood fragments, and nuts, either walnut or hickory nut, 34-36" depth
11MO594	Carbon Dioxide	charred plant remains; restes de plantes carbonisé	1630	80	fill of Rosewood phase pit, feature 36
CiIe-___1	Sand River	charcoal; charbon de bois	1630	10 0	undisturbed hearth, feature 1, 13 cm below highway construction exposure
33WA82	Jonah's Run 1	unknown; inconnu	1630	10 5	
36HU1	Sheep Rock Shelter	charcoal; charbon de bois	1630	14 0	E20/S05, level 70 to 84 inches
18MO3	Shepard	charcoal; charbon de bois	1630	28 0	burial 33
CT22-12	Pearl Harbor	unknown; inconnu	1630	17 0	Clearview stage
CdEx-2	Hamel = Lotbinière	charbon de bois; charcoal	1630	31 0	foyer de la zone 2, sous un chemin de gravelle; la couche contenait des éclats et de la céramique du Sylvicole supérieur
DcEd-1	Rimouski	charbon de bois; charcoal	1630	90	sondage #25, niveau Ae + Bf, +/- 20 cm de la surface, appartenaient à un arbre déraciné
AKSIT244	Daxatkanada	marine shell; coquillage	1635	90	column 1, 10-20 cm depth, unit H1W, a unit excavated by de Laguna in 1950
JePw-1	Desnoyers	charcoal; charbon de bois	1635	28 0	hearth, north wall, unit 85-1M, 38 cm depth, level 2
24BW559	Schmitt Mine	charcoal; charbon de bois	1635	80	unit N, Level 13
EINk-1	Coffin	bone collagen; collagène osseux	1635	85	unknown
DdGt-9	Réal	charcoal; charbon de bois (2.0 g)	1635	15 0	pit S2/E1, level 2, zone 2, SE quad, 9 cm depth, from an occupation zone 8-15 cm thick
ME42.7	Richards	bone collagen; collagène osseux	1635	70	section 1A.1/4E, pit bottom with crumbs of pottery
AKCRG376	Big Creek Fish Weir	wood; bois	1640	50	wood-stake fish weir
DgRw-4	False Narrows	whale bone collagen; collagène osseux de baleine	1640	50	whale bone artifacts associated with Burial 52
EgPm-116	Edworthy Park	bison bone collagen; collagène osseux de bison	1640	12 0	3.6 m below the surface of a tributary alluvial fan
FcPg-33	NOVA Donalda	bison bone collagen; collagène osseux de bison	1640	90	
42WN1666	Down Wash	charcoal; charbon de bois	1640	60	stratum 6, feature 2, a slab-lined hearth, upper fill
24HL401	Kremlin	bison bone collagen; collagène osseux de bison	1640	10 0	bison kill, unit 6, stratum 1
48SW2049	Jack Morrow Creek	charcoal; charbon de bois	1640	90	south side

5RB3657	Alimony Alcove	charcoal; charbon de bois	1640	50	unit 2 floor
FaNr-2	Grandora	bone collagen; collagène osseux	1640	65	cultural layer in buried soil 61 cm below the surface near a hearth
39DW240	Grover Hand	wood; bois	1640	80	burial pit fill in Mound 2
13HR28	Hanging Valley	charcoal; charbon de bois	1640	60	20 cm above level 1
11A1020	Wet Willie	charcoal; charbon de bois	1640	70	pit feature, La Crosse phase
23PI77	Bundy	unknown; inconnu	1640	70	
11F35D	Dickson Camp	charcoal; charbon de bois	1640	90	feature 5, early Havana tradition, Morton/Caldwell phase
47DR167	Whitefish Bay View	charcoal; charbon de bois	1640	70	earliest component, with lithic debitage and floral remains (blackberry and bush honeysuckle), but no ceramics
33LI252	LIC79.1 / Hale House	unknown; inconnu	1640	90	
46SU67	Spring	unknown; inconnu	1640	70	Armstrong phase
CeEt-9	Place Royale	charbon de bois; charcoal	1640	130	foyer
16ST2	Tchefuncte	marine shell; coquillage	1643	250	site ST 2, midden A, top 6"
24RB1011	Horse Shelter	charcoal; charbon de bois	1645	120	feature 3, 33-37" depth
11GE4	Koster East	charred plant remains; restes de plantes carbonisé	1645	100	feature 1070, level f, White Hall phase
19ES256	Saugus Quarry	charcoal; charbon de bois	1645	200	
JcDe-1	Nunaingok 1	charcoal; charbon de bois	1645	90	trench 1-1977, 17 cm depth
AKKEN043	Moose River	charcoal; charbon de bois	1650	60	House pit 7, second hearth, top of gravel fill
DkSg-2B	Mission Hill	charcoal; charbon de bois	1650	70	mound III, upper level, 12-18" depth
35DO83	Umpqua-Eden	charcoal?; charbon de bois?	1650	60	
CAMad106	Dancing Cow	human bone collagen; collagène osseux humaine	1650	80	
48UT920	Bridger Gap	charcoal; charbon de bois	1650	60	hearth
5RB699	Dripping Brow Cave	unknown; inconnu	1650	60	
48LA304	Seven Mile Point	charcoal; charbon de bois	1650	60	
32SI200	Alkire Mound	wood; bois	1650	200	feature 2, a burial pit, 1.07 m depth
23PL29	Brenner-Keller Mounds	charcoal; charbon de bois	1650	125	deep in the mound, about 2 ft from the edge of the fire-burned area
13MA41	Milo's Silo	charcoal; charbon de bois	1650	80	feature 2, bottom of a roasting pit
47RI2	Price I	plant remains; restes de plantes	1650	100	feature 48, Hopewell

20BE122	Eidson	Charcoal (associated with Zea Mays cupule in feature #306)	1650	70	
33PK153	Maderia Brown	unknown; inconnu	1650	70	
33LI10	Newark Works Octagon	unknown; inconnu	1650	80	
NiHg-1	Abverdjar	walrus bone collagen; collagène osseux de morse	1650	10 0	terrace 8-10.5 m asl
33MU77	Hilltop Mounds	charcoal; charbon de bois	1650	60	Philo Group, Mound B, fire basin on the floor of the primary mound
33LA-?	Norma Grantham	unknown; inconnu	1650	60	
7K-D-21	Hughes-Willis	marine shell; coquillage	1650	11 0	with Mockley ceramics
BgDq-4	Camp	charcoal; charbon de bois	1650	70	Unit E1, Layer 1
GG-69-1	Verres Pithouse	charcoal; charbon de bois	1655	80	burned superstructure of Basketmaker II pithouse
EgNn-1	Melhagen	bison bone collagen; collagène osseux de bison	1655	11 5	cultural layer, north and west areas, unit 95s/51e, NW quad, Level 2
20AE88	Mushroom	charcoal; charbon de bois	1655	65	feature 5 with late Middle Woodland ceramics
EE:2:50	Pantano	charcoal; charbon de bois	1660	60	rock-filled hearth, probably in unit B-a, a cultural deposit up to 1.5 m thick, San Pedro stage
5MT2858	Apricot Hamlet	plant remains; restes de plantes	1660	60	pit structure 1, locus 21, surface 1, Sagehen phase
48SW5981	Lost Minkey	charcoal; charbon de bois	1660	10 0	area C, feature 4, hearth
48NA1000	Butler-Rissler	charcoal; charbon de bois	1660	90	embedded in the punctates of Plains Woodland pottery
EcNI-1	Mortlach	charred bison bone; os de bison carbonisé	1660	15 9	Zone 4B, buried A horizon, dark grey-brown fine sandy loam, 27-33" (70-82 cm)
39HN204	Lightning Spring	charcoal; charbon de bois	1660	80	stratum 1, feature 9
DiLw-12	Wapiti Sakihtaw	bone collagen; collagène osseux	1660	75	lower Levels 4-5, 15-25 cm depth
14JN309	Sutter	charcoal; charbon de bois	1660	13 0	with a burned limestone concentration in the gray clay zone
14DP3	Taylor Mound	charcoal; charbon de bois	1660	14 0	feature 9, within the cremation layer of the mound, ca. 61 cm higher than the cist, Valley phase
47ON27	Robinson	human bone collagen; collagène osseux humain	1660	13 0	late Lakes Phase material in apparent association, but may represent the age of a Nokomis Phase occupation
47WP26	Sanders 1	charcoal; charbon de bois	1660	65	house fill and house floor of House 3, a semi-subterranean house basin, 1.8-3.65 ft depth, Effigy Mound culture
12D29S	Jennison Guard	charcoal; charbon de bois	1660	70	unit F2, level 2



BbGm-__2	Serpent Mounds	charcoal; charbon de bois	1660	75	component 1, large mass of charcoal, Sqs. C12d 10-1, C12c 10-10, 60 cm depth, western end of the mound
28WA2	Harry's Farm	charcoal; charbon de bois	1660	95	large cobblestone hearth with Meadowood-like points and coil constructed pottery
15MO40	C.K. Stacy Rockshelter	unknown; inconnu	1663	50	
39BK7	Oakwood Lakes	bone apatite; apatite osseux	1665	70	summer camp on a lake shore buried in aeolian sand and silt
36WH297	Meadowcroft Rockshelter	charcoal; charbon de bois	1665	65	firepit, upper third of stratum V, feature 14
19ES-?	Wheeler	charcoal; charbon de bois	1665	17 0	
AKCRG434	Trocadero Bay	wood; bois	1670	60	wood-stake fish weir or trap
DiSc-1	Little Qualicum River	waterlogged hemlock wood; bois de ciguë imprégné d'eau	1670	11 0	Unit 13, in wet midden, 53-62 cm depth
NeRb-1	Hornaday Lake 1	pine wood; bois de pin	1670	60	near the surface, half-buried under moss
35HA1421	Indian Grade Spring	charcoal; charbon de bois	1670	80	
35BA895	Yellow Pine Seed Orchard	unknown; inconnu	1670	50	
42KA2745	Meister Knapper	charcoal; charbon de bois	1670	70	slab-lined hearth at locus B
EkNr-2	Carroll	human bone collagen; collagène osseux humain	1670	10 0	burial in aeolian sand in a pit 60 cm deep, with a large amount of red ochre
FbMi-5	Swan River	charcoal; charbon de bois	1670	70	basal peat overlying clay zone, Unit 30n2w, 62 cm depth
DjKp-__3	Meek	charcoal; charbon de bois	1670	11 5	living floor at the bottom of the Laurel stratum, the earliest occupation level on the site
23PU235	Sadie's Cave	unknown; inconnu	1670	70	stratum 1B, with 2 Rice side-notched and 1 Gary point, Maramec Spring phase
23MN221	Garrelts	unknown; inconnu	1670	10 0	
47GT157	Preston Rockshelter	charcoal; charbon de bois	1670	65	square 16N/40W, 2.2 m depth, late Middle Woodland - early Late Woodland transition levels
21.0	Bearskin Point	plant remains; restes des plantes	1670	45	parched wild rice grains from a ceramic vessel
11PM-?	Kuhne	charcoal; charbon de bois	1670	10 0	square K-939, part of a charcoal ash lens probably representing a fire of short duration
33RO40	Seip 1	charcoal?; charbon de bois	1670	55	site 4
NYSM-1163	Snell	charcoal; charbon de bois	1670	15 0	pit 12, to date early Owasco culture
19BR56	Bay Street I	charcoal; charbon de bois	1670	12 5	

DcEe-2a	Cap-à-l'Original 1, Section A	charbon de bois; charcoal	1670	10 0	puits N17, W108, niveau d'occupation b, lentille organique provenant probablement du foyer F-1 et déplacée sous l'action des eaux marines
26WP46	Smith Creek Cave	charcoal; charbon de bois	1675	90	rear of cave, 12 NE, 12-18" depth
5LR263	Lykins Valley	charcoal; charbon de bois	1675	85	west bank, rock-lined hearth B, 110 cm depth
39MH8	Sherman Park mounds	human bone; os humain	1675	18 0	base of Mound 4, a secondary burial, Loseke
33MA4	James Chase Hambleton Mound	charred wood; bois carbonisé	1675	10 5	charred board under Burials 3 and 4, feature 2
CfDI-1	Oxbow	charcoal; charbon de bois	1675	85	unit 84-4, N59.0-59.5/E161.0-162.1, 124 cm depth, Level 8a
35CS43	Bandon	charcoal; charbon de bois	1680	60	ca. 1.5 m asl
EeRl-4	Bridge River	charcoal; charbon de bois	1680	85	Housepit 64, floor C
45CH302	Stemilt Creek Village	charcoal; charbon de bois	1680	70	
GhQt-4	Saskatoon Mountain	charcoal; charbon de bois	1680	14 0	83 cm depth
45FR46H	Seed Cave	charcoal; charbon de bois	1680	80	
45ST201	Slawntehus	wood; bois	1680	50	
45ST401	Galbraith Springs	charcoal; charbon de bois	1680	19 0	
24FR760	Vestal	sediment; sédiment	1680	70	feature 30, a hearth
EgNr-2	Camp Rayner	bison bone collagen; collagène osseux de bison	1680	11 0	cultural layer 15 cm depth in multicomponent site
5LA211	Metate Cave	charcoal; charbon de bois	1680	95	Graneros? Focus, with one Scallorn point, 12 cord-marked sherds with sand temper
33HA4	Miami Fort	charred wood; bois carbonisé	1680	13 0	thin stratum of charred material below a zone of red burned wall fill, resting on the original sub-embankment surface
15BE8	McCabe Mound	bone collagen; collagène osseux	1680	10 0	
15BB16	Auvergne	charcoal; charbon de bois	1680	11 5	fragments in the fill of the central inhumation in a mound, Adena
33ER1	Esch Mound II	bone collagen?; collagène osseux	1680	90	Esch phase
36LY37	Canfield Island	unknown; inconnu	1680	12 0	
44DW1	Williamson	charcoal; charbon de bois	1680	15 0	yellowish-gray silt 18-30" (45-90 cm) depth, in a buried depression containing chert flakes
19ES196	Shattuck Farm	charcoal; charbon de bois	1680	12 5	with Levanna points

BIDn-12	Fulton Island	charcoal and charred nutshell; charbon de bois et coquille de noix	1680	70	Unit 4F1, feature 35-36, 52 cm depth
AKSIT171	Hood Bay Fort	marine shell; coquillage	1685	90	lower terrace, midden base
AKSIT329	Kanalku Coal Claim Weir	wood; bois	1690	50	wood-stake fish weir
AKPET393	McDonald Arm	wood; bois	1690	50	wood stake in southwest lead of fish trap 1
AKPET394	Island Point Trap	wood; bois	1690	60	wood-stake fish trap
DeRw-18	Somenos Creek	human bone collagen; collagène osseux humain	1690	70	burial of individual 1
DhRt-5	Point Grey	charcoal; charbon de bois	1690	120	Trench A, 40 cm depth
35CO34	Ede	charcoal; charbon de bois	1690	60	hearth
45SA85	Vine	charcoal; charbon de bois	1690	100	
45KI435	Mule Spring	charcoal; charbon de bois	1690	80	
42KA172	Alvey	cultigen; cultigène	1690	80	FS 86, from feature 31, level 2
42GA3303	Data Bank	charcoal; charbon de bois	1690	50	hearth buried in alluvium, ca. 80 cm below terrace top
24BL1152	Herdegen's Birdtail Butte	bison bone collagen; collagène osseux de bison	1690	80	Layer 13
5RB3653	Sandwash Shelter	unknown; inconnu	1690	70	
LA-4257	Power Pole	wood; bois	1690	150	structure 1, rotted construction logs
24RB1024	Engineer's Shelter	charcoal; charbon de bois	1690	60	feature 5
5LR220	Joe Wright	unknown; inconnu	1690	70	open site
41VV218	Bonfire Shelter	charcoal; charbon de bois	1690	80	Fiber layer, lower 2 of 3 superimposed hearths making up feature 29
41HF128	Sanders	charcoal; charbon de bois	1690	70	scattered charcoal, with 8 corner-notched dart points, 1 cord-marked sherd wit 8.5% bone, 8.0% sand, and 2.5% hematite temper
34MC8	Clement	wood; bois	1690	80	northwest center post of a 4-center-post house, House 1, early Fulton aspect
40DV40	First American Bank	human bone collagen; collagène osseux humain	1690	115	feature 9
33OT8	North Bass Island	charred wood; bois carbonisé	1690	60	logs from crematory crypt in clayey matrix 30-60 cm depth near center and base of mound
KdDq-19	Killiktee	charred animal remains; restes d'animaux carbonisés	1690	155	cemented sand 10 cm below base of sod, well above permafrost line
EfQu-10	Blind Bay Rock Shelter	charcoal; charbon de bois	1695	165	Zone I, base of the lowest cultural level, 4.1 m N, 1.02 m E, 1.39 m below datum

KjNb-7	Duc	charcoal; charbon de bois	1695	11 0	thick cultural level with 2 basally ground stemmed points
20SA128	Feeheley	charcoal; charbon de bois	1695	12 0	feature N, 0.9-1.1 ft depth, a fire pit with slightly baked margins adjacent to and apparently contemporaneous with burial 4
GhGk-63	Kuujuarapik	charcoal; charbon de bois	1695	85	level IIa in the mid-passage of structure 7
AKWAI095	Siraagruk	charcoal; charbon de bois	1700	85	House 8, paleosol with side blade fragments, intersected by a 19th century house pit
35JA189	Brooks	charcoal?; charbon de bois?	1700	80	below feature 5
45KP2	Old Man House	charcoal; charbon de bois	1700	14 0	ca. 3 m asl
26CH162	Hanging Rock Cave	plant remains; restes de plantes	1700	10 0	Z-twined mat associated with a carved and painted owl effigy
GIQp-6	St. Charles Oblate Church	charcoal and soil; charbon de bois et sol	1700	14 0	Level 7, 30-35 cm depth
26CH1f	Spirit Cave	plant remains; restes de plantes	1700	60	twined grass and tule mat (1-20-65)
42SA363	Lone Tree Dune	charcoal; charbon de bois	1700	80	charred beam in fill of shallow slab-lined Basketmaker II pithouse with a slab-lined entrance
24HL103	Fresno	charcoal; charbon de bois	1700	12 0	hearth, unit 8, stratum 2
24RB1145	Rockshelter East	charcoal; charbon de bois	1700	10 0	feature 4(C)E
11C135	Peisker	charcoal; charbon de bois	1700	12 0	feature 1, an in situ remnant of a hearth, part of a pre-mound habitation site beneath Mound 3
12GR29	Lattas Creek	unknown; inconnu	1700	70	Allison-LaMotte component
33RO186	Harness 28	unknown; inconnu	1700	80	refuse trough
36CH53	Field P	unknown; inconnu	1700	80	
19WR-?	Cedar Swamp 3	charcoal; charbon de bois	1700	80	one of three small associated features with a concentration of rhyolite chipping debris
BdDk-1	Bear River	charcoal; charbon de bois	1700	11 0	layer at the very bottom of the Bear River East subsite, 60 cm depth
BcDb-1	Whynacht Cove	marine shell; coquillage	1700	10 5	shell heap, lowermost of three levels
QkPa-1	McCormick Inlet	peat; tourbe	1705	21 0	below flagstones of house, presumably pre-dating house
5LR252	Spring Gulch	charcoal; charbon de bois	1705	70	feature 3, upper portion of Level 3 hearth, Franktown Focus
33SU-?	Krill Rockshelter	charcoal; charbon de bois	1705	75	prepared fireplace, ca. 77 cm depth, with bone fragments, grit-tempered sherds, bone awls, flint chip and other artifacts
36LU80	Anastazi	unknown; inconnu	1705	70	

DeRt-1	Pender Canal	human bone collagen; collagène osseux humain	1710	19 0	Layer 4, burial 85-1, 185 cm depth, SU 4
35DS34	Paulina Lake	charcoal; charbon de bois	1710	70	feature 4
10AA68	Dry Creek Rockshelter	charcoal; charbon de bois	1710	75	Level 9, a culturally rich layer of dark brown sediment with a clay figurine, Rose Spring corner-notched, Eastgate series and Elko series points
EeOk-16	Walter Moser	charcoal; charbon de bois	1710	90	fire pit 30 cm depth in second occupation layer
48SW1455	Deadman Wash	charcoal; charbon de bois	1710	20 0	component 9, 41 cm depth
5RB2829	White Rock	unknown; inconnu	1710	11 0	with no diagnostic artifacts
5MT4763	Faraway House	charcoal; charbon de bois	1710	60	
23JA110	Sohn	charcoal; charbon de bois	1710	75	
47RI81	Rehbein I	charcoal; charbon de bois	1710	35	feature 10, mound 3, part of log and bark roof over burial pit in conical mound, ca. 91 cm below top of mound
15LR24	Elk Creek Rockshelter	unknown; inconnu	1710	60	feature 1, with Turner Check Stamped pottery
7S-K-21	Wilgus	charcoal; charbon de bois	1710	70	with Mockley ceramics
RI	Block Island	charcoal; charbon de bois	1710	80	50-60 cm depth
JfEl-4	Tuvaaluk = Dia.4	charbon de bois?; charcoal?	1715	95	structure C
AKFAI035	Chugwater	charcoal; charbon de bois	1720	90	west area, square S5/W83, northeast corner, 31 cm BD
AKCRG439	Little Salt Lake Weir	wood; bois	1720	50	wood-stake fish weir
35DO182	Standley	charcoal; charbon de bois	1720	80	
45CL422	Covington	charcoal; charbon de bois	1720	50	
45KL5	Alderdale	charcoal; charbon de bois	1720	12 0	
26DO38	Spooner Lake	charcoal; charbon de bois	1720	10 0	Pit 13, 10-30 cm depth, composite sample on northeast edge of bedrock mortar area, Spooner III component, late phase of the Martis complex
26EK-?	Bonneville Estates Rockshelter	unknown; inconnu	1720	70	lower zone in a badly disturbed rockshelter
42KA2737	Square Cist Alcove	plant remains; restes de plantes	1720	14 0	basket fragment, close coiled, half rod and bundle stacked foundation with stitches intentionally split on both surfaces
42GA105	Dry Laid Heaven	cultigen; cultigène	1720	60	surface of site, disturbed context
24GV401	Stark-Lewis	charcoal; charbon de bois	1720	80	Level 4 or Layer 7
48SW994	Lost Soldier Creek	charcoal; charbon de	1720	70	feature 1

		bois			
GkLt-20	Wapisu Cairn	human bone collagen; collagène osseux humain	1720	60	cairn burial
13CT166	French Town Mound group	charcoal; charbon de bois	1720	75	charcoal stratum, 12 ft diameter, in a burial pit in Mound 8, overlying a late Hopewell vessel with plain rocker-stamping on the body, Alamakee
3PO467	McCarty	human bone collagen; collagène osseux humaine	1720	80	with copper beads in a base camp exposed by land levelling
11C-?	Ledders Mounds	charcoal; charbon de bois	1720	75	lens in feature 8d, an oval storage/refuse pit
11PK459	Bedford Mound Group	charcoal; charbon de bois	1720	12 5	charred grass or mat under burial 19 in mound Pk 4
11MO200	Truck #7	charred plant remains; restes de plantes carbonisé	1720	80	fill of Hill Lake phase pit, feature 14
12M2	Anderson Group	charcoal; charbon de bois	1720	13 0	post hole 2, protruding into primary platform in small mound in approximate center of the Great Mound
33FR-?	Seid Mound	charcoal; charbon de bois	1720	80	burned stick, Unit D, square 20L2, midden layer, 0.54 m below stake 30
33HO1	Ash Cave	cultigen; cultigène	1720	10 0	
26WA198	Shinners site A	plant remains; restes de plantes	1725	12 0	Z-twined basketry, close, plain 2-element Z-twined with stiff rod warp, 18-24" depth
AKTLM030	Fog Creek	charcoal?; charbon de bois?	1730	12 0	
AKFYU-VP	Black River bison	bison bone collagen; collagène osseux de bison	1730	60	male bison skeleton
AKSIT130	Windy Smokehouse Village	marine shell; coquillage	1730	90	column 3, 10-20 cm depth
AKXPA132	Secluded Cove Weir 2	wood; bois	1730	60	wood-stake fish weir
DhSe-2	Shoemaker Bay	charcoal; charbon de bois	1730	80	Zone C, soil containing many small round pebbles, 1.2-1.6 m depth, the base of the cultural deposit
DgRs-1	Beach Grove	charcoal; charbon de bois	1730	13 0	just under burial 17, 26'N, 3'E, 6'10" depth, in shallow burial pit
EcPI-1	Old Women's buffalo jump	charred bison bone; os de bison carbonisé	1730	65	bone, hide and hair, Layer 17, sq. B-0, 10 ft depth
48SU871	Schaffer	charcoal; charbon de bois	1730	80	feature 1
24SW651	Jarrett	bone collagen; collagène osseux	1730	11 0	unit 30N/14E, level 3
42SA5800	Murphy	charcoal; charbon de bois	1730	70	

24BH1077	Benson's Petroglyph	charcoal; charbon de bois	1730	60	burned area
5RT11	Walton Creek	charcoal; charbon de bois	1730	22 5	hearth, feature 1
5ST85	Vail Pass Camp	charred wood; bois carbonisé	1730	10 0	feature 5, a stone cluster hearth assigned to Occupation V
34BK46	Certain	charcoal; charbon de bois	1730	60	Feature C-1, a small circular hearth directly above the uppermost ison bone bed in Trench C
GkLs-1	Wapisu UNR 26	bone collagen; collagène osseux	1730	20 0	hard, block clay, Unit 90n122w, Level 2, 8-10 cm depth
13AM151	Harper's Ferry	charcoal; charbon de bois	1730	75	mound with heavy firing in a shallow pit, no burials, but very late rocker-stamped pottery, Alamakee
11JY70	Macoupin	charcoal; charbon de bois	1730	13 0	redeposited hearth residue in pit feature 215, with 6 Havana-ware sherds
ME69.6	Evergreens	unknown; inconnu	1730	60	direct association of grit-tempered, smoothed, pseudo scallop shell decorated ceramics, ceramic period 2
HcOn-1	Garden	unknown; inconnu	1735	10 5	
15LO11	Savage Cave	unknown; inconnu	1735	35	
20OT1	Spoonville	charred wood; bois carbonisé	1735	11 0	Test pit 11, feature 3, 1.5-2.5 ft depth, a trash pit with mussel shell, animal bone, charred wood, and grit-tempered smoothed sherds
33FR63	Phillips	charcoal; charbon de bois	1735	17 0	Mound II, square 30, 38 cm below the mound surface, with cremated bones, to date construction of the earth mound over an abandoned house
9FU14	Great Southwest Atlanta	charred wood; bois carbonisé	1736	60	feature 65, representing the Cartersville period
DiSo-9	Loon Cave	charcoal; charbon de bois	1740	60	component II, upper part of zone H
35LIN459	Marion Creek	charcoal; charbon de bois	1740	60	feature 3
26NY-?	Barnett	charcoal; charbon de bois	1740	12 0	
42IN40	Evans Mound	plant remains; restes de plantes	1740	90	pithouse 67-1
42EM177	Clydes Cavern	cultigen; cultigène	1740	10 0	near surface of level 2
48UT390	Austin Wash	unknown; inconnu	1740	75	
EaOd-1	Gull Lake	charred wood; bois carbonisé	1740	60	Layer 31a, Zone 3, gray soil containing whole to nearly whole bison bones, beneath a large bison skull at 9 feet (2.7 m) depth
41SW23	Deadman's Shelter	charcoal; charbon de bois	1740	40	stratum D

FkMh-5	Pas Reserve	human bone collagen; collagène osseux humain	1740	60	burial in clay
34KA10	Von Elm	unknown; inconnu	1740	60	feature 2, a pit, with mostly Scallorn points, some Gary dart points, smooth and cord-marked sherds with sand temper
13AM101	Red House Landing	charcoal; charbon de bois	1740	110	Mound 12, cremation zone, 38-40" depth in conical mound, McGregor focus, Hopewell
47DA642	Statz	unknown; inconnu	1740	80	feature 150, with Madison Ware, Effigy Mound culture
33PI44	Tick Ridge	unknown; inconnu	1740	160	
15MM6	Wright Mound	charcoal; charbon de bois	1740	140	Burial 13, feature 19, 5.7 m depth, apparently in secondary mound, Adena
19PL540	Plymouth Street	charcoal; charbon de bois	1740	60	with small quartz triangles
CAMad117	Schwabacker	human bone collagen; collagène osseux humaine	1745	100	
21KT1	Lake Bronson	charcoal; charbon de bois	1745	85	hearth, with bison bone and Laurel pottery in the vicinity
11J-?	Raymond	charcoal; charbon de bois	1745	100	fire pit at base of 6" plowzone with two Raymond cord-marked vessels
33PO-?	Gillie's Cave	unknown; inconnu	1745	130	
EiBh-59	Brador Tumulus I	charcoal and bone; charbon de bois et os	1745	130	shallow pit at the base of the mound
DcRu-136	Stchayak (Dunns Nook)	marine shell; coquillage	1750	50	near the base of shovel test #14, 33-38 cm depth
5AA1345	Oven	charcoal; charbon de bois	1750	115	pit house 1, fire basin, Los Pinos phase
39CU779	Beaver Creek Shelter	charcoal; charbon de bois	1750	60	unit 4, 100.67 m, a charcoal layer within reddish-brown, argillaceous, very fine-grained, noncalcareous quartz sandstone
39HT30	Wolf Creek Mounds	charcoal; charbon de bois	1750	80	Mound 1, with at least 12 bundle burials, ceramics with both Late Woodland and Early Plains Village attributes
13AM190	Fire Point Mound Group	charcoal; charbon de bois	1750	150	mound 33, McGregor focus
11MA-?	Steuben	human bone; os humain	1750	125	charred bone of an extended adult male burial, no. 43, on the east side of pit D on the floor of the mound
20CS6	Summerville Mounds	charcoal; charbon de bois	1750	60	southwest corner of a large fire pit, Hopewell
33FR895	Marsh Run	unknown; inconnu	1750	70	
33OT6	Libben	bone collagen; collagène osseux	1750	90	Esch phase?



18PR7	Piscataway	charcoal; charbon de bois	1750	90	unit 32-I, an oval pit 23 cm deep, 38-61 cm depth, with pottery, projectile points and blades
BiGb-___1	Marshall's Bay 1	charcoal; charbon de bois	1750	60	hearth in Sq. T5J, 30-53 cm depth
7K-D-3	Carey Farm	marine shell; coquillage	1750	90	with Mockley ceramics and miscellaneous side-notched points
ME14.18	Great Moshier Island C	unknown; inconnu	1750	110	general association of grit-tempered, smoothed, rocker dentate decorated ceramics, ceramic period 2
DjOw-1	Fletcher	bison bone collagen; collagène osseux de bison	1755	145	test 1, level 8, mottled dark grey and rust coloured sand just above a thin dark black Ah soil horizon, 168-172 cm depth
EiOj-1	Elma Thompson	bison bone collagen; collagène osseux de bison	1755	145	unit 9, adjacent to the east side of a tipi ring, 15 cm depth
LA-9301	Sheltons Shelter	charcoal; charbon de bois	1755	105	200-210/N87-E96
5WL32	Uhl	charcoal; charbon de bois	1755	95	Zone D, component 4, fill of feature 2, South Platte phase
35CLT47	Palmrose	charcoal; charbon de bois	1760	60	Unit A, level 6
EdQx-15	Monte Creek	charcoal; charbon de bois	1760	130	fill in oval storage pit, close to west wall in floor of circular house pit
26WP107	Newark Cave	charcoal; charbon de bois	1760	100	area 1, level 1
LbPf-5	Deception Point	charcoal; charbon de bois	1760	100	hearth with fired rock, in palaeosol beneath 35.6 cm aeolian sand
24RB1181	Area B	charcoal; charbon de bois	1760	70	feature 1B
DjMw-27	Bennet	bone collagen; collagène osseux	1760	140	hearth feature 21, 106 cm depth
33HA19	Turpin	charcoal; charbon de bois	1760	120	unit A, feature 8, Newtown
28HU530	Derewal	sediment; sédiment	1760	50	area 3, BC horizon, possible pit fill
BgDb-2	Melanson Dyke	charcoal; charbon de bois	1760	60	Level 4, 45-58 cm depth
41UV2	Kincaid Shelter	charcoal; charbon de bois	1765	145	Zone 5, 66-72" below datum, Edwards Plateau Aspect
DcJi-___1	Cummins	charcoal; charbon de bois	1765	200	possible hearth with debitage and tools
AKHEA001	Teklanika West	charcoal; charbon de bois	1770	70	top of tephra, either Devil or Watana tephra, within the modern A horizon
DeRu-12	Genoa Bay	charcoal; charbon de bois	1770	60	
35UM1	Umatilla	charcoal; charbon de bois	1770	80	hearth
FIQs-30	Grande Cache Lake	charcoal; charbon de bois	1770	170	unit 9, level 2, 10-20 cm depth
24CH68	Lost Terrace	charcoal; charbon de	1770	80	feature 3

		bois			
48CR1880	Universal State 1	charcoal; charbon de bois	1770	90	
46BY153	Sunshine	unknown; inconnu	1770	60	
33RO32	Mound City Group	charcoal; charbon de bois	1772	53	mound 10, feature 12A, a charred layer beneath a sub-floor cremation with a copper headdress and copper adze resting on the top of the layer
18AN279	Rose Haven	marine shell; coquillage	1775	65	feature 4, with shell tempered Mockley ware and Selby Bay projectile points
DkSf-2	Millard Creek	charcoal; charbon de bois	1780	14 5	Area C, Layer 1c, shell-sprinkled dark earth
45JE6	Bugge Spit	charcoal; charbon de bois	1780	40	
35LK2736	Carlton Village	charcoal; charbon de bois	1780	70	test pit 1, 60-65 cm depth
DjQj-1	Vallican	charcoal; charbon de bois	1780	80	hearth, 45-65 cm depth, to date earliest occupation of cultural depression
42TO	Grantsville	charcoal; charbon de bois	1780	80	general occupation layer
24SW264	Cremer	charcoal; charbon de bois	1780	11 0	cultural layer 1, a possible hearth lined with fire-cracked rock
FB9366	Pendejo Cave	plant remains; restes de plantes	1780	50	upper portion of Zone C, unit W2S1, sandal fragment
13JK20	Henry Schnoor Rockshelter	charcoal; charbon de bois	1780	60	Level 15 of test pit 2, 28-30" depth
22CO502	Dickerson	charcoal; charbon de bois	1780	10 0	with a small, well fashioned clay figurine, 50% Mulberry Creek Cordmarked, 40% Baytown Plain, and 10% Marksville Incised and Indian Bay Stamped sherds
11ST123	Smiling Dan	charcoal; charbon de bois	1780	70	trench F, base of a Middle Woodland trash deposit, gully-filling Unit III, 2.0 m depth
20MK-?	Tamlin	charcoal; charbon de bois	1780	80	feature 22, a small hearth
15McY414	Bare Bones Shelter	unknown; inconnu	1780	50	
15LE9	Little Sinking Cave	unknown; inconnu	1780	14 0	with triangle points
19SU-?	Boylston Street Fish Weir	charcoal; charbon de bois	1785	80	with Small Triangle points
AKXBD020	Village (RaEc-2)	plant remains; restes de plantes	1790	50	Level 3
AKSIT341	Portage Arm Weir	wood; bois	1790	80	wood-stake fish weir
45CA1	Waatch	charcoal; charbon de bois	1790	70	upper bracketing date for a complex of shell strata exposed on the upland side of the area
42EM625	Pint Size Shelter	charcoal; charbon de bois	1790	10 0	lower half of stratum 4, the upper component with Rose Springs corner-notched points, Emery Gray ceramics, and

					trough metates
24RB93	Iron Jaw Wilcox	charcoal; charbon de bois	1790	50	burial on the first alluvial terrace above Iron Jaw Creek, 2-30 cm depth, with no associated grave goods
47CR313b	Hunter Channel II	charcoal; charbon de bois	1790	90	feature 1, a triangular pit in plan view, exposed by erosion, 130 cm below top of river bank, containing a Lane Farm rocker-stamped rimsherd
13JK23	Keystone Rockshelter	charcoal; charbon de bois	1790	60	levels 10, 11, and 12, transitional zone between Archaic and Woodland occupation, with Archaic/Early Woodland artifacts
11P-?	Hannah	plant remains; restes de plantes	1790	20 0	Tomb 2, north side, Hopewell
47DR81	Porte des Morts	pottery encrustation; tarte de poterie	1790	10 0	unit A, mainly stratum E, charred food residue from sherds of the North Bay ceramic complex
20KT1	Norton mounds	charcoal; charbon de bois	1790	12 0	Mound H, 90 E 190, in hearth at base of cap, in ash lens, immediately above black dirt from burial pit, 5 ft south of pit
15KE4	Gibson Greeting Card	unknown; inconnu	1790	70	
33AT429	Connett Mound 4	charcoal; charbon de bois	1790	50	mound floor in unit S2.5/E0, Adena
33CO189	Union Street Village	unknown; inconnu	1790	80	
18KE-no#	Cory-Diker #1	marine shell; coquillage	1790	50	
36TI34	Cowanesque Reservoir	unknown; inconnu	1790	70	
19BN-?	Follins Pond	wood; bois	1790	12 0	possible site in former freshwater swamp now located in more intertidal zone, subject to daily tidal flooding
DaEi-8	Turcotte-Lévesque	charcoal; charbon de bois	1790	90	test pit northeast of the site, with dentate rocker-stamp decorated sherds
FgQm-59	Site 243R	charcoal; charbon de bois	1792	12 5	component IV
33MU160	Locust	unknown; inconnu	1799	11 8	
EE:12:2	Hereford Dairy Ranch	charcoal; charbon de bois	1800	14 0	erosional channel of San Pedro River with artifacts tentatively identified with Chiricahua stage of Cochise culture
42KA2751	Sunny Beaches	charcoal; charbon de bois	1800	10 0	basin hearth associated with Rose Spring corner-notched points

24FR52	Holmes Terrace	charcoal; charbon de bois	1800	10 0	Area C, Level 3
24BH251	Red Earth	charcoal; charbon de bois	1800	15 0	upper level, feature 2, a shallow oval firepit
5AH2	Michaud A	human bone collagen?; collagène osseux humaine	1800	11 0	burial 1, a flexed burial of an adult female with 2 chopping tools, 5 handstones, 1 grinding slab, and 2 hammerstones, South Platte phase
48LA1033	Sorensen Shelter	charcoal; charbon de bois	1800	70	
39DW242	Stelzer	charcoal; charbon de bois	1800	50	feature 1, a partly eroded pit exposed in a low cutbank, with no diagnostic artifacts but similar to pits associated with Woodland occupations
JgLp-1	Mountain Lake	charcoal; charbon de bois	1800	95	hill section, area 4, pit 8, levels 2 and 3
21ML1	Brower-Vanderbloom	charred wood; bois carbonisé	1800	10 0	overlying the central burial area of a conical mound that contained secondary burials on the original soil surface
11GE-?	Helton	plant remains; restes de plantes	1800	70	trash-laden pit with 85 Havana series sherds
11MG-?	Archie	charred plant remains; restes de plantes carbonisé	1800	70	feature 5, a refuse pit containing a few Massey Fabric-Impressed and Hopewell series sherds, Massey phase
11CT-?	North	charcoal; charbon de bois	1800	90	pit intrusive into feature 17, with a figurine head
11JP135	Dhom	unknown; inconnu	1800	15 0	Allison-LaMotte component
33VI315	Field Site 137	unknown; inconnu	1800	10 0	
BfFt-__2	Steward	charred wood; bois carbonisé	1800	80	embedded in clay subsoil immediately below the midden deposit
VTFR-?	Besette I	unknown; inconnu	1800	70	general association of grit-tempered, smoothed, rocker dentate decorated ceramics
19NT-?	Arthur Dean	charcoal; charbon de bois	1800	80	midden on glacial moraine, 65 cm depth
ME15.231	Rosie	charcoal; charbon de bois	1800	14 5	N6/W46, Level 7-8, with dentate rocker-stamped ceramics
ME74.8	Eddington Bend	unknown; inconnu	1800	70	direct association of grit-tempered, smoothed, rocker dentate decorated ceramics, ceramic period 2
BgDq-6	Weir	charcoal; charbon de bois	1800	90	component 2, cultural gravel living floors, clam and sea urchin lenses, midden
24HL101	Wahkpa Chu'gn	bison bone collagen; collagène osseux de bison	1805	12 0	bison kill, area C, unit 72, level 6

5LR97	Hutcheson	human bone collagen?; collagène osseux humaine	1805	10 5	burial 3, a flexed burial of an adult female, with 2 mammal bone beads, South Platte phase
EISx-3	Kisameet	charcoal; charbon de bois	1810	10 0	level 1 (FS2.10B.1), midpoint of site, 1.5 m depth
DgRr-1	Crescent Beach	charcoal; charbon de bois	1810	70	south trench, layer CN-4, collected during water-screening
DcRt-15	Cadboro Bay	charcoal; charbon de bois	1810	90	basal black stratum, scattered chunks, 2'9"-3'9"N/49'-49'10"E, 53-54" depth
35JA302	Hairpin Thistle	charcoal; charbon de bois	1810	70	
DiRa-9	Stirling Creek Bridge	sheep bone collagen; collagène osseux de mouflon	1810	90	upper of two components, unit 4B4, level 1 and unit 5A3, levels 1 and 2, 0-20 cm depth
26PE450	Sand Island	charcoal; charbon de bois	1810	70	feature 5
NcPf-12	Beulah	caribou bone collagen; collagène osseux de caribou	1810	16 0	House 4, N4/W0
42BO36	Hogup Cave	plant remains; restes de plantes	1810	80	stratum 16, square 105:90, full thickness of layer (FS 195), Shoshoni
DIOj-2	Gap Creek	charcoal; charbon de bois	1810	60	hearth exposed in cutbank without associated artifacts
47VE640	Viola Rockshelter	charcoal; charbon de bois	1810	80	test pit F, area B, a neatly stratified burned layer containing large sherds from a single vessel comparable to Prairie ware
11PK500	Napoleon Hollow	charred plant remains; restes de plantes carbonisé	1810	70	feature 42, levels 1, 2, a shallow pit containing only charcoal, in Middle Woodland structure 1, block IV
12PO20	Leonard	charcoal; charbon de bois	1810	13 5	refuse pit, 0.6 m depth, in a multi-component non-stratified village site, Late Woodland and Mississippian
33AT434	Armitage Mound	plant remains; restes de plantes	1810	45	within the primary mound
28OC60	Pennella	marine shell; coquillage	1810	50	feature 74, Burial 7
ME154.7	Blue Ribbon	charcoal; charbon de bois	1815	60	feature 1, a fire-cracked rock concentration
41VV456	Hinds Cave	charcoal; charbon de bois	1820	70	analysis unit 1, area F-3, unit 3, level III, lens I
23CA1	Wakenda Village	charcoal; charbon de bois	1820	12 5	pits on east side of road with Hopewell pottery and other artifacts
47DR-VP	Brussels Hill Cave	charcoal; charbon de bois	1820	70	28 m depth in underground fossiliferous deposits in a deep irregular fissure in Silurian dolomite
46MS112	Kirk Mound	unknown; inconnu	1820	60	Adena
33BL36	Armstrong Mills	unknown; inconnu	1820	80	
CcFd-3	Bourassa	charbon de bois;	1820	10	foyer

		charcoal		5	
AKHEA038	Little Panguingue Creek	charcoal; charbon de bois	1825	68	component II
24CB91	Shield Trap	bison bone collagen; collagène osseux de bison	1825	65	stratum I, 25 cm below datum
39DW233	Swift Bird	charcoal; charbon de bois	1825	12 0	mound 1, log in burial pit fill
33HO-?	Earl DeLong Mound	charcoal; charbon de bois	1825	70	adjacent to a cremation area and a burial with a stone earspool at the left side of the skull and a projectile point at the right side
AKSUT003		charcoal; charbon de bois	1830	60	test 1 in house depression with small sherds resembling Norton in paste type
AKKET290	Port Stewart Fish Weir	wood; bois	1830	70	wood-stake fish weir
45WH224	Desolation Quarry	charred wood; bois carbonisé	1830	60	
24BE84	Mammoth Meadow I	charcoal; charbon de bois	1830	90	hearth, level IE, 50-60 cm depth
3LA4	Shane's Mound	human bone; os humaine	1830	12 0	charred bone from central cremation, Early Ceramic, Bellevue phase, Marksville-like
21KC2	McKinstry	charcoal; charbon de bois	1830	55	mound 1B, feature 24
DeJd-__2	Pegwith	pottery encrustation; tartre de poterie	1830	60	scraped from the interior of a rim sherd found in level 3, unit 71S/64W
11CW23	Palestine	unknown; inconnu	1830	12 0	Allison-LaMotte component
33HI13	West Mound / White Mound	charcoal; charbon de bois	1830	10 0	north side of tomb 4 in a Hopewell mound
46FA7	Mount Carbon Village	charcoal; charbon de bois	1830	14 0	feature 136, an Armstrong culture pit, square 180E/170S, 30" depth
46OH16	Duvall	unknown; inconnu	1830	45	Monongahela phase
VT	KI	charcoal; charbon de bois	1830	80	features 1 and 2, two small adjacent hearths a few cm above bedrock, 18-20 cm depth, with burned bone and quartzite flakes but no tools, Laurentian?
TkAt-4	Sojourn	charcoal; charbon de bois	1830	70	dwelling feature on lower terrace
33.0	Reber Kame	unknown; inconnu	1835	70	Esch phase
CT41-22	Roaring Brook Rock Shelter	unknown; inconnu	1835	10 5	Clearview stage
24CT30	Mill Iron	charcoal; charbon de bois	1836	55	Locality 10, Unit F, 160 m west of Mill Iron, cultural horizon at the base of aeolian sand, 30 cm below the S6 surface
EISx-1	Namu	charcoal; charbon de bois	1840	80	front trench, Period 6
DfSi-5	Macoah	charcoal; charbon de	1840	80	clay at base of site

		bois			
35CU173	Hunters Island	charcoal; charbon de bois	1840	70	composite sample
35DS219	Hot Springs Boat Ramp	charcoal?; charbon de bois?	1840	50	
45SA116	McClellan Meadows	charcoal; charbon de bois	1840	50	
24GF660	Koepke	bone collagen; collagène osseux	1840	12 0	bison kill
48SW5057	Buffalo Hump	charcoal; charbon de bois	1840	12 0	component 1, feature 1
EbKx-10	Whaley Cairn	human bone collagen; collagène osseux humain	1840	60	unit 2, feature 1, individual 1
23PL51	Naylor or Neiman	charcoal; charbon de bois	1840	11 5	
47VE154	Lawrence I Rockshelter	charcoal; charbon de bois	1840	50	Square 6A, Level II, log in midden deposit with Durst stemmed points, 75.9 cm depth
47DA533	Camp Indianola	charcoal; charbon de bois	1840	60	feature 7, a Middle Woodland trash pit containing Kegonsa Stamped sherds, chert flakes and fired rock
19WR517	Millbury III	charcoal; charbon de bois	1840	12 0	about 20 m west of the cremation cluster
BgDs-10	Minister's Island	charcoal; charbon de bois	1840	60	
10CR768	Big Boulder Creek	charcoal; charbon de bois	1843	74	open site
CeDw-9	Four Falls	charcoal; charbon de bois	1845	60	brown soil, eluviated A horizon, 18 cm depth
CALas-?	Lower Willow Creek	human bone collagen; collagène osseux humaine	1850	10 0	
DIPb-2	Cranford	bison bone collagen; collagène osseux de bison	1850	80	16-24 cm depth
39DW252	Arpan Mound	wood; bois	1850	90	mound 1, timber near the edge of the burial pit, 45.8-97.6 cm depth
32SN216	Wolf	charcoal; charbon de bois	1850	80	zone of Plains Woodland or Plains Village tradition artifacts, 160-190 cm below the surface of the James River floodplain
23CL199	Yeo	charcoal; charbon de bois	1850	10 0	
46PU31	Buffalo #2	charcoal; charbon de bois	1850	12 0	feature 2, a large firepit or oven in block 50W20, 42" depth
33LE165	Brady Run Rockshelter 3	unknown; inconnu	1850	80	
33AT56	Welch	unknown; inconnu	1850	60	
BbGm-___1	Cameron's Point	unknown; inconnu	1850	55	unknown
BiGa-___3	Constance Bay 2	charcoal; charbon de bois	1855	11 0	cultural layer with ceramics and lithics

AKXSL010	Kitnepaluk	animal remains; restes d'animaux	1860	60	grave 45S
AKPET027	Sandy Beach	wood; bois	1860	90	wood stake in fish trap 4
CAHum129	Tsahpekn	charcoal; charbon de bois	1860	12 0	
26WA200	Shinners site C	plant remains; restes de plantes	1860	70	coiled basketry fragment, second lowest level of site, Area 2, 36-42" depth, Lovelock culture
OdPc-2	Joss	charcoal; charbon de bois	1860	10 0	trench 1, square 15, hearth area, 13-18 cm depth
42WN665	Harvest Scene	charcoal; charbon de bois	1860	50	associated with Barrier Canyon Style rock art
KeNi-5	Evergreen	charcoal and calcined bone; charbon de bois et os calcinés	1860	13 0	Feature 1, with many tools but no projectile points
47RI3	Price II	plant remains; restes de plantes	1860	10 0	feature 16, with a side-notched point type associated with Early Woodland and Early Hopewell pottery
33HA242	Sayler Park / Merk Mound	charcoal; charbon de bois	1860	10 0	log tomb about the middle of the mound, Adena
33CS6	Miskimens / Maxwell Mound	unknown; inconnu	1860	60	
BIGj-___3	Montgomery M2	charcoal; charbon de bois	1860	80	Sq. 14, base of red-stained soil pocket, 38-43 cm depth
JfEl-1	Cordeau = Dia-1	charbon de bois; charcoal	1860	90	maisons A et B
BIDo-4	Bull Frog	charcoal; charbon de bois	1860	70	Test 1, 55 cm depth, in silt and sand
33GR5	Pollock Works	charcoal; charbon de bois	1865	65	barrier wall, Trench B, feature 40, a large timber that was part of the fence on the stage 3 surface
MkPk-6	Sandwillow	caribou bone collagen; collagène osseux de caribou	1870	75	surface of blowout, including all organic material found at the site
5BA320	Carrizo Ranches	charcoal; charbon de bois	1870	70	hearth A, level 3, 30 cm depth
5PE648	Recon John Shelter	charcoal; charbon de bois	1870	50	cutbank locality no. 2, stratum D/F
34KA20	Harmon	unknown; inconnu	1870	70	features 1 and 2, with Williams corner-notched dart points, Cooper zoned and 7 Cowskin dentate-stamped sherds
21CA188	Felknor	pottery encrustation; tartre de poterie	1870	40	
RcHw-VP-4	Cape Storm	whale bone apatite; apatite osseux de baleine	1870	90	gravel surface of a raised beach, 3 m asl
15PI92	Martin Justice	unknown; inconnu	1870	70	feature 5
18AN141	Martins Pond	plant remains; restes de plantes	1870	12 0	zone 2, with quartz and sand tempered ware
46MO1	Cotinga Mound	unknown; inconnu	1875	75	Adena



ME15.233	Mugford	charcoal; charbon de bois	1875	95	N4/E15, Level 8, SP4, with pseudo-scallop and dentate rocker-stamped ceramics
AKPET187	Red Bay Weir	wood; bois	1880	50	wood-stake fish weir
35DO422	Island Campground	charcoal?; charbon de bois?	1880	11 0	
26CH16	Hidden Cave	wood; bois	1880	90	stratum 4
45AD104	Bafus bison	bison bone collagen; collagène osseux de bison	1880	80	
47CR186	Mill Pond	charcoal; charbon de bois	1880	80	feature 21, 90 cm depth, 2 m north of exposed Early Woodland shell midden, to date the Prairie phase, a local manifestation of Black Sand culture
15MT8	Calloway	unknown; inconnu	1880	70	Adena
46PU258	Harris	unknown; inconnu	1880	60	
DhDn-2a	Du Ruisseau, Station A	charbon de bois; charcoal	1880	11 0	inconnu
18KE126	Plummer #20	marine shell; coquillage	1885	50	
AKXMK056	Russian Anchorage	charcoal; charbon de bois	1890	70	test pit B, stratum 4, level 1, 35 cm depth
AKKOD044	Anton Larsen Bay	charcoal; charbon de bois	1890	90	hearth on house floor 1B
42WN420	Cowboy Cave	charcoal; charbon de bois	1890	65	stratum 5b?, provenience unknown
48BH18	Deer Creek	charcoal; charbon de bois	1890	70	
HiLp-1	Kame Hills	charcoal; charbon de bois	1890	90	dry sand, Unit 476, Level 3, Feature 16-73, 15 cm depth
47CR348	Dillman I	charcoal; charbon de bois	1890	80	silty loam surrounding a vessel that had collapsed upon itself, representing the Prairie phase, a local manifestation of Black Sand culture
47GT156	Brogley Rock Shelter	charcoal; charbon de bois	1890	60	Level 5, 112-117 cm depth
20BE132	Wymer	charcoal; charbon de bois	1890	70	feature 18, a very large refuse pit with a Snyders corner-notched point
KeDe-14	Willows Island 4	spruce charcoal; charbon d'épinette	1890	60	64N/8E, test pit 3 area
35JA21	Saltsgaver	charcoal?; charbon de bois?	1900	90	Camas oven
DeRv-15	Bird's Eye Cove Shelter	charcoal; charbon de bois	1900	75	loose shell midden, N7-9, W1-3, 3.10-3.30 m below Datum A, 0.45-0.65 m depth
FhQl-4	Swan Landing	charcoal; charbon de bois	1900	60	Level 3
32SN22	Jamestown Mounds	charcoal; charbon de bois	1900	70	component 1, mound B, feature 1, an ossuary
23HI216	Phillips Spring	charcoal; charbon de bois	1900	80	unit E, feature 408, a pit containing hickory nuts, black walnuts, and acorns, 2.7-2.8 m below datum

36AL285	Thorpe	charcoal; charbon de bois	1900	60	
19BR-?	Read Farm B	charcoal; charbon de bois	1900	80	
DhRt-3	Musqueam North	charcoal; charbon de bois	1910	80	
35CR29	Beaverdam Creek	unknown; inconnu	1910	80	
CAIny222	Colville Rockshelter	charcoal; charbon de bois	1910	60	
23MN751	West	unknown; inconnu	1910	40	
15MA25	Indian Fort Mountain	charcoal; charbon de bois	1910	60	feature
33ER409	Weilnau	unknown; inconnu	1910	80	Leimbach phase
PgHb-7	Arnakadlak	caribou bone collagen; collagène osseux de caribou	1910	80	old tent ring
35LK-?	Paisley Five Mile Point Cave 3	unknown; inconnu	1915	55	
24CB85	Crystalsin Cave	charcoal; charbon de bois	1915	35	cultural horizon 2
NiTs-4	Satkualuk	caribou bone collagen; collagène osseux de caribou	1920	70	deflated area of the site
DgSl-?	First Radar Beach Midden 927T	charcoal; charbon de bois	1920	60	midden 5 m asl, 185 cm depth
DeSf-10	Nitinat Lake	charcoal; charbon de bois	1920	60	north side, 115 cm above datum
35LK1	Fort Rock Cave	plant remains; restes de plantes	1920	75	twined basket removed from the cave before 1940 by an artifact collector, donated to the Lake County Museum in 1991
10BK26	Wahmuza	charcoal; charbon de bois	1920	60	rock feature 1, level A II-IV
24DW250	Seline	charcoal; charbon de bois	1920	50	bottom of the lowest bone bed
25RW28	Doyle	charcoal; charbon de bois	1920	70	refuse pit, 61-76 cm above house floor, Keith variant
48SW6926	Mayfly	soil; sol	1930	60	
33LU10	Gladieux	charcoal; charbon de bois	1930	60	unit 1, pit 1, bluff habitation site, single component, 25-31 cm below surface of cultural pit, Providence component
15JF187	SARA	unknown; inconnu	2065	60	
45ST63	Deadhorse	charcoal; charbon de bois	2070	50	
45ST23	Lions Island	charcoal; charbon de bois	2070	60	
3SB29	Sliding Slab Rock Shelter	plant remains; restes de plantes	2070	60	square N3/E4, levels 7-10, 70-100 depth, stratum 8
15LA222	Graham	unknown; inconnu	2070	50	with Johnson Plain pottery
33AT521	Boudinot 4	charcoal?; charbon de bois?	2070	60	feature 5b, a hearth yielding a flotation sample of 43.1 litres
11MS118	Holding	cultigen; cultigène	2077	70	feature 1, a structure ringed by post molds and visible within the midden as a distinct stain
45FR36	Bone-in-the-Throat	charcoal; charbon de	2080	55	House 2

		bois			
45PO422	Flying Goose Ranch	charcoal; charbon de bois	2080	60	
48BH657	Eagle Shelter	carbonized wood; bois carbonisé	2080	50	stratum 3/4, 7.2 g field collected with no diagnostic artifacts, but below a corner-notched point in stratum 3
47TR31	Schwert mound group	charcoal; charbon de bois	2080	70	various squares and levels within a Middle Woodland village deposit buried by construction of Mound 4, Hopewell
47SB202	Bachmann	charcoal; charbon de bois	2080	70	feature 16, with Early Woodland ceramics
33TU35	Kohl Mound	unknown; inconnu	2080	70	
DgRr-2	St. Mungo Cannery	charcoal; charbon de bois	2090	60	Layer C, large charcoal chunks, 6.7 m asl
26WP69	Kachina Cave	charcoal; charbon de bois	2090	80	stratum VIII, feature 4, 148-175 cm depth
42SA20804	Frog on a Stick	charcoal; charbon de bois	2090	50	hearth exposed by erosion
21CA184	Roosevelt Narrows	pottery encrustation; tarte de poterie	2090	60	
PgHb-1	Nunguvik	charcoal; charbon de bois	2090	50	square 43, House 76, 15 cm depth, 5-6 m asl
ME52.10	Norridgewock	pottery encrustation; tarte de poterie	2090	40	deposits on a Ceramic Period 2 sherd
AKSUM025	North Point	charcoal; charbon de bois	2100	70	test pit 4, 30 cm depth, younger or equivalent to age of artifacts in Unit 2 midden
AKCRG433	Thorne River	wood; bois	2100	60	wood-stake fish weir or trap
EeRl-21	Seton Lake	charcoal; charbon de bois	2100	80	Housepit 5, floor B
45BN412	Tsulim	bison bone apatite; apatite osseux de bison	2100	90	bison kill site, the first unequivocal example of this site type in the southern Plateau
42GR382	Dubinky Well	paint; peinture	2100	50	Barrier Canyon Style rock art
5GF110	Sisyphus Shelter	unknown; inconnu	2100	55	
24PH3396	Cree Crossing	charcoal; charbon de bois	2100	40	Pleistocene terrace, feature 2, a small shallow feature adjacent to a few burned and unburned bone fragments
11F35P	Pond	charred plant remains; restes de plantes carbonisé	2100	70	feature 7, a pit containing nearly complete Havana Utility and Neteler Crescent pottery vessels, Havana tradition, Fulton phase
15TR33	Lawrence	unknown; inconnu	2100	90	
ME29.9	Turner Farm	charcoal; charbon de bois	2105	75	stratum 2GF, Second Gravel Floor, E15/S75
AKPET474	Blind Slough	wood; bois	2110	60	wood stake in V-shaped wood-stake and rock alignment
DfRu-8	Helen Point	charcoal; charbon de bois	2110	10 5	Carlson's assemblage 5

10LN74	Tomcat Cave	charcoal; charbon de bois	2110	60	1997 test, 40 cm depth
42SV-?	Nawthis Village	unknown; inconnu	2110	80	
42UT104	Spotten Cave	charcoal; charbon de bois	2110	10 0	zone II
5MF435	Duffy Shelter	unknown; inconnu	2110	60	
15WA981	Plum Springs	unknown; inconnu	2110	10 5	
46HS2	Oak Mound	unknown; inconnu	2110	70	Adena
AdHk-___1	Hind	human bone; os humain	2115	10 5	Burial 15A, cremation, Unit F-11, 40-50 cm depth
35LNC76	Ahnkuti	wood; bois	2120	70	weir stake, Zone 4, feature 1
32MZ58	Mondrian Tree	charcoal; charbon de bois	2120	90	composite, zone 3, horizon 2, BU-3, F-187, F-192, 75 cm sd
11MO593	Carbon Monoxide	charred plant remains; restes de plantes carbonisé	2120	10 0	fill of Columbia complex shallow basin pit, feature 19
33GR-?	Chillicothe	unknown; inconnu	2120	60	
15BL80	Mills	unknown; inconnu	2120	60	feature 20
33PK34	Clough Mound	charcoal; charbon de bois	2120	10 0	burned house in Adena mound
33MU15	Nashport Mound	unknown; inconnu	2120	85	
AKXSL001	Hillside	walrus bone collagen; collagène osseux de morse	2130	60	House 2 floor
AKPET205	Straight Creek Weir	wood; bois	2130	60	wood-stake fish weir
CALas194	Rodriguez	charcoal; charbon de bois	2130	10 5	one of a series of circular house floors exposed during construction, 1.80 m depth, Lovelock culture
GgQq-7	Wood Bog	peat; tourbe	2130	10 0	40-45 cm depth
CALAn324	Elderberry Canyon	marine shell; coquillage	2130	50	west sidewall of knoll, 45-60 cm depth, to date cairn and central cemetery area
47LC20	Overhead	human bone collagen; collagène osseux humain	2130	80	Mound 1, feature 75, secondary burials in a submound burial pit
11S458	Florence Street	charred wood; bois carbonisé	2130	11 0	reduced and oxidized zone in Florence phase, feature 95
33LN14	Eiden	unknown; inconnu	2130	12 0	Leimbach phase
46LG162	Dingess Crossing North	unknown; inconnu	2130	50	
36BV29	Georgetown	charcoal; charbon de bois	2130	10 0	fire pit in the next to high level in the site, with late Half-Moon Cord Marked pottery
18AN18	West River	human bone; os humain	2130	10 0	reburial pit
ME	Hunneman	charcoal?; charbon de bois	2130	70	feature 5-6, Vinette II, general association of grit-tempered, smoothed, pseudo scallop shell and rocker dentate decorated ceramics, ceramic period 2

DgPl-4	Narrows	unknown; inconnu	2135	90	
33FR12	Dominion Land Company	unknown; inconnu	2135	80	
18KE127	Plummer #21	marine shell; coquillage	2135	80	
18KE43	Andelot #10	marine shell; coquillage	2135	70	bottom of deposit, with no diagnostic artifacts
45GR445	Salishan Mesa	charcoal; charbon de bois	2140	10 0	
26WA275	Mongoose Cave	plant remains; restes de plantes	2140	11 0	twined basket associated with a mummy and transitional Pyramid phase grave goods
48SU867	Harrower	unknown; inconnu	2140	10 5	feature 80
DkMe-10	Cherry Point	bone collagen; collagène osseux	2140	13 0	main area, occupation B, the middle occupation
23MI20	O'Bryan Ridge	charcoal; charbon de bois	2140	12 5	refuse pit in excavation unit 3, pit 1, level 6, 30-36" depth, with mainly Mulberry Creek Cord-Marked pottery
15FA166	Peter Village	unknown; inconnu	2140	11 0	Adena
46MS103	Niebert	unknown; inconnu	2140	80	
15LE70	Pine Crest Shelter	unknown; inconnu	2140	80	Cogswell?
BhFl-1e	Pointe-du-Buisson, Station 4	charbon de bois; charcoal	2140	10 0	puits 2E-32, au-dessus de l'argile, entre 25 et 30 cm de la surface
DILw-11	Kain	bison bone collagen; collagène osseux de bison	2145	10 5	Component 3, paleosol in alluvium, 50-80 cm depth
JcRx-2	Pointed Mountain	charcoal; charbon de bois	2150	14 0	composite, 5-10 cm below base of humus, possible forest fire residue
47MO1	Silver Creek I	charcoal; charbon de bois	2150	80	semisubterranean house basin, 1.2-2.2 ft depth, Hopewell
23SL20	Creve Coeur Lake	charred bone; os carbonisé	2150	10 0	level XI, 34-37" below datum, with Hopewell sherds and worked stone
11S-?	Cahokia	wood; bois	2150	90	
33ER85	Seaman's Fort	charcoal; charbon de bois	2150	80	lens within Earthwork 1, Leimbach phase
46BX73	OSB Two	unknown; inconnu	2150	80	
10OE1689	Givens Hot Springs	charcoal; charbon de bois	2160	70	House 4, with numerous Elko series and several Humbolt series points
DjPm-36	Welsch	bison bone collagen; collagène osseux de bison	2160	90	50-60 cm depth
42SA415	Willow Seep	charcoal; charbon de bois	2160	10 0	
32OL159	Bundlemaker	charcoal; charbon de bois	2160	60	pre-zone I
18KE25	Andelot #29	marine shell; coquillage	2160	55	
45CA22	Neah Bay	charcoal; charbon de bois	2170	60	
35DS486	Ashflow Boundary	charcoal?; charbon de	2170	80	occupation surface

		bois?			
45OK706	Ellisford	charcoal; charbon de bois	2170	70	
10OE2873	Point in Skull	bone collagen; collagène osseux	2170	90	
DkPj-27	Calderwood	bison bone collagen; collagène osseux de bison	2170	90	unit 15, 47-57 cm depth, layer 5
5WL101	Happy Hollow Rockshelter	charcoal; charbon de bois	2170	80	hearth 6, lowest of three components, Glendo phase
5BA30	McEndree Ranch	charcoal; charbon de bois	2170	65	fire feature 2, a charcoal-stained, heavily compacted house floor with a ramp entrance
41.0	San Pedro Springs	human bone; os humaine	2170	130	eroding from the surface of a terrace composed of light tan sandy silt, somewhat cemented by carbonate
15ML134	Hite	unknown; inconnu	2170	70	feature 7, with Baumer/Crab Orchard ceramics
BhDc-5	Clam Cove	charcoal; charbon de bois	2170	140	cultural layer containing vessels of ceramic period 3
33FR58	Galbreath Mound	unknown; inconnu	2175	125	
AKSIT299	Anteyuq	marine shell; coquillage	2180	80	column 3, 60-70 cm depth, in an 80 cm thick midden on a terrace at the foot of the knoll
AKPET395	Woody Island	wood; bois	2180	50	wood stake in fish trap complex 2
EdRk-8	Lehman	charcoal; charbon de bois	2180	150	zone I, Horizon A, dark-brown to black loam disturbed by plow to 25 cm depth, a composite sample (EdRk-8:898, 899)
DjRi-5	Esilao	charcoal; charbon de bois	2180	130	26'7"S/1'9"E, 42" depth, midway between M-1543 and 18th century
48SW2590	Maxon Ranch	charcoal; charbon de bois	2180	100	component III, feature 21
3LR49	Old Martin	charred bone; os carbonisé	2180	110	midden, Old Martin phase, Coles Creek culture
23CN71	Cobb Cave	charcoal; charbon de bois	2180	120	
11S435	Mund	charred plant remains; restes de plantes carbonisé	2180	90	buried soil horizon, 10-15 cm above Marion phase fracture
47WS150	Brunner-Schmidt	unknown; inconnu	2180	80	single component campsite
33PI9	Florence Mound	unknown; inconnu	2180	46	
46MS110	Newman Mound	unknown; inconnu	2180	45	Adena
33AT428	Connett Mound 3	charcoal; charbon de bois	2180	55	feature 1, intermixed with cremated bone, Adena
BIHj-___1	Killarney Bay	charcoal; charbon de bois	2180	150	narrow streak of black sand and charcoal carried to bottom of hearth by waves
BbGb-___5	McDonald Island 36H32	charcoal; charbon de bois	2180	70	hearth
28BE160	Skyline	charcoal; charbon de	2180	15	hearth, square E-5, 36" depth

	Rockshelter	bois		0	
VTFR26	Boucher	charcoal; charbon de bois	2180	13 0	feature 40
CbFd-5	Bouvais	charbon de bois; charcoal (6 g)	2180	14 0	puits N1,O3, à 23 cm de la surface, associé à une mèche de foret à talon en T
19BR40	Canoe River West	charcoal; charbon de bois	2180	13 0	
ME23.25	Poland	charcoal; charbon de bois	2180	70	presumed hearth feature
BIDq-1	Savage Island	charcoal; charbon de bois	2180	60	encrustation from inside ceramic vessel found eroding from an unexcavated site
LdLl-2	Aberdeen Lake	peat; tourbe	2183	10 5	square I15, southwest edge of House 2, 9-23 cm depth
EeRl-22	Mitchell	charcoal; charbon de bois	2185	85	Housepit 1, floor C, a thin stratum of charcoal representing a collapsed pithouse roof, 10.0-10.2S/10.0-10.13W, 90-95 cm depth
18AG119	Cresaptown	charcoal; charbon de bois	2185	75	feature 275, with limestone tempered ware and bone beads
35JE278	Suttle Lake Methodist Camp	charcoal; charbon de bois	2190	80	
24MA1144	Cherry Creek	sediment; sédiment	2190	70	Ab3 soil horizon exposed in a low terrace cutbank just above an occupation level in the Ab4 soil horizon at 65-70 cm depth
EiNs-4	Sjovold	charcoal; charbon de bois	2190	14 0	Layer X, hearth feature F10-k, buff, yellow-grey sand and silt, 152-165 cm depth
46MR7	Cresap Mound	charcoal; charbon de bois	2190	10 0	near edge of West Primary mound, 0.8 ft above the floor, Adena
18WO23	Nassawango	charcoal; charbon de bois	2190	70	feature 1, with quartz tempered ware
19MD-?	Spy Pond	charcoal; charbon de bois	2190	16 5	with Small Stem points
33MY16	Hines Mound	unknown; inconnu	2195	70	
DhRl-16	Scowlitz	charcoal; charbon de bois	2200	16 0	Mound 23, unit G17, layer F, a floor below the burial
48UT401	Porter Hollow	unknown; inconnu	2200	80	
W:10:112	Cienega Creek	charcoal; charbon de bois	2200	14 0	distributed through matrix of bed D-1, composite of 2 field sample from a 3-m area
W:13:6	McEuen Cave	plant remains; restes de plantes	2200	14 5	cord woven from yucca, from burial
24RB1005	Dead Cow	charcoal; charbon de bois	2200	80	test 9, 10 cm depth, southwest section of site, probably associated with corner-notched projectile point resembling the Pelican Lake type

32SI1	Boundary Mound	charcoal; charbon de bois	2200	12 5	Mound 3, 3/4 ft depth, to date burials and associated artifacts within the central subfloor chamber of the mound
11MN-?	Havana	wood; bois	2200	12 5	mound 9
33FR43	Toepfner Mound	charcoal; charbon de bois	2200	10 0	log tomb, feature 4, Adena
15FA11	Drake Mound	plant remains; restes de plantes	2200	12 5	burial 7, lying on the bottom of the pit, the central feature of this Adena site, bark preserved by copper salts, Adena
46MG9	Rohr Shelter	charcoal; charbon de bois	2200	60	hearth in block A3, 18" depth, in transition zone from late Archaic to early Woodland
18FR17	Nolands Ferry	charcoal; charbon de bois	2200	75	feature 18, with limestone tempered ware
AKXHP311	Croxton	charcoal; charbon de bois	2210	15 5	Area J, with end and side blades, discoids, flake-knives, leister parts, decorative art, and knife side blades
DiSc-40	Alderbury	charcoal; charbon de bois	2210	13 0	
FbNp-9	Meewasin Creek	bison bone collagen; collagène osseux de bison	2210	12 5	Level 2
20MT120	Point Arcadia	corn; maïs	2210	85	feature 1
33LI26	Rutledge Mound	unknown; inconnu	2210	80	
18KE50	Andelot #18	marine shell; coquillage	2210	70	
19BR119	Bear Swamp 2	charcoal; charbon de bois	2210	70	feature 72, a pit 150 cm below the plow zone
5JF6	Willowbrook	charcoal; charbon de bois	2215	75	Level 2, Willowbrook
5WL-?	Nelson	human bone collagen; collagène osseux humaine	2215	16 0	burial disturbed during construction of a cattle feedlot area in Lone Tree Creek near the South Platte River
NH47-22	Seabrook Marsh	charcoal; charbon de bois	2215	12 5	B-1-1, small sample from the top of cultural strata
AKSLT067	Ilruk	charcoal; charbon de bois	2220	70	dispersed in bottom of B horizon, over limestone regolith, square N0/W1, 28-29 cm below secondary datum
AKPSM050	Gallagher Flint Station	charcoal; charbon de bois	2220	50	northeast quadrant of Locality 1, not directly associated with artifacts
35LNC78	Montgomery Creek weir	wood; bois	2220	80	weir stake, feature 1
45CA16	Tongue Point	freshwater mollusc shell; coquille de mollusque d'eau douce	2220	50	
45CL319	Monument Headquarters	charcoal; charbon de bois	2220	80	
45YA-?	Naches Lithic Scatter	charcoal; charbon de bois	2220	60	



EfQt-1	Fraser Bay	charcoal; charbon de bois	2220	50	gravelly beach deposits, stratum III, immediately above sterile stratum I, unit 20, southeast quad, level 7, 60-70 cm depth, possibly a burned root
42SA20256	Squaw Butte Cove	charcoal; charbon de bois	2220	90	feature 1, a slab-lined hearth
5RB1463	Hummingbird Rockshelter	charcoal; charbon de bois	2220	90	hearth P, with no diagnostic artifacts
NiNg-3	Ballantine	charcoal and bone; charbon de bois et os	2220	14 0	trench 1, sq. 5, in midden beneath modern humus and above sterile gravel
46MS180	Henderson School	unknown; inconnu	2220	60	
KdDq-8-1	Avinga	charred animal remains; restes d'animaux carbonisés	2220	12 5	cooking rocks and a lamp sherd, 20 cm or more below sod base
KdDq-8-2	Kemp	charred animal remains; restes d'animaux carbonisés	2220	12 5	cemented sand 20 cm below base of sod in cultural midden
DbEj-11	Lavoie	charbon de bois; charcoal	2220	70	sondage 4, niveau h, couche organique de 3 à 5 cm d'épaisseur contenant une légère induration par du ferromanganèse; aucune association artéfactuelle
JIRq-1	Sibbetson Lake	charcoal; charbon de bois	2225	17 0	hearth in silt, 1-8 cm depth
ME17.11	Todd	marine shell; coquillage	2225	65	direct association of grit-tempered, smoothed, dentate and pseudo scallop shell decorated ceramics, ceramic period 1
35JA59	Stump	charcoal; charbon de bois	2230	20 0	catkins terrace, trench BC
35JE319	Heath Cliffs	soil; sol	2230	10 0	southern locus, component III?, Warm Springs phase
LA-3297	Tesuque	charcoal; charbon de bois	2230	12 5	lower of two accumulations of charcoal, ash and fire-cracked rocks interpreted as hearths, at the base of a 6 m alluvial terrace
DgMr-1	Long Creek	charcoal; charbon de bois	2230	10 0	Level 4, upper portion, top of eroded gravel surface, Grid A, 20N80W, north wall
RbJu-1	Port Refuge	seal bone collagen; collagène osseux de phoque	2230	55	Cold component, midden south of Feature 19, on and in limestone gravel, 0-10 cm depth
3.0	Banks	charcoal; charbon de bois	2230	12 0	Trench 8+13?, Unit A, Level 1, near the surface
33AT109	Daines Mound II	charcoal; charbon de bois	2230	14 0	base of mound, with the first occurrence of Adena corn
EdRa-22	Curr	charcoal; charbon de bois	2235	90	large pit feature 2-2 on east side of Housepit 1, Area 2, unit 99-100n/117-118e
6LF7	Lovers Leap	unknown; inconnu	2235	14 0	

DjSf-13	Buckley Bay	human bone collagen; collagène osseux humain	2240	50	
45LE277	Isabell Saddle	charcoal; charbon de bois	2240	60	
CAIny372	Rose Spring	charcoal; charbon de bois	2240	14 5	60-64" depth, Middle Rose Spring
24PA195	Corwin Springs	charcoal; charbon de bois	2240	13 0	A, upper layer
13PM16	Amos Ross	charcoal; charbon de bois	2240	65	12 ft below the modern surface, probably from branches of black walnut, the stumps of which were found 8 ft below
DbJm-___3	MacGillivray	charcoal; charbon de bois	2240	80	extensive pure carbon lens initially thought to be associated with a hearth but later considered possibly a product of a forest fire
15HT4	Salts Cave	human feces; fèces humaines	2240	20 0	upper cave, near survey point P-58, on dirt between breakdown blocks in a sheltered location, covered with gypsum needles
36AL2	Lock No. 3	charcoal; charbon de bois	2240	10 0	
BcHi-___7	Thede	charcoal; charbon de bois	2240	10 0	Area A, small pieces floated from fill of feature 69-12
18KE62	Arrowhead #50	marine shell; coquillage	2240	70	
DcRu-12	Maplebank	charcoal; charbon de bois	2245	70	
46WD46	Gordons Landing	unknown; inconnu	2245	21 0	Adena
45CL454	Cedarbrook	charcoal; charbon de bois	2250	60	
10OE565	Bachman	charcoal; charbon de bois	2250	70	
42GA3122	Long Canyon Dune	charcoal; charbon de bois	2250	70	hearth, with no associated diagnostics
48SW2369	Bairoil Tipi Ring	charcoal?; charbon de bois	2250	10 0	stone circle
KdLw-1	Mosquito Lake Overlook	charcoal; charbon de bois	2250	10 0	sand, northeast quadrant of site, level 2
12W1	Yankeetown	charred wood; bois carbonisé	2250	14 0	feature 18, a heavily fired silt area, 8.1 ft depth, with poorly preserved bone, waterworn pebbles, and pottery
46PU3	Leslie Mound	charred wood; bois carbonisé	2250	15 0	postmold under mound with an Armstrong Plain sherd
46KA108	Ennis Mound	unknown; inconnu	2250	45	Adena
18KE72	Bissel-Ferris #8	marine shell; coquillage	2250	75	
ME71.19	Sebasticook Fish Weir	plant remains; restes de plantes	2250	60	bark container
46KA105	Jarvis Farm	unknown; inconnu	2255	75	
AKXBD131	Broken Mammoth	charcoal; charbon de bois	2260	40	cultural zone 1A

CADNo11	Point St. George I	charcoal; charbon de bois	2260	21 0	cluster of small hearths, 42-45" depth, near bottom of feature 36
45ST95	St. Paul's Mission	charcoal; charbon de bois	2260	13 0	
35UN95	Marshmeadow	charcoal; charbon de bois	2260	80	
IfPo-1	Wentzel Lake	charcoal; charbon de bois	2260	11 0	organic lens, 60-65 cm depth
24PE30	Ayers-Frazier	bison bone collagen; collagène osseux de bison	2260	15 0	bison kill
20NE113	Jancarich	charcoal; charbon de bois	2260	14 0	feature 2, S6/W2, 2.2-3.0 ft depth
15McY325	Singer Shelter	unknown; inconnu	2260	70	with Cotaco Creek point
15MS27	Dover Mound	charcoal; charbon de bois	2260	14 0	burial 9, from over the legs of the burial, zone 2 or zone 3, stratigraphically below C-759 and C-760, Adena
15LE55	Big Turtle Shelter	unknown; inconnu	2260	12 0	Cogswell?
33SA41	Green Creek	charcoal; charbon de bois	2260	90	Leimbach phase
BkGg-10	Morrison's Island 2	birch bark; écorce de bouleau	2260	40	
BhFl-1a	Pointe-du-Buisson, Station 1	charbon de bois; charcoal	2260	12 0	Hector-Trudel, structure indéterminée dans le puits T-74 qui s'étend aussi dans le puits S-74
BdCw-1	Skora = Whites Lake	charcoal; charbon de bois	2260	10 0	burial feature no. 1, a mound-like deposit
NiNg-1	Buchanan	caribou bone collagen; collagène osseux de caribou	2265	12 0	test cut 2, moist brown humus, 8-20 cm depth
CT132-44	Woodchuck Knoll	unknown; inconnu	2265	25 5	
DiRi-1	Hope	charcoal; charbon de bois	2270	10 0	hearth 1.68 m depth, 15 cm above sterile soil
10NP143	Hatwai	charcoal; charbon de bois	2270	15 0	buried soil surface on upper Tucannon sediment, Middle Alluvium, 18-28S/32W, Tucannon phase
24PH401	Keaster	bone collagen; collagène osseux	2270	95	Layer 1
5LR1370	Bode's Draw	unknown; inconnu	2270	80	
11GE119	Cypress Land	charred plant remains; restes de plantes carbonisé	2270	70	feature 7, a Cypress phase (Black Sand) pit containing eight Liverpool cordmarked sherds
20CX-?	Eagle Island	charcoal; charbon de bois	2270	14 0	hearth, southwest corner of Level 4, unit N30/E50
NhHd-1	Alarnerk	walrus bone collagen; collagène osseux de morse	2270	10 0	terrace 19 m asl
19NF-?	Ponkapoag	charcoal; charbon de bois	2270	11 0	with Vosburg and Small Triangle points

19DK148	Lucy Vincent Beach	charcoal; charbon de bois	2270	40	feature 9, a pit feature, 138-148 cm below datum, with pottery, debitage, faunal and floral remains
KdDq-9	Nanook	whale bone collagen; collagène osseux de baleine	2270	80	square 15L10, 15 cm depth, in permafrost
ME30.21	Knox	charcoal; charbon de bois	2270	70	assemblage 1, feature 4, direct association of grit-tempered, fabric paddled interior/exterior, undecorated ceramics, ceramic period 1
DfSi-4	Ch'uumat'a	charcoal; charbon de bois	2280	60	front area, 1.95 m depth
21HB26	LaSalle Creek	pottery encrustation; tartre de poterie	2280	60	
PfJv-2	Tasealuk	charcoal and peat; charbon de bois et tourbe	2280	10 0	Feature 122, Locality C
15EL4	Conley-Greene Rockshelter	unknown; inconnu	2280	50	feature 2
18KE53	Andelot #50	marine shell; coquillage	2280	90	
ME36.57	Varney Farm	charcoal; charbon de bois	2280	60	presumed cultural feature below the plow zone reinterpreted as noncultural after the date was received
15LA45	Blankenship Rockshelter III	unknown; inconnu	2285	24 5	
33FA37	Phillip Smith Mound	unknown; inconnu	2285	10 0	
18KE76	Bramble #20	marine shell; coquillage	2285	60	bottom of deposit
34LF1	Spiro	wood; bois	2286	10 0	well preserved log from the central tomb of the main Spiro mound
EfPm-104	Bow Bottom	charcoal; charbon de bois	2290	12 0	ring 4
DjPm-116	Smyth	bison bone collagen; collagène osseux de bison	2290	10 0	Level 18, 180 cm depth
IgPc-2	Peace Point	bone collagen; collagène osseux	2290	15 5	Level 1
LA-9300-E	Armijo Shelter	charcoal; charbon de bois	2290	17 0	
15JO40	Win Rockshelter	unknown; inconnu	2290	50	
33MU-?	Merry's Cave	charcoal; charbon de bois	2290	50	layer D-3, with lowest level with pottery
BgDs-1	Pagan Point	marine shell; coquillage	2290	10 5	91-99 cm depth
DgRw-204	False Narrows Bluffs	human bone collagen; collagène osseux humain	2300	70	Feature 6
DgRr-6	Glenrose Cannery	charcoal; charbon de bois	2300	70	Component I, XU 3, 0.39 m depth

35LK2737	Big M	charcoal; charbon de bois	2300	12 0	tiny fragments associated with a small cluster of artifacts. an Elko Corner-notched point, a cut bone tube, and a biface fragment
46MR3	Welcome Mound	wood; bois	2300	10 0	central base of mound containing two burials on an unprepared floor with no identifiable artifacts
35LNC62	Yaquina Head	charcoal; charbon de bois	2310	60	fire-cracked rock
DcRu-4	Kosapsom Park	charcoal; charbon de bois	2310	60	unit W, with a small assemblage of items including a microblade
10AA17	Swan Falls	charcoal; charbon de bois	2310	70	rye grass matting that covered a small wickiup structure, with pottery and Elko series and Rose Spring points
42KA2730	Sifted Shelter	charcoal; charbon de bois	2310	90	layer of burned plant remains, perhaps a burned brush structure, largely destroyed by looters
48FR2064	Sandtrap	charcoal; charbon de bois	2310	11 0	feature T182, a possible housepit
24PH8	Johnson Bison Kill	charcoal; charbon de bois	2310	80	test pit 4
47JA21	Silver Mound Rockshelter	charcoal; charbon de bois	2310	12 5	stratum 1-4, later "stratum 2," a lens of charcoal about 96 cm above UGa-1602
15LV98	Bridge	unknown; inconnu	2310	90	unit 3, Crab Orchard
15BL59	Cumberland Ford I	unknown; inconnu	2310	10 0	feature 27
15BD306	Viney Branch Mound	unknown; inconnu	2310	65	
19DK60	Peterson	charcoal; charbon de bois	2310	10 0	stone hearth, feature 23, 24-26" depth, lower part of stratum 2A, with pottery showing transition from late Early Woodland to Middle Woodland
ME26.1	Glidden	marine shell; coquillage	2310	25 0	shell midden, near the base
AKSIT124	Killisnoo Picnicground Village	marine shell; coquillage	2320	90	near midden base exposed in a road cut
DfRu-44	Long Harbour	human bone collagen; collagène osseux humain	2320	60	burial 87-3, unit 13, layer 7
45CL48	Lady Island Village	charcoal; charbon de bois	2320	50	ca. 1 m depth, 11 m asl, Merrybell phase
CALAn-?	Los Angeles Man	marine shell; coquillage	2320	60	pit 1, with burial 20, between 40 cm of overburden and sterile rock-gravel on a knoll west of Trancas Canyon
FjPi-29	Strathcona	bison bone collagen; collagène osseux de bison	2320	14 0	Level G, 44 cm depth

42KA3384	Doughnut Alcove	plant remains; restes de plantes	2320	80	cache of three wooden tools wrapped in juniper bark mat and grass, placed in pit with no other evidence of alcove use
24CH72	"The Wall" Terrace	bone collagen; collagène osseux	2320	120	occupation layer, 2.75 m depth
42GA3138	Horse Canyon Rock Shelter	charcoal; charbon de bois	2320	60	hearth, middle of stratum 2, with no associated diagnostics
42SA21153	Turkey Pen	human remains; restes humains	2320	50	burial under a large roof spall, the pit cutting through early Archaic deposits into underlying sterile, originating from unit 5
TMM-41172	Pratt Cave	bone collagen; collagène osseux	2320	70	
14PO1	Coffey	charcoal; charbon de bois	2320	60	Horizon IV-3, with small corner-notched points
20DE-?	Summer Island	charcoal and charred bone; charbon de bois et os carbonisé	2320	140	pit containing charcoal, a poor bifacial blank, burned rock and mussel shell fragments, associated with Oneota component
20BE307	Stover	charcoal; charbon de bois	2320	70	feature 56, a deep cooking pit
15BL35	Main	unknown; inconnu	2320	70	feature 123, Candy Creek
46LG156	MacDonald Field #4	unknown; inconnu	2320	50	
BaGn-__16	Dawson Creek	charcoal; charbon de bois	2320	70	Feature 15, 0-10 cm depth
21KC3	Smith	charred wood; bois carbonisé	2325	215	Mound 3
AKXSL-?	Okvik	walrus bone collagen; collagène osseux de morse	2330	60	Okvik
FaOm-22	Bodo Archaeological Locality	Bone collagen; collagène osseux	2330	40	
42SA20301	Whirlwind Ridge	charcoal; charbon de bois	2330	90	feature 2, an unlined hearth
EcNx-2	Heron	charcoal and bone; charbon de bois et os	2330	70	sand and clay zone, units B16 and B19, 32 cm depth
15BN20	Crystal Onyx Cave	human bone collagen; collagène osseux humain	2330	90	
33WO7	Williams	human bone; os humain	2330	120	Providence component
NY	Engelbert	charcoal; charbon de bois	2330	100	pit 33
7K-E-12	Dill Farm	charcoal; charbon de bois	2330	85	with Wolfe Neck ceramics
7K-D-1	St. Jones	charcoal; charbon de bois	2330	80	pit with Adena burials
19FR326	Quinnetuk Narrows	charcoal; charbon de bois	2330	80	hearth, a fire-cracked stone-filled pit, with Adena points
CfDI-2	Augustine Mound	charcoal; charbon de bois	2330	110	backdirt, probably from the central burial pit
BgDr-2	Pickering	charcoal; charbon de	2334	11	feature 14

		bois		0	
EkNv-26	Wallace Adair	unknown; inconnu	2335	50	unknown
18KE45	Andelot #12	marine shell; coquillage	2335	70	
15BT5	Carlston Annis	plant remains; restes de plantes	2336	25 0	
CAAla328	Coyote Hills	charcoal; charbon de bois	2339	15 0	refuse midden in Pit 5A, at the base of the cultural deposits, 11 ft depth
AKKTZ079	Cape Espenberg	charcoal; charbon de bois	2340	80	paleosol 75-78 cm depth, the lowest of three layers, probably late Choris or early Norton, but no diagnostic artifacts present
AKPET206	Snoose Creek	wood; bois	2340	50	wood-stake fish weir
BcFx- 4	Adelaide 2	charcoal; charbon de bois	2340	60	Square 2, 10-15 cm depth
KkHh-1	T3 Native Point	charred bone, soil and charcoal; os carbonisé, sol, et charbon	2343	12 2	test pit 8, hearth, 30 cm depth
23JA139	Traff	charcoal; charbon de bois	2345	70	cooking hearth/workshop area with Liverpool series-like pottery
CALas7	Karlo	unknown; inconnu	2350	15 0	square 40/21, ca. 0.6-0.9 m depth, Lovelock culture
26EU843	James Creek Shelter	charcoal; charbon de bois	2350	10 0	Horizon 4, feature 46, a hearth in basal horizon 4, 102.04 cm below datum
10CL10	Bison Rockshelter	charcoal; charbon de bois	2350	12 0	layer 12, feature 12, an earth oven penetrating layers 13-15, Beaverhead phase
5GN289	Park Cone Scraper	charcoal; charbon de bois	2350	12 0	feature 1
14MH-?	Bean Hollow	charcoal; charbon de bois	2350	12 5	numerous small particles, 15- 30" level, with stemmed projectile points and long, wide polyhedral flakes
15MO10	Burchett Flats	unknown; inconnu	2350	50	
46LG160	Madison Branch	unknown; inconnu	2350	70	
36WM453	Backstrum 1	charcoal; charbon de bois	2350	50	feature 3
36LU105	Gould Island	unknown; inconnu	2350	70	
36PI13A	Faucett	charcoal; charbon de bois	2350	95	Bushkill component
VTCH46	Winooski	charcoal; charbon de bois	2350	13 5	noncultural stratum 7, Trench 4
CaDu-8	Cronkite	charcoal; charbon de bois	2350	10 0	alluvial silty sand, test trench 3, pit 7, 45 cm depth
25HK13	Massacre Canyon	freshwater mollusc shell; coquille de mollusque d'eau douce	2355	13 5	habitation site, Keith variant, also five flexed burials, three with shell disk beads, one with bird bone beads
41TV48	Pumkinseed Shelter	charcoal; charbon de bois	2355	18 5	square 100, 0.5-1.0 ft depth, Austin Focus

DjRi-3	Milliken	charcoal; charbon de bois	2360	60	zone C, separated from zone E by stream-laid gravel (zone D), 1.5-1.8 m depth, with thin ground slate knives
35GR1380	Crane Flats	charcoal; charbon de bois	2360	90	
LcPd-13	Blackfly Creek	charred spruce wood; bois d' épinette carbonisé	2360	14 0	buried soil, 4-5 cm thick, overlain by 88 cm of aeolian sand
48SW5025	Rock Springs Uplift	charcoal; charbon de bois	2360	18 0	stratum A, feature
AgHk-__16	Adder Orchard	charcoal; charbon de bois	2360	90	Unit 2, Feature 1
BfGa-__11	Wyght	charcoal; charbon de bois	2360	25 0	Sq. N11, with Woodland dentate-stamped and criss-cross trailed pottery
15WA6	Crumps Cave	unknown; inconnu	2365	95	
DkSf-1	Courtenay River Midden	charcoal; charbon de bois	2370	70	midden of shell and gravelly sand, square 1, 0.9-1.2 m depth, layer 5 and the bottom of layer 4
OjRI-3	Lagoon	muskox bone collagen; collagène osseux de boeuf musqué	2370	12 0	Area A
39CU417	Miner Rattlesnake	charcoal; charbon de bois	2370	70	hearth in stone circle #2, a basin-shaped hearth 7 cm deep in center of stone circle with highly friable large mammal bone
11PK-?	Joe Gay Mounds	charcoal; charbon de bois	2370	12 0	north of the paleochannel, 0.8-1.2 m depth, with no pottery or points and very little lithic debris
11F	Dickson Mounds	human bone; os humain	2370	10 0	burial 3, from Mound 1, unit 2, a Red Ochre Focus burial
33WO17c	Asmus 3	unknown; inconnu	2370	75	
33HO67	Dozer	unknown; inconnu	2370	85	
46MR63	Wolf Run	unknown; inconnu	2370	80	Adena
36WM601	Site 19A	charcoal; charbon de bois	2370	55	area A, feature 12/3, unit 5, 207 cm below datum
KdDq-7	Tanfield	charred animal remains; restes d'animaux carbonisés	2370	14 5	square 5R5, 15 cm depth, thin midden closer to coast than main midden
AKFAI091	Owl Ridge	charcoal; charbon de bois	2380	90	component I, unit 2
FjPp-1	Mace	bone collagen; collagène osseux	2380	10 5	basin-shaped boiling or cooking pit with a base at 60 cm depth containing yellowish-white ash between black organic layers, fish bone, and fired rock
39LM238	Good Soldier	charcoal; charbon de bois	2380	75	feature 4, an oval pit in the third soil stratum below the present surface, 2.0 ft depth, Badger phase
20ME1	Riverside	charcoal and bark; charbon de bois et écorce	2380	50	feature 37



15BE33-36	Rogers	charcoal; charbon de bois	2380	13 0	Pit 5, 6 ft depth, a bell-shaped pit 3 ft diameter, 6 ft deep, with thick easily crumbled pottery
33GA17	Bob Evans Mound	unknown; inconnu	2380	60	
BhFl-1f	Pointe-du-Buisson, Station 5	charbon de bois; charcoal	2380	13 0	sépulture no 1, entre 6 et 9 pouces de la surface
CT22-22	Pete's Dive	unknown; inconnu	2380	21 0	
19MM221	Pratt	charcoal; charbon de bois	2380	80	feature 13, a hearth 5-10 cm deep, dug from stratum 2 into stratum 3, with Vinette 1 potsherds and lobate and straight-stemmed projectile points
15ED162	Kingbird Rockshelter	unknown; inconnu	2385	70	feature 1 with Mulberry Creek Plain pottery
26PE118	Trego Hot Springs	charcoal; charbon de bois	2390	80	square 2S/14W, level 7, lower part of Unit 2, below Horizon 2d, with living floors, flake debris, a possible graver
35BA258	Twin Pines	charcoal; charbon de bois	2390	10 0	
13LA152	Gast Spring	charcoal; charbon de bois	2390	80	feature A
15CK89	Stone	charcoal?; charbon de bois	2390	50	feature cluster, a circular to oval single-post domestic structure, a chinked two-post rack, and cooking pits, Adena
15JF110	Villier	charred wood; bois carbonisé	2390	70	pit feature in the upper levels of an 80 cm thick stratum, with thick, grit/chert tempered, cord-marked pottery
46KA30	Murad Mound	charcoal; charbon de bois	2390	13 0	under Tomb 1, a shallow firepit or crematory basin, Armstrong phase
EaLf-1	Lockport	bone collagen; collagène osseux	2395	85	Bed G/H, N122/W36, contact of Beds G and H, 1.57 m depth
35BA523	Tamsnag	unknown; inconnu	2400	90	
45FR5	Miller	charcoal; charbon de bois	2400	11 0	non-housepit occupation underlying a large housepit occupation
20SA192	Schmidt	charcoal; charbon de bois	2400	37 0	stratum 5, Dustin?
15BE32	Hartman Mound	charcoal; charbon de bois	2400	15 0	Burial 7 or 8, a centrally located burial pit, Adena
15BE391	West Runway	charcoal; charbon de bois	2400	60	feature 12, a small pit with numerous flakes, surrounded by a concentration of Fayette Thick sherds
15McY322	Campbell Shelter	unknown; inconnu	2400	60	with Chesser Notched? point
BbHj-__2A	Knechtel I	charcoal; charbon de bois	2400	10 0	stratum 4, square E
18AN65	Ruf	charcoal; charbon de bois	2400	15 0	midden with shell tempered ware
28SX2	Rosenkrans	charcoal; charbon de bois	2400	60	burial 5

BgFr-___1	Ault Park	charcoal; charbon de bois	2400	11 0	Level 3, Area 1, Trench 1, Square B15 & B16
TjAo-8	Lonesome Creek II	charcoal?; charbon de bois?	2400	75	campsite on the lowest terrace, 12 m asl
EiBi-14	Presqu'île des Belles-Amours	charbon de bois; charcoal	2400	10 0	foyer
46PU7	Bills Creek Mound	unknown; inconnu	2405	65	
46PL13	Willow Island Mound	charcoal; charbon de bois	2405	65	inner mound, 0.7 ft above feature 10, Adena
ObRv-1	Crane	caribou bone collagen; collagène osseux de caribou	2410	90	unit S4/E15
45KI429	West Point	charcoal; charbon de bois	2410	60	
CASac6	Johnson	charcoal; charbon de bois	2410	20 0	trench Z, unit 8, 36-48" depth, burned post embedded in the floor of a house
26WA525	Blazing Star Cave	unknown; inconnu	2410	90	associated with a mummy and the first clearly autochthonous record of a mite, Lardoglyphus, in North America
24MA565	Steel's Pass	sediment; sédiment	2410	80	bulk sample, unit 1, 150 cm, level 6
47OZ7	Hilgen Spring Park	charcoal; charbon de bois	2410	55	hearth on floor of Mound 1, one of three conical mounds of Effigy Mound culture
15CR73	Grayson	unknown; inconnu	2412	12 4	
FdPe-4	Boss Hill	bone collagen; collagène osseux	2415	75	Locality 1, occupation 2
JcRw-8	MacLeod	charcoal; charbon de bois	2420	13 0	square 73, top of soil developed on proglacial lake silt
35MU84	Hemlock	charcoal; charbon de bois	2420	70	rock oven
EhPv-8	Vermilion Lakes Loc. A (153R)	charred wood; bois carbonisé	2420	25 0	Locality A, occupation 7, unit 153R2, suspect provenance
42KA2661	Rock Creek Alcove	human remains; restes humains	2420	10 0	partially decomposed body parts of a Basketmaker II burial
24CB1266	Buckeye	sediment; sédiment	2420	70	feature 4
5BL73	Albion Boardinghouse	charcoal; charbon de bois	2420	22 0	upper charcoal band above sterile Neoglacial loess
11J814	Little Muddy Rock Shelter	charcoal; charbon de bois	2420	70	Crab Orchard I
15OH13	Bowles	unknown; inconnu	2420	20 0	A3-7, 93-100 cm depth
15MO28	Ray Hill	unknown; inconnu	2420	13 0	
BbHj-__21	Ferris	charcoal; charbon de bois	2420	80	Feature 2, hearth in sand, flotation sample
EiBg-43a	Blanc-Sablon 43a	charbon d'épinette; spruce charcoal	2420	60	foyer
5ST98	Porcupine Peak	unknown; inconnu	2425	85	

24PR5	Powers-Yonkee	bison bone collagen; collagène osseux de bison	2425	15 5	cultural layer
DiSo-1	Hesquiatic Village	charcoal; charbon de bois	2430	20 0	component IV/V
DiRj-1	Katz	charcoal; charbon de bois	2430	90	Zone A, within the floor area of housepit 1
10GG191	Crutchfield	bone collagen; collagène osseux	2430	80	feature D1, a small house structure, probably a windbreak, with Elko series and Humbolt series points
EgPn-290	Happy Valley	bison bone collagen; collagène osseux de bison	2430	80	bison kill site
42BO-?	Beatty Springs	bison bone collagen; collagène osseux de bison	2430	90	main excavation area, ca. 18" depth
13CT18	Sny-Magill Mound Group	charcoal; charbon de bois	2430	12 5	east part of Mound 43, partly consumed pole, Ryan focus
15MO5	Big Mine Fork Rockshelter	unknown; inconnu	2430	34 0	
36FA262	Crawford-Grist	charcoal; charbon de bois	2430	55	Feature 53, a small circular basin in Trench 4
28WA15	Miller Field	charcoal; charbon de bois	2430	80	Hearth 5, feature C-F38, with net-impressed pottery nearby, and Rossville projectile points
EiBg-29	Ile au Bois	charcoal?; charbon de bois?	2430	80	unknown
NjHa-1	Kapuvik = Jens Munk	caribou bone; os de caribou	2434	14 0	terrace 24 m asl
42BO365	Remnant Cave	charcoal; charbon de bois	2435	65	top of stratum 4
EdOa-14	Cabri Burial	human bone collagen; collagène osseux humain	2435	10 5	burial in sand overlying gravel
19BN658	Slough Pond or Pagos Plot	charcoal; charbon de bois	2435	16 0	excavation unit 3, level 2, feature 1, with flakes and Vinette I pottery
AKXMH289	Landmark Gap Trail	charcoal; charbon de bois	2440	19 0	base of Level I, a thin layer of carbonaceous soil attributed to a forest fire
35LA801	Pepper Rockshelter	bone collagen; collagène osseux	2440	11 0	
EdPn-8	Boyd	charcoal; charbon de bois	2440	17 0	feature 6, just outside circle 2
5ME82	DeBeque Rockshelter	charcoal; charbon de bois	2440	12 0	
24PH2886	King	charcoal; charbon de bois	2440	10 0	XU-16, occupation 2E
5LR170	Pack Rat Rock Shelter	charcoal; charbon de bois	2440	80	feature 56
32SN246	Naze	charcoal; charbon de bois	2440	70	cultural zone 3, soil horizon 4Ab, feature 15, a charred post from a dwelling, 90 cm depth
23JA38	Bowlin Bridge	unknown; inconnu	2440	90	with a lithic tool production area
15JF549	Long	unknown; inconnu	2440	60	feature 2

18CH58	Loyola Retreat	charcoal; charbon de bois	2440	95	Level 2, with shell tempered ware
GcEl-3	Lac Delorme	charcoal; charbon de bois	2440	100	hearth 1, within a sand and bone deposit
15MF36	Cloudsplitter Rockshelter	unknown; inconnu	2441	60	
42KA265	Captains Alcove	charcoal; charbon de bois	2445	85	hearth 3, occupation B, subarea 2 of shelter
20GR33	Conservation Park	charcoal; charbon de bois	2445	95	feature P, Area I, a fire-cracked rock feature first noted 6 cm below the plow zone
33LI251	Munson Springs	charcoal; charbon de bois	2445	60	scattered minute fragments in apparent association with a fluted preform, but presumably related to the construction of an Early Woodland mound
AKAMR001	Onion Portage	unknown; inconnu	2450	85	Band 3, Level 2
AKXPA164	McCallum's Fish Weir	wood; bois	2450	60	wood-stake fish weir
35LA39	Rigdon's Horse Pasture Cave	charcoal; charbon de bois	2450	60	composite sample, stratum E
C:5:3	Stanton's Cave	feces; fèces	2450	80	Level 1
48NO204	Lance Creek	charcoal; charbon de bois	2450	75	hearth in middle portion of an alluvial fill with numerous bison remains and triangular side-notched points
23MN275	Hatten Mound	human bone collagen; collagène osseux humaine	2450	55	layer 4, with Late Archaic projectile points, sheet copper, antler flakers, bone awls, and a bone fleshing tool
15BC138	Rockmaker	unknown; inconnu	2450	60	feature 74
15BU265	Riverwood Rockshelter	charcoal; charbon de bois	2450	140	square 500 E 590, feature 3, a small pit
DbEj-13	Grandes-Bergeronnes VI	charbon de bois; charcoal	2450	100	secteur 3, coupe B/C15, cuvette charbonneuse provenant probablement d'un incendie de forêt qui aurait précédé l'occupation de la terrasse
FbNp-18	Opamihaw	bison bone collagen; collagène osseux de bison	2455	140	Level 9, the lowest of nine cultural levels
21MH5	North Twin Lake	pottery encrustation; tarte de poterie	2455	50	
ME154.14	Fluted Point	charcoal; charbon de bois	2455	60	
35GR425	Owen Spring	charcoal; charbon de bois	2460	70	
45CH433	Swiftwater Rockshelter	unknown; inconnu	2460	60	
5RB3651	Not Robertson's Hearth	charcoal; charbon de bois	2460	70	hearth in open campsite
46LG164	Dingess Crossing South	unknown; inconnu	2460	50	

7S-F-68	Two Guys	charcoal; charbon de bois	2460	13 0	excavation unit 38, level 4, feature 19, an irregular stain with charcoal
CT54-25	Timothy Stevens	charcoal?; charbon de bois	2460	60	feature 1, with six steatite vessels
19PL-?	Oak Island	charcoal; charbon de bois	2460	60	with Rossville points
AKNOA002	Cape Krusenstern	charcoal; charbon de bois	2470	15 0	House 21
45GA42?	Pataha Canyon	wood; bois	2470	60	
47DR73	Richter	charcoal; charbon de bois	2470	65	floor of House 2, a basin-shaped pit house, 55 cm depth, 30 cm below plow zone
15LE50	Cold Oak Shelter	charcoal; charbon de bois	2470	90	feature 8, an irregular basin-shaped pit originating in zone 2
33LN7	Leimbach	charcoal; charbon de bois	2470	31 0	posthole, possibly part of a circular house, 1.0-1.3 ft depth, with Early to Middle Woodland artifacts, Leimbach phase
46NI275	GAI No. 32	unknown; inconnu	2470	70	
36BV9	Ohioview	charcoal; charbon de bois	2470	12 0	feature 4, associated with Half Moon or Fayette Thick ware and a banded slate effigy of a snake
CT	Bliss	carbonized plant remains; restes de plantes carbonisé	2470	40	hearth
BkDw-5	Mud Lake Stream	charcoal; charbon de bois	2470	11 0	a small Ceramic period feature with fired rock, pottery, a scraper, and a projectile point tip
FaNp-7	Rocky Island	charcoal; charbon de bois	2475	12 0	hearth in cultural layer
39BF225	Sitting Crow	charcoal; charbon de bois	2475	15 0	feature 3, Mound 2, to date a pre-mound occupation defined by small triangular points with side-notches and a straight base, Badger phase
FdMi-1	Steeprock Lake	charcoal; charbon de bois	2480	12 0	apparent hearth, dark red sand, square 205n/10w, Level 5, 20.3-30.5 cm depth
21BL-?	Kitchie Bay	charcoal; charbon de bois	2480	90	
23BO-?	Brynjulfson Cave 1	bone collagen; collagène osseux	2480	10 0	darker of two horizontal layers, ca. 1 m above cave floor
11GE453	Weitzer	charcoal; charbon de bois	2480	70	feature 1049d-e
20SA2	Schultz	charcoal; charbon de bois	2480	15 0	upper unit 4, feature 62, 2.2 ft depth, in lower dark silts, with 2 thick interior cord-marked sherds and an Early Woodland occupation floor
20SA1	Green Point	charcoal; charbon de bois	2480	12 0	stratum VI, zone II, feature 6, ca. 6.5 ft depth, with charred vegetal materials

33GA16	Bob Evans Rockshelter	unknown; inconnu	2480	23 0	
AgHk-___4	Wyoming Rapids	charcoal; charbon de bois	2480	85	Profile 4, 90-100 cm depth
BdHi-___1	Donaldson	charcoal; charbon de bois	2480	60	refuse pit, 41-92 cm depth, below 36 cm ploughzone
EcNx-4	East Pasture	bone collagen; collagène osseux	2485	80	Level 2, western area, unit 70n/143w, dark brown sand, 10-20 cm thick
24LN1041	LAURD project	charcoal; charbon de bois	2490	80	component 2
39PN102	Sod Table	charcoal; charbon de bois	2490	70	Feature 1, shallow hearth 271 cm depth
DkLw-1	Harris 2	charcoal; charbon de bois	2490	10 0	firepit, sq. 105n10e, 44-58 cm depth
20NE106	Carrigan Mound A	charcoal; charbon de bois	2490	15 0	Mound A, hearth at base of mound, 6.3 ft depth
CIIf-___8	Wawa	charcoal; charbon de bois	2490	25 0	balk at junction of Sqs. A3, A4, B3, B4, 17.8 cm depth
9GO-?	Mahan	charred plant remains; restes de plantes carbonisés	2490	10 0	feature 25, a refuse pit with limestone and sand-tempered sherds in addition to the dominant grit-tempered ware
EeMw-26	Lebret	charcoal; charbon de bois	2495	44 0	Area B, level 6 (layer 11), unit 8s/14w, 66-72 cm depth, paleosol on grey-brown silty clay and gravel
15ED1	Mammoth Cave	charcoal; charbon de bois	2495	80	selenite mine in Flint Alley
36LR36	Boarts	charcoal; charbon de bois	2495	11 0	
18FR100	Monocacy	charcoal; charbon de bois	2495	95	zone 5, with steatite tempered ware, top of second cultural level
AKPET329	Hole-in-the-Wall Weir	wood; bois	2500	60	wood-stake fish weir
CASJo145	Thornton	human bone collagen; collagène osseux humaine	2500	20 0	
24PR-?	Upper Miles	bone collagen; collagène osseux	2500	11 0	occupation layer
21MR2	Fox Lake Village	bone collagen; collagène osseux	2500	13 0	
33SA36	Hickory Creek 2	unknown; inconnu	2500	80	Hickory Island component
NiHf-3	Freuchen	charred bone collagen; collagène osseux carbonisé	2500	11 0	terrace 18.5 m asl
DhDn-2b	Du Ruisseau, Station B	charbon de bois; charcoal	2500	80	dans la couche de sable gris, aucune association culturelle
BfDa-1	St. Croix	charcoal; charbon de bois	2500	12 0	hearth associated with vessel 18 representing ceramic period 1
DfSi-4	Ch'uumat'a	charcoal; charbon de bois	2510	11 0	back trench, N38-40/W86-88, 1.0 m depth, dark grey silty sand with crushed shell near the top of the midden
35DS486	Ashflow Boundary	charcoal?; charbon de bois?	2510	70	hearth

45KI435	Mule Spring	charcoal; charbon de bois	2510	60	
35LK536	Lake Abert	soil; sol	2510	90	humic sediment, unit 472/82, 40-50 cm depth
45CH433	Swiftwater Rockshelter	unknown; inconnu	2510	60	
5ME82	DeBeque Rockshelter	charcoal; charbon de bois	2510	12 0	
KdLw-1	Mosquito Lake Overlook	charcoal; charbon de bois	2510	60	sand, northwest quadrant of site, level 5
41VV218	Bonfire Shelter	charcoal; charbon de bois	2510	10 0	Bone Bed 3, in a hearth
11F1109	Larson	charred plant remains; restes de plantes carbonisé	2510	10 0	pit fill, recovered by flotation, with Marion Thick pottery
33WA112	King Road	unknown; inconnu	2510	27 0	
46MO1	Cotinga Mound	unknown; inconnu	2510	40	Adena
20GR33	Conservation Park	charcoal; charbon de bois	2515	14 5	feature F, Area I, a fire-cracked rock feature first noted 9 cm below the plow zone
45PO422	Flying Goose Ranch	charcoal; charbon de bois	2520	80	
26EK1667	Kittredge Creek	charcoal; charbon de bois	2520	10 0	with possible groundstone materials, 910 m N, 123 m W
EhPv-?	Banff	charcoal; charbon de bois	2520	21 0	natural layer 8, scattered in a palaeosol associated with occupation 4
10LH44	Polly's Place	charcoal; charbon de bois	2520	15 0	
EgPn-290	Happy Valley	bison bone collagen; collagène osseux de bison	2520	12 0	bison kill site
EcPn-2	Cattle Baron	caribou bone collagen; collagène osseux de caribou	2520	11 0	contact of overbank and colluvial silt on cobble gravel
23BE125	Rodgers Shelter	charcoal; charbon de bois	2520	60	horizon 2
23MN223	Collins	charcoal; charbon de bois	2520	15 0	feature 9, a basin-shaped pit, 35.6-60.9 cm depth, with a few charred nutshells, some bone, many flakes, burned clay, point fragments
13LA152	Gast Spring	charcoal; charbon de bois	2520	80	feature 7
11GE453	Weitzer	charcoal; charbon de bois	2520	70	feature 1051e
33WO7	Williams	bone collagen; collagène osseux	2520	19 0	Providence component
KcFr-3A	Ohituk	caribou bone collagen; collagène osseux de caribou	2520	80	area A, units N10/E9 and N10/E10, level 2
NY	Engelbert	charcoal; charbon de bois	2520	10 0	large oval feature, 112 cm long, 79 cm wide, 10 cm thick, in Stratum 5, with base of small biface blade, a few sherds in the surrounding

					midden
BkDm-14	Jemseg Crossing	charcoal; charbon de bois	2520	70	hearth
AKNOA002	Cape Krusenstern	wood; bois	2530	15 0	House 21
AKFAI035	Chugwater	charcoal; charbon de bois	2530	11 0	southeast area, square S3/E64, 28 cm BD, with microblades and debitage
EISx-1	Namu	human bone collagen; collagène osseux humain	2530	16 0	main trench, cairn burial B78-1, 10-70 cm depth, probably one of the most recent burials from Namu, Period 5
ObRv-1	Crane	caribou bone collagen; collagène osseux de caribou	2530	11 0	unit N1/E10
DeSf-9	Nitinat Lake	charcoal; charbon de bois	2530	60	west side, 56 cm above datum
DgRx-5	Duke Point	marine shell; coquillage	2530	12 0	Area B, component III
EfPs-1	Windle	bison bone collagen; collagène osseux de bison	2530	14 0	alluvial clay deposited by the river along its floodplain
DjPp-3	Crownsnest Dance Hall	bone collagen; collagène osseux	2530	10 0	summer camp, Level 4
EfPm-104	Bow Bottom	charcoal; charbon de bois	2530	12 0	ring 12
W:10:112	Cienega Creek	charcoal; charbon de bois	2530	12 5	hearth in bed D-1, 2.75 m depth under valley sediments, Chiracahua stage
29.0	Honest Injun Cave (GS3)	charcoal; charbon de bois	2530	20 0	large hearth in alluvium, exposed in arroyo wall ca. 2 m depth, with two sandstone slab milling stones inverted on hearth
23CN71	Cobb Cave	charcoal; charbon de bois	2530	14 0	
11PK-?	Joe Gay Mounds	charcoal; charbon de bois	2530	70	north of the paleochannel, charcoal lens, 1.4-2.1 m depth, Marion component
11PK500	Napoleon Hollow	charcoal; charbon de bois	2530	80	square 196, level 8B, 1.8-1.95 m depth, lacking diagnostic artifacts, beneath a Middle Woodland cultural stratum, block IV
11J814	Little Muddy Rock Shelter	charcoal; charbon de bois	2530	80	Crab Orchard I
33PI28	McCoy Mound	unknown; inconnu	2530	55	
15MA25	Indian Fort Mountain	charcoal; charbon de bois	2530	13 0	feature
NiHf-4	Tikilik	walrus bone collagen; collagène osseux de morse	2530	11 0	terrace 17 m asl
BfGa-_11	Wyght	charcoal; charbon de bois	2530	12 0	Sq. J16, Feature 3, with pseudo-scallop shell and incised Woodland pottery



CAAla-?	West Berkeley	charcoal; charbon de bois	2535	12 0	large shell mound, 96-108" depth
BdHi-___1	Donaldson	charcoal; charbon de bois	2535	15 0	test pit just west of Unit 8, basal yellow clay of Midden A, 61 cm depth
AKKAR031	Old Karluk	charcoal; charbon de bois	2540	60	layers 7-9, not associated with cultural materials
EeSu-5	O'Connor	charcoal; charbon de bois	2540	15 0	Component II, Area 1, unit D, with a hearth feature in the lower parts of Zone C, 150 cm depth
35JA100	Elk Creek Lake	charcoal; charbon de bois	2540	70	level 5
45ST63	Deadhorse	charcoal; charbon de bois	2540	10 0	
5RB454	Hanging Hearths Shelter	charcoal; charbon de bois	2540	60	hearth W, with no diagnostic artifacts, constructed in storage feature depression
48SW994	Lost Soldier Creek	charcoal; charbon de bois	2540	70	feature 3, lower portion
5JF52	Bradford House III	human bone collagen; collagène osseux humaine	2540	18 5	circular burial pit, 178-185 cm depth, in a multi-component site
23BO-?	Brynjulfson Cave 1	bone collagen; collagène osseux	2540	23 0	darker of two horizontal soil layers, ca. 1 m above cave floor
12DA9	Prairie Creek	wood; bois	2540	80	stratum 7, 0.6 m depth
20AE195	Elam	charcoal; charbon de bois	2540	65	feature 29, with Early Woodland ceramics
20NE111	Carrigan Mound B	charcoal; charbon de bois	2540	15 0	Mound B, top of burial pit, containing a cremation
15BL35	Main	unknown; inconnu	2540	10 0	feature 164, Candy Creek
33ER85	Seaman's Fort	unknown; inconnu	2540	90	Leimbach phase
NiHf-3	Freuchen	walrus bone collagen; collagène osseux de morse	2540	11 0	terrace 18.5 m asl
36BU23	Lower Black's Eddy	charcoal; charbon de bois	2540	15 0	
19DK60	Peterson	charcoal; charbon de bois	2540	10 5	area of refuse-filled sand, 22-24" depth, in lower part of stratum 2B, with Vinette 1 pottery
AKCIR-VP	Esther	bison bone collagen; collagène osseux de bison	2545	80	male bison skull
FgQi-9	Mary Gregg Lake	charcoal; charbon de bois	2545	40 0	
KeNi-4	Whitefish Lake	charcoal; charbon de bois	2545	16 0	Level 3, in sand, middle level, southwest end of site
DhRx-16	Departure Bay	marine shell; coquillage	2550	60	unit 4, layer D, level 11, 155-165 cm below datum, 4.25 m asl
35CLT13	Ave. Q	charcoal; charbon de bois	2550	70	testpit 1, level 5
DhRt-4	Musqueam Northeast	charcoal; charbon de bois	2550	85	shell midden, subzone A2, overlying water-logged deposits

EeRl-22	Mitchell	charcoal; charbon de bois	2550	80	Housepit 1, floor E, a well defined lens of charcoal from the living floor, 12.9S/8.7-8.95W, 1.00-1.10 cm depth, above Bridge River tephra
CAFre48	Tranquillity	human bone collagen; collagène osseux humaine	2550	60	burials 3 and 4
35HA2066	Willow Butte	charcoal; charbon de bois	2550	11 0	
DIPb-2	Cranford	charcoal; charbon de bois	2550	90	buried component below ring 321, 22-24 cm depth
EE:12:1	Lehner	charcoal; charbon de bois	2550	16 0	rock-lined hearth 110 cm depth, north bank of Lehner arroyo in sand subunit of unit o, with no associated artifacts
24FR52	Holmes Terrace	charcoal; charbon de bois	2550	17 0	Area A, Level 5
48FR424	Sand Wash	charcoal; charbon de bois	2550	90	feature T112, a possible housepit
13CT1	Turkey River Mound Group	charcoal; charbon de bois	2550	60	Burial 4, Mound 37, an extended adult who was decapitated post mortem or perimortem, associated with red ochre
11C-?	Ledders Mounds	charcoal; charbon de bois	2550	70	flotation sample containing little barley, Hordeum pusillum
20WA-VP	Kuhl mastodon	peat; tourbe	2550	25 0	slightly decomposed peat, 43 cm depth, to date the cessation of deposition in the basin
15BL59	Cumberland Ford I	unknown; inconnu	2550	10 0	feature 25
AdHc-__4	Bruce Boyd	deer bone collagen; collagène osseux de cerf	2550	70	Feature 15, burial pit, Sq 490-500, 10-15 cm below top soil
ME9.16	Great Diamond Island	marine shell; coquillage	2550	60	Area C, unit S21R0, stratum II/I, with grit-tempered, fabric padded interior/exterior, undecorated ceramics, ceramic period 2
GaEl-1	Lac Caniapiscau	charcoal; charbon de bois	2550	11 0	hearth 2, within a black lens underlying one end of the hearth
BgDq-6	Weir	peat; tourbe	2550	60	intertidal peat deposit adjacent to Weir site, 90 cm depth
33FR12	Dominion Land Company	unknown; inconnu	2555	10 0	
AKXSL001	Hillside	walrus bone collagen; collagène osseux de morse	2560	50	House 3
35BA529	Pinesnag	charcoal; charbon de bois	2560	19 0	
TMM-41172	Pratt Cave	bone apatite; apatite osseux	2560	34 0	

47TR31	Schwert mound group	charcoal; charbon de bois	2560	70	feature 1, a refuse pit or post mold 0.4 ft below buried Middle Woodland village under the fill of Mound 4, with 2 grit-tempered body sherds, Hopewell
13CD10	Rock Run Shelter	charcoal; charbon de bois	2560	60	44-46" depth
15BE391	West Runway	charcoal; charbon de bois	2560	16 0	feature 19
15FA166	Peter Village	unknown; inconnu	2560	90	with Fayette Thick pottery
28SX2	Rosenkrans	charcoal; charbon de bois	2560	12 0	cremation burial no. 9, in grave pit 90 cm deep
45CA16	Tongue Point	freshwater mollusc shell; coquille de mollusque d'eau douce	2565	70	
42GR382	Dubinky Well	organic matter; matière organique	2565	11 5	unpainted sandstone hosting Barrier Canyon Style rock art
PeHa-1	Saatut II	sea mammal bone collagen; collagène osseux de mammifères marins	2565	80	Saatut II, house, square 2
19BR40	Canoe River West	charcoal; charbon de bois	2565	15 0	
32SN121	Akata	unknown; inconnu	2566	30	
DgRr-1	Crescent Beach	charcoal; charbon de bois	2570	90	Trench 2, unit 7, level 9, assemblage 4, a hearth in the middle deposits of the trench
DgRv-3	Dionisio Point	marine shell; coquillage	2570	11 5	component IIa, test cut 6, 90 cm depth, 7 m asl
45SJ84	Reid Harbor	charcoal; charbon de bois	2570	14 0	ca. 2.5 m asl
45CH302	Stemilt Creek Village	charcoal; charbon de bois	2570	10 0	
10OE1689	Givens Hot Springs	charcoal; charbon de bois	2570	10 0	House 4, with numerous Elko series and several Humbolt series points
10TF570	Crumbling Bank	bone collagen; collagène osseux	2570	90	
24CB1266	Buckeye	sediment; sédiment	2570	60	feature C1
DhOb-3	Bracken Cairn	human bone collagen; collagène osseux humain	2570	90	burial cairn
FhNa-69	Eastcott Flat	bone collagen; collagène osseux	2570	90	cultural level 2, gold/brown sandy clay
14MO314	Morris Mound	charcoal; charbon de bois	2570	11 0	central burial complex associated with Snyder-like blades
47VE154	Lawrence I Rockshelter	charcoal; charbon de bois	2570	70	Square 5A, Level III, hearth, feature 112, with Durst stemmed points, 191.1 cm depth
15HT4	Salts Cave	human feces; fèces humaines	2570	14 0	upper cave, near survey points P-63-64, under breakdown on right side of passage
33HO65	Park	unknown; inconnu	2570	70	

36TI30	Antonio	charcoal; charbon de bois	2570	16 0	feature 31, a fire pit, with fire-cracked rocks
SdFi-VP	O- (CARD)	bone, whale rib	2570	22 0	imbedded in beach gravel and sand on top of a moraine ridge
19WR-?	Cedar Swamp 3	charcoal; charbon de bois	2570	13 0	with Small Stem points and a steatite vessel
EiBg-43a	Blanc-Sablon 43a	charbon d'épinette; spruce charcoal	2570	90	foyer
11C135	Peisker	charcoal; charbon de bois	2575	11 0	Level C, feature Q, the lowest ceramic bearing stratum, Black Sand phase or Peisker phase
11F	Dickson Mounds	freshwater mussel shell; coquille de mollusque d'eau douce	2575	13 5	house site with 90% Hummel Stamped and 2% Classic Hopewell pottery
11P-?	Hannah	freshwater mussel shell; coquille de mollusque d'eau douce	2575	14 0	Tomb 2, Hopewell
DeRt-2	Pender Canal	human bone collagen; collagène osseux humain	2580	18 0	Late Midden deposit, 23.00S/21.75W, 40 cm depth, Burial 84-34a
DiQw-2	Marron Valley	bone collagen; collagène osseux	2580	10 0	partially cemented grey and compacted sand associated with faint traces of a hearth, XU 0S/18E, west half, 42-55 cm depth
24BW559	Schmitt Mine	charcoal; charbon de bois	2580	11 0	unit XX, Level 7
48SW1455	Deadman Wash	charcoal; charbon de bois	2580	80	component 7
48FR2230	Sweetwater Rock	charcoal; charbon de bois	2580	21 0	
21CA169	Nushka Lake	charcoal; charbon de bois	2580	70	Archaic occupation layer with evidence of fall to early winter large mammal hunting
9GO-?	Mahan	charred wood; bois carbonisé	2580	10 0	feature 20, a refuse pit with grit-tempered, fabric-impressed pottery
KcFr-5	Pita	willow charcoal; charbon de saule	2580	60	hearth, structure C, a tent ring 3 x 4 m, unit S4/W22, level 2
BIGk-__15	Whitson Lake W1	charcoal; charbon de bois	2580	17 0	test hole 18-25.4 cm depth, near shale blade and pseudo-scallop sherds
26EK25	Deer Creek Cave	charcoal; charbon de bois	2585	15 0	hearth 5, 107-122 cm depth, with Elko series, Eastgate series, and small Desert side-notched points
15ED162	Kingbird Rockshelter	unknown; inconnu	2585	65	feature 1 with Rough River cordmarked pottery
20AE62	DeBoer	charcoal; charbon de bois	2585	75	feature 23
AKSUM025	North Point	charcoal; charbon de bois	2590	10 0	test pit 4, 50-60 cm depth, dating cultural occupation in unit 2 midden
24LN1041	LAURD project	charcoal; charbon de bois	2590	80	component 2

DjPm-116	Smyth	bison bone collagen; collagène osseux de bison	2590	90	Level 4, ca. 1 m depth
48LN1468	Taliaferro	charcoal; charbon de bois	2590	90	component III, feature 28
33PK153	Maderia Brown	unknown; inconnu	2590	16 0	
15PI92	Martin Justice	unknown; inconnu	2590	11 0	feature 17
19BR218	Cedar Dell Pond	charcoal; charbon de bois	2590	80	
45JE6	Bugge Spit	marine shell; coquillage	2600	60	
26PE3b	Chimney Cave	human bone collagen; collagène osseux humaine	2600	80	Whisky Lil, a cave mummy
GIQp-6	St. Charles Oblate Church	charcoal; charbon de bois	2600	90	Level 15, 135-137 cm depth
10VY67	Big Creek Cave	charcoal; charbon de bois	2600	33 0	
42BO36	Hogup Cave	plant remains; restes de plantes	2600	10 0	stratum 10, square 110L100 (FS 572)
NiNg-1	Buchanan	charcoal and caribou bone; charbon de bois et os de caribou	2600	13 0	trench 4, sq. 1, 13-18 cm depth, in hearth at east edge of square
5WL1856	Rattlesnake Shelter	charcoal; charbon de bois	2600	10 0	unit 3, the lowest cultural deposits
41LU1	Lubbock Lake	sediment extract; extrait de sédiment	2600	50	humic acid, trench 108, substratum 4/, marsh sediment
23MN275	Hatten Mound	human bone collagen; collagène osseux humaine	2600	80	layer 4, with Late Archaic projectile points, sheet copper, antler flakers, bone awls, and a bone fleshing tool
11PK751	Axedental	plant remains; restes de plantes	2600	70	feature 22-01P
15MO28	Ray Hill	unknown; inconnu	2600	23 0	
ME41.40	Kidder Point	unknown; inconnu	2600	22 0	general association of grit- tempered, smoothed, rocker dentate, rocker pseudo scallop shell decorated ceramics, ceramic period 1
CfDI-1	Oxbow	charcoal; charbon de bois	2600	60	unit 78-11, datum level A/1059-1062, associated with a projectile point, cord- wrapped decorated and plain pottery
FbNp-16	Newo Asiniak	bone collagen; collagène osseux	2605	21 0	Level 5, processing area, silty sand and gravel, 55-60 cm depth
26NY-?	Barnett	charcoal; charbon de bois	2610	90	
EE:2:35	Cienaga Creek	charcoal; charbon de bois	2610	25 0	lens 4, probably a deep cooking pit bisected by arroyo cutting, correlated with artifact-bearing stratum of San Pedro stage
48FR113	Crooks Creek	charcoal; charbon de bois	2610	10 0	feature T147, a possible housepit

24PH86	Whitewater Burial	human bone collagen; collagène osseux humain	2610	13 0	isolated multiple bundle burials of two females
KkLn-4	Migod	charcoal; charbon de bois	2610	21 0	sand, 20N/10E, Level 2c
21CA184	Roosevelt Narrows	pottery encrustation; tarte de poterie	2610	60	
33AT521	Boudinot 4	charcoal?; charbon de bois?	2610	80	feature 14, a hearth yielding a flotation sample of 44.3 litres
FgQm-59	Site 243R	charcoal; charbon de bois	2612	85	component IV
EISx-4	Windsor Cove	charcoal; charbon de bois	2620	50	core 2, 154-156 cm depth, basal cultural deposit, 135 cm asl
DfRu-3	Harbour House	marine shell; coquillage	2620	60	Zone B, unit 2, layer 13, level 9, 80-90 cm depth, expected to provide an upper bracketing date for the highest intact cultural stratum
35JE278	Suttle Lake Methodist Camp	charcoal; charbon de bois	2620	10 0	
CALas194	Rodriguez	charcoal; charbon de bois	2620	80	charred limb used as construction element in a burned house near the base of an open campsite, stratigraphically below Elko Eared points
15BN20	Crystal Onyx Cave	human bone collagen; collagène osseux humain	2620	70	
AgHc-___5	Innes	charcoal; charbon de bois	2620	80	Feature 3
5ST98	Porcupine Peak	unknown; inconnu	2625	60	
CfDI-2	Augustine Mound	charcoal; charbon de bois	2625	50	top of burial pit, Feature 12 (CfDI-2: 3099c), associated with grave contents
KdDq-7	Tanfield	charred animal remains; restes d'animaux carbonisés	2628	60	encrusted cooking rock, 20 cm below sod base, 35 cm depth
DjSp-1	Yuquot	charcoal; charbon de bois	2630	11 0	Zone II, stratum IIa, heavy damp black organic soil, rocks, decomposed bone, ca. 7 m asl
DIsh-6	Oyster River	charcoal; charbon de bois	2630	50	hearth
DiSe-7	Deep Bay	charcoal; charbon de bois	2630	10 0	Stratum T, coarse yellow- brown sand, 160-170 cm depth
DcRt-10	Willows Beach	charcoal; charbon de bois	2630	95	lower part of the cultural deposit
DhRq-21	Pitt River	charcoal; charbon de bois	2630	80	Logodi deposit, Block BN, unit 16, feature 69
45WH1	Cherry Point	charcoal; charbon de bois	2630	24 0	shallow firepit at base of short trench, 160-175 cm depth, ca. 3 m asl, on a wave-cut terrace
42BO268	Swallow Shelter	charcoal; charbon de bois	2630	11 0	within 1-2" of the bottom of stratum 5, a discrete concentration of charcoal

25SF1	Signal Butte	charcoal; charbon de bois	2630	10 0	middle cultural horizon, level II, Glendo phase
21NR9	Canning	charcoal; charbon de bois	2630	80	above feature 5, a thick layer of charcoal resting on bison bone and rock
IfKs-1	Thyazzi	charcoal; charbon de bois	2630	90	hearth, Feature 2
16OR6	Big Oak Island	marine shell; coquillage	2630	10 0	with Tchefuncte pottery at a depth of 4.5 ft below the mound surface in the south bank of test trench 8
40MU261	Cheek Bend Cave	charcoal; charbon de bois	2630	25 5	Stratum 7
33DL14	Arthur James mound	charcoal; charbon de bois	2630	11 5	post hole in squares 20L4 and 20L5, from a house pattern typical of Early Adena architecture
18KE-no#	Cory-Diker #1	marine shell; coquillage	2630	75	
18KE44	Andelot #11	marine shell; coquillage	2635	65	
DjRi-5	Esilao	charcoal; charbon de bois	2640	14 0	34'-34'3"S/ 17'-17'6"W, 35" depth, just below massive gravel slide, 4.5' above M-1544, 3' above GSC-456, hearth with well made adze blades
45ST65	China Bend or Nshitkwu	charcoal; charbon de bois	2640	11 0	
10BT62	Saw Mill Canyon	soil; sol	2640	14 0	dark brown soil, test pit 8, 25-30 cm depth
42KA2546	Bechan Cave	charcoal; charbon de bois	2640	50	auger test, uncertain context and association, assigned to cultural period 3
24HL946	Laulo	sediment; sédiment	2640	90	feature B6, analytic unit 3
42SA20301	Whirlwind Ridge	charcoal; charbon de bois	2640	10 0	feature 1, an unlined hearth
24ML564	Stark	bone collagen; collagène osseux	2640	90	bison kill, area B
48SW6384	Pinnacles 7	charcoal?; charbon de bois	2640	60	feature 1
21OT2	Morrison Mound	charred wood; bois carbonisé	2640	20 0	mound 3, log over the central burial pit beneath a conical mound, Malmo focus
AIDf-18	Port Mouton	charcoal; charbon de bois	2640	70	near bottom of site, 66 cm depth, Upper Bear River level
AKKAR039		charcoal; charbon de bois	2650	60	test pit
NbTj-8	Verna Mae Firth	charcoal; charbon de bois	2650	80	hearth fill in I,J-12,13, 10 cm depth
35LA907	South Fork Rockshelter	charcoal; charbon de bois	2650	17 0	hearth
45OK11	Narrows	charcoal; charbon de bois	2650	12 0	Hudnut phase
5GN289	Park Cone Scraper	charcoal; charbon de bois	2650	18 0	features 3 and 4
DkMq-2	Moose Mountain Medicine Wheel	charcoal; charbon de bois	2650	24 5	five small samples from various contexts within the

					medicine wheel
41HY29	Greenhaw	unknown; inconnu	2650	80	
15MS27	Dover Mound	charcoal; charbon de bois	2650	17 0	large heavily burned area near the top of the mound, zone 3, Adena
AcHk-__3	Morpeth South	charcoal; charbon de bois	2650	50	pit feature 1
36WH297	Meadowcroft Rockshelter	charcoal; charbon de bois	2655	12 0	firepit, upper third of stratum IV, feature 16
18KE12	Bramble #1	marine shell; coquillage	2655	75	
45WK51	Burkhalter	charcoal; charbon de bois	2660	13 0	ca. 10 m asl
42TO13	Danger Cave	unknown; inconnu	2660	90	stratum 31, cultural level 5
48SW3362	North Cutthroat Draw	carbonized wood; bois carbonisé	2660	50	hearth
5ME635	Koch	charcoal; charbon de bois	2660	13 0	
25KX204	Tramp Deep	charcoal; charbon de bois	2660	11 0	Level 2, 4.5-5.0 ft depth, refuse sandwiched between thick strata of dark brown humus, Loseke
16WC2	Poverty Point	charcoal; charbon de bois	2660	80	extensive layer exposed beneath the southern portion of mound B, antedating the construction of this part of the mound
11GE482	Apple Creek	charcoal; charbon de bois	2660	13 0	charred mass at the base of a pit in unit 179d, located in the floor of a house, White Hall phase
15ML134	Hite	unknown; inconnu	2660	10 0	feature 9
BIDn-12	Fulton Island	charcoal; charbon de bois	2660	90	fine brown sand, Test cut 13, 0-50N/125-145E, 100-103 cm depth
EeMw-26	Lebret	bison bone collagen; collagène osseux de bison	2665	29 0	Area B, level 7 (layer 13), paleosol on sand and gravel shoreline deposit
18KE66	Arundel #21	marine shell; coquillage	2665	70	
KkHh-1	T3 Native Point	charred bone; os carbonisé	2668	13 0	trench A, square 1, level 2, 15 cm depth
AKXSL-?	Okvik	walrus bone collagen; collagène osseux de morse	2670	60	Okvik
35LNC62	Yaquina Head	charcoal; charbon de bois	2670	70	upper shell
EdRk-7	Lochnore Creek	charred wood; bois carbonisé	2670	13 0	log, Zone Ic, bottom of housepit 2, 1.85-2.00 m depth
33CL17	Berry Hill	unknown; inconnu	2670	90	
33LI252	LIC79.1 / Hale House	unknown; inconnu	2670	70	
25SX101	Cedar Canyon	charcoal; charbon de bois	2675	28 0	hearth in a paleosol at the base of Terrace 1 fill, Glendo phase
BaGn-__16	Dawson Creek	charcoal; charbon de bois	2675	70	Feature 14, 10-20 cm depth



AKXBD020	Village (RaEc-2)	charcoal; charbon de bois	2680	15 0	Level 3, 11 cm depth, square N35/E35
48SW998	Abel Creek	charcoal; charbon de bois	2680	70	unit 1, feature 4
24PR5	Powers-Yonkee	charcoal; charbon de bois	2680	55	composite sample, cultural layer
5WL101	Happy Hollow Rockshelter	charcoal; charbon de bois	2680	90	lowest of three components, Glendo phase
5DA265	Bayou Gulch	charcoal; charbon de bois	2680	14 5	excavation unit 140N/60W, 60-80 cm depth
23HI172	Blackwell Cave	charcoal; charbon de bois	2680	15 0	feature 10, a small hearth
BgDq-24	Rum Beach	peat; tourbe	2680	80	salt marsh adjacent to the Rum Beach site, 90 cm depth
AKTLM030	Fog Creek	charcoal?; charbon de bois?	2690	70	
35DO212	Times Square Rockshelter	charcoal?; charbon de bois?	2690	60	ash lens
26CH15	Humboldt Lakebed	charcoal; charbon de bois	2690	12 5	charcoal and charred basketry from a cremation and surface pit in an open Lovelock culture site
23HE151	Thurman	charcoal; charbon de bois	2690	20 0	Zone II, according to Faunmap, level 4, with Late Archaic lithic material
20ME1	Riverside	charcoal; charbon de bois	2690	60	feature 41
33CS93	Meek I	unknown; inconnu	2690	90	
33TU40	Kline Mound	unknown; inconnu	2690	18 0	
36BV9	Ohioview	charcoal; charbon de bois	2690	70	feature 3, with two Forest Notched points
7NC-E-41	Delaware Park	charcoal; charbon de bois	2690	80	with stemmed point
EiBg-43	Baie de Blanc-Sablon	charbon de bois; charcoal	2690	60	la plus récente occupation, la station ouest
DiRj-1	Katz	charcoal; charbon de bois	2695	90	lowest cultural layer of zone B
5MN40	Shavano Spring	charcoal; charbon de bois	2695	18 0	
33RO27	Hopewell Mound Group	marine shell; coquillage	2695	21 0	mound 25
5JF463	Dutch Creek	charcoal; charbon de bois	2700	90	feature 2, an unlined basin-shaped hearth, 108-120 cm depth, with a corner-notched dart point
33.0	Reber Kame	unknown; inconnu	2700	55	Esch phase
33WY-?	Thomas Reber Kame	unknown; inconnu	2700	55	
36PI13A	Faucett	charcoal; charbon de bois	2700	10 0	Meadowood component
CT105-33	Lieutenant River or Talcott	charcoal?; charbon de bois	2700	60	with a Susquehanna Broad/Wayland notched point, an Orient Fishtail point, a soapstone vessel, and interior cord-marked pottery

CT	Bliss	marine shell; coquillage	2700	11 5	feature 1, earth wholly enclosed in glacial sand and gravel, 80 cm below mean sea level, to date the earliest occupation
CeEu-12	Lambert	charbon de bois; charcoal	2700	80	structure 3, située immédiatement au sud de la concentration de lames
DcEe-3a	Cap-à-l'Original, Station A	charbon de bois; charcoal	2700	12 0	niveau 5, couche culturelle 2, sol noir organique contenant du charbon
15CR73	Grayson	unknown; inconnu	2702	26 0	
35CU123	Bravo Creek	charcoal; charbon de bois	2710	60	
26WA3051	John Dryden Cave	human bone collagen; collagène osseux humaine	2710	80	burial B
DkPj-1	Head-Smashed-In Buffalo Jump	charcoal; charbon de bois	2710	15 0	area 2, unit 22, feature 1, a small pit of unknown function containing bison bone and a McKean point
34NW6	Lawrence	charcoal; charbon de bois	2710	70	feature 4 fill, 0.92-1.07 m below datum, base of black, indurated midden
47GT157	Preston Rockshelter	charcoal; charbon de bois	2710	65	hearth, feature 23, square 20N/32W, 2.6 m depth, preceramic levels with Durst projectile points
15GP14	Hansen	charcoal?; charbon de bois	2710	60	feature 102, Later Newtown component
QkHn-37	Tote Road	charcoal; charbon de bois	2710	60	driftwood, feature 1, a rectangular tent ring, 2-4 m asl
15BL80	Mills	unknown; inconnu	2710	60	feature 36, Watts Bar
33SA-?	Hereford Hill	bone collagen; collagène osseux	2710	60	
46PU197	Blue Three	unknown; inconnu	2710	70	
SgFm-6	Ridge	charred bone collagen; collagène osseux carbonisé	2710	60	several small concentrations within dwelling feature 2, 20 m asl
36MR5	Smithfield Beach	unknown; inconnu	2710	15 0	
NYSM-287	Nahrwold	charcoal; charbon de bois	2710	80	scattered from ca. 15 cm to 38 cm below subsoil in Trench 2, feature 2, component B, Meadowood
EdOp-1	British Block Cairn	charcoal; charbon de bois	2715	21 5	unit 1, center of tipi ring 46, feature 8, a burned stake, 10 cm depth
VTCH5	Shelburne Pond Ewing	bone collagen; collagène osseux	2715	13 5	
DcRv-48	Goodridge Peninsula	charcoal; charbon de bois	2720	70	
DgRs-1	Beach Grove	human bone collagen; collagène osseux humain	2720	80	burial 24, 45 cm depth
DhRp-7	Fort Langley	charcoal; charbon de bois	2720	27 0	Feature 161

CAA1a309	Emeryville	marine shell; coquillage	2720	23 0	shellmound, 2.44-2.67 m depth, near base of mound, ca. 1.5 m below groundwater
42KA265	Captains Alcove	charcoal; charbon de bois	2720	20 5	hearth 2, occupation B, subarea 2 of shelter
47.0	Flambeau Lake canoe	beaver-gnawed wood; bois rongé par des castors	2720	90	marsh, 8 ft depth, 7 ft below the present bottom of Steve Creek in a 3-4" layer of sand and gravel
33RO55	Russell Brown	charcoal; charbon de bois	2720	90	mound 2, fireplace at the base of the mound, 22" depth
33CS-?	Eppley Rockshelter	unknown; inconnu	2720	23 5	
RI	Block Island	unknown; inconnu	2720	12 0	Terminal Archaic occupation demonstrating diversification of the subsistence base and the first use of shellfish at the site
ME30.21	Knox	charcoal; charbon de bois	2720	90	assemblage 1, feature 2, shell-free zone K, with grit-tempered, fabric paddled interior/exterior, undecorated ceramics, ceramic period 1
AKFAI001	Campus	charcoal; charbon de bois	2725	12 5	K5NE-SW-NW, middle zone, 20-25 cm depth, 3 samples combined
DhRt-6	Locarno Beach	charcoal; charbon de bois	2730	90	unit 4, layer 11
EeRk-4	Bell	charcoal; charbon de bois	2730	90	Housepit 19, 20 cm depth
45OK78	Hymer	charcoal; charbon de bois	2730	16 0	housepit hearth 2.40 m depth, with fire-broken rock, post molds, fish bone and freshwater mussel shell
EaOq-43	Aldon Plant	bison bone collagen; collagène osseux de bison	2730	90	Level 3, 20-30 cm depth
20BE122	Eidson	charcoal; charbon de bois	2730	10 0	feature 26, a pit with an Eidson side-notched point
46MS180	Henderson School	unknown; inconnu	2730	50	
36FA363	Grays Landing	unknown; inconnu	2730	12 0	
19WR82	Horne Hill or Soapstone Hill	charcoal; charbon de bois	2730	12 0	small hearth, 155 cm depth in a steatite quarry, Hawes group
EdPc-1	Majorville cairn	bone collagen; collagène osseux	2735	85	unit 1-5, levels 1-3, layer 12
18PR7	Piscataway	freshwater shell; coquille de mollusque d'eau douce	2735	11 0	unit 32-I, an oval pit 23 cm deep, 38-61 cm depth, with pottery, projectile points and blades
18WO23	Nassawango	charcoal; charbon de bois	2735	75	feature 19, with quartz tempered ware
35JE51	Johnson	charcoal?; charbon de bois?	2740	60	feature 12
42SA5800	Murphy	charcoal; charbon de bois	2740	60	
5LR3953	Kaplan-Hoover	charcoal; charbon de bois	2740	40	N1027.632/E882.397, elevation 86.286 m

32MZ58	Mondrian Tree	charcoal; charbon de bois	2740	80	zone 3, horizon 1, BU-3, F-186, 70 cm sd
12W1	Yankeetown	charred plant remains; restes de plantes carbonisés	2740	150	feature 19, a basin-shaped area of fired silt, 11.3 ft depth, with poorly preserved bone, flint flakes, and waterworn sandstone
18CH163	Cedar Grove	marine shell; coquillage	2740	75	20 cm depth
36PI136	Banana Belt	unknown; inconnu	2740	140	
CT75-7	Hamburg Cove	unknown; inconnu	2740	90	
ME15.231	Rosie	charcoal; charbon de bois	2745	130	S17/E13, Level 4, feature 5, with no associated artifacts
35DS140	Sand Spring	charred wood; bois carbonisé	2750	120	bottom of organically darkened, redeposited Mazama ash, 70-80 cm depth, with a large number of obsidian flakes
CAMad117	Schwabacker	human bone collagen; collagène osseux humaine	2750	90	
26EU843	James Creek Shelter	charcoal; charbon de bois	2750	70	Horizon 6, feature 42, a hearth in upper horizon 6, western alcove, 101.70 cm below datum
VT35A-3	Sumner Falls	charcoal; charbon de bois	2750	80	squares N35/E10 and N40/E10, level 4
GcEl-5	Lac Delorme	charcoal; charbon de bois	2750	120	hearth 2, from the lower portion of a sand/bone deposit near the interface with an underlying Ae horizon, not likely contaminated
BkDw-5	Mud Lake Stream	charcoal; charbon de bois	2750	80	feature 27, a deep pit in units G9 and G10, beginning in level 3, about 25 cm depth and extending to 60 cm depth, with calcined bone and several sherds
33AL39	Kirian-Treglia	unknown; inconnu	2755	85	
35CS114	Hauser	charcoal?; charbon de bois?	2760	70	test pit B
45KI429	West Point	charcoal; charbon de bois	2760	100	
26NY301	Gatecliff Shelter	charcoal; charbon de bois	2760	60	horizon 4/5, charcoal scatter
42GA3138	Horse Canyon Rock Shelter	charcoal; charbon de bois	2760	100	hearth, bottom of stratum 2, with no associated diagnostics
EINs-4	Zoerb	bone collagen; collagène osseux	2760	80	lower of two cultural layers
5LR170	Pack Rat Rock Shelter	charcoal; charbon de bois	2760	100	feature 51
15EL4	Conley-Greene Rockshelter	unknown; inconnu	2760	60	Level 2A
46LG164	Dingess Crossing South	unknown; inconnu	2760	60	

DdGt-9	Réal	charcoal; charbon de bois (5.32 g)	2760	70	pit S3/E4, level 3, zones 5 and 6, NW quad, 25-35 cm depth, from a charcoal pocket 10 cm thick, 15-25 cm below the top of Level 3
DcRu-4	Kosapsom Park	charcoal; charbon de bois	2770	50	
35BA895	Yellow Pine Seed Orchard	unknown; inconnu	2770	50	
45ST45	Atstluktsin	sediment; sédiment	2770	50	
5GF126	Kewclaw	charcoal; charbon de bois	2770	60	pithouse with a central slab-covered hearth
48FR1468	McIntosh	unknown; inconnu	2770	80	
28ME12	Assunpink Creek	charcoal; charbon de bois	2770	60	loose association with an argillite assemblage, 35-45 cm depth
ME7.4	Limington	charcoal; charbon de bois	2770	60	fire-cracked rock feature
5ST85	Vail Pass Camp	charred wood; bois carbonisé	2775	70	feature 12, a stone-outlined hearth assigned to Occupation III
33LE97	Mabel Hall	unknown; inconnu	2775	11 5	with thick, grit-tempered plain pottery
AKAMR001	Onion Portage	unknown; inconnu	2780	10 0	Band 3, Level 5
45FR46H	Seed Cave	plant remains; restes de plantes	2780	14 0	
FhQl-6	Track	charcoal; charbon de bois	2780	13 0	end of Period 2, charcoal concentration at the top of the Bm horizon
32SN246	Naze	charcoal; charbon de bois	2780	80	cultural zone 3, soil horizon 4Ab, feature B, a charred post from a dwelling, 90 cm depth
33ER409	Weilnau	unknown; inconnu	2780	60	
46PU4	Winfield Locks	unknown; inconnu	2780	12 0	
BcHi-__3	Nodwell	carbonized bone; os carbonisé	2780	75	House 8, composite sample
SfFl-1	Baculum	plant remains; restes de plantes	2780	14 0	feature 1, a concentration of cultural debris lacking evidence of shelter construction
BhFl-1a	Pointe-du-Buisson, Station 1	charbon de bois; charcoal	2780	12 0	Hector-Trudel, vidange de foyer, dans le puits 0B-33, sous un dépotoir
GcFb-22	Lac Vincelotte	charbon de bois; charcoal	2780	11 0	inconnu
EaLa-3	Bjorklund	bison bone collagen; collagène osseux de bison	2785	12 0	component 3
LIDv-10	Sandy Point	peat; tourbe	2785	11 5	basal peat section, northeast perimeter of the island component, overlying the Pre-Dorset cultural layer
DjRi-3	Milliken	charcoal; charbon de bois	2790	13 0	zone C, near bottom of topsoil, 1.4-1.5 m depth, with the earliest disc beads at the site

35JE319	Heath Cliffs	soil; sol	2790	80	southern locus, component III?, Warm Springs phase
24CA74	Sun River	charcoal; charbon de bois	2790	90	Level I, unit 20N/350W, feature A bottom, a rock-filled basin-shaped hearth, 3-35 cm depth, with fire-broken rocks, bone fragments, lithic debitage
EgNr-2	Camp Rayner	charcoal; charbon de bois	2790	70	cultural layer 92-94 cm depth
DhMt-67	Tree	bone collagen; collagène osseux	2790	75	Level 6, unit 221N/186E, NW quad
47OZ7	Hilgen Spring Park	charcoal; charbon de bois	2790	65	feature 5, a fire hearth of limestone on the surface of a cleared mound floor
HkPb-1	Satsi	charcoal; charbon de bois	2795	85	Feature 1, unit 39, Block B, a smudge pit
AdHc-___1	Boyd Lakefront	charcoal; charbon de bois	2795	11 5	Unit A, Feature 1, from 123 litre flotation sample
35KL677	Williamson River Bridge	charcoal; charbon de bois	2800	13 0	
35DO372	Reynolds	charcoal?; charbon de bois?	2800	60	
45WH224	Desolation Quarry	charred wood; bois carbonisé	2800	12 0	
GaPb-VP	Pembina River	bison bone collagen; collagène osseux de bison	2800	14 0	sandy silt alluvium exposed in a natural cutbank, 1.5 m depth, in a postglacial river terrace
CASDi-?	Silver Strand	charcoal; charbon de bois	2800	15 0	hearth in a midden on top of sand over a Pleistocene beach
11S46	Missouri Pacific #2	charred wood; bois carbonisé	2800	80	feature 53, fill of Prairie Lake phase pit
20IR30	Lookout	charcoal; charbon de bois	2800	12 0	pit 56, 3.2-3.4 ft below the highest edge of the mine, deposits representing natural in-filling after abandonment, therefore limiting the age of mine use
36WA1	Williams Mound	charcoal; charbon de bois	2800	15 0	pit 2, section 13, lens 30-33" depth, Hopewell
6NH48	Binette	unknown; inconnu	2800	14 0	
ME15.233	Mugford	charcoal; charbon de bois	2800	70	N5/E15, Level 13, SP7, with flakes
33JA159	Rais Rockshelter	unknown; inconnu	2805	10 0	
AKPET319	Exchange Cove Weir	wood; bois	2810	60	wood-stake fish weir
MkPk-7	Lapointe	caribou bone collagen; collagène osseux de caribou	2810	90	square E-10, 20-40 cm depth
DjPI-1	Pincher Creek	bison bone collagen; collagène osseux de bison	2810	90	Level 15, 150 cm depth
15LE70	Pine Crest Shelter	unknown; inconnu	2810	70	Cogswell
15JO19	Sparks Rockshelter	charcoal; charbon de bois	2810	70	stratum 2
ME154.14	Fluted Point	charcoal; charbon de	2810	60	

		bois			
PgHb-1	Nunguvik	sea mammal bone collagen; collagène osseux de mammifères marins	2815	80	lower level of House 46, 12 m asl
ME31.17	Great Gott	charcoal; charbon de bois	2815	85	S3/E9, with Vinette I ceramics
AKPET410	Kushtaka Cave	bone collagen; collagène osseux	2820	60	spear point
EkSx-12	Koeye River	marine shell; coquillage	2820	50	core HC1, 340 cm depth
JcRx-2	Pointed Mountain	charcoal; charbon de bois	2820	90	square 0-50N/0-35W, 5-10 cm depth
DfRu-24	Georgeson Bay	charcoal; charbon de bois	2820	10 0	black soil, sand, and pea gravel, 26-36 cm N/44-52 cm E, 232-234 cm depth
FjPi-29	Strathcona	bison bone collagen; collagène osseux de bison	2820	80	bison processing area of Middle Prehistoric lithic workshop and habitation site, to date the earliest occupation of the site
13PK149	Darr-Es-Shalom	charcoal; charbon de bois	2820	65	unit 3, level 2
46MS103	Niebert	unknown; inconnu	2820	40	Adena
20SA620	Bridgeport	charcoal; charbon de bois	2820	14 0	unit 107N/101W, levels 6-7
PaHb-1	Agleruuyag	bone collagen; collagène osseux	2820	13 0	inside oval-rectangular tent ring 1
EiBg-7	Blanc-Sablon 7	charbon de bois; charcoal	2820	90	3e niveau d'occupation à 120 cm sous le litière dans un niveau de sable marin induré
EePk-272	Highwood burial	human bone collagen; collagène osseux humain	2825	95	burial exposed in plowed field, also disturbed by deflation and collecting
35LNC60	Whale Cove	charcoal; charbon de bois	2830	70	top of shell midden, cultural layer WCI, ca. 15 m asl
35LK2992	Bowling Dune	charcoal; charbon de bois	2830	70	feature 1, a hearth
26WP230	Amy's Shelter	charcoal; charbon de bois	2830	80	Brown V zone, C10/C11 balk, ca. 100-140 cm depth, with Elko corner-notched points
24JF110	Quinn Creek	comminuted bone; os broyé	2830	90	XB:1, CMUs 17 and 18, >20-30 cm depth
48CO1144	Deer Creek	charcoal; charbon de bois	2830	60	hearth
5LR252	Spring Gulch	charcoal; charbon de bois	2830	13 5	feature 10a, lowest hearth excavated in Level 4
15LE50	Cold Oak Shelter	charcoal; charbon de bois	2830	60	zone 3a hearth
36CN164	Memorial Park	charcoal; charbon de bois	2830	50	component XI, buried soil 1
VTFR26	Boucher	charcoal; charbon de bois	2835	35	feature 122
45SJ11	Smallpox Bay	charcoal; charbon de bois	2840	60	ca. 9 m asl
5LK221	Campion Hotel	charcoal; charbon de bois	2840	13 0	firepit, feature 2, Hogsback phase
5CF358	Runberg	unknown; inconnu	2840	80	

KjNb-6	Junction	charcoal; charbon de bois	2840	95	Level 2, north third of square 8S/OE
23BY388	Jakie Shelter	charcoal; charbon de bois	2840	12 5	square 75L7, level 4
15BC138	Rockmaker	unknown; inconnu	2840	80	feature 66
ME30.42	Goddard	charcoal; charbon de bois	2840	10 5	area 1 midden, 105S/OE, feature 1, with an expanded stem biface
EbOp-16	Cactus Flower	bone collagen; collagène osseux	2850	95	occupation 1, unit 6, including all identifiable and unidentifiable bones in the unit, an 8 x 20 m area
3BE174	Albertson	charcoal; charbon de bois	2850	12 0	stratum 4
20MD30	Naugle	charcoal; charbon de bois	2850	11 0	feature 1, a hearth considered transitional Archaic in age, with small stemmed and Meadowood side-notched points
36WM601	Site 19A	charcoal; charbon de bois	2850	11 0	area A, feature 15, a small rock-filled hearth, unit 8, 227 cm below datum
SgFm-3	Longhouse	charred bone collagen; collagène osseux carbonisé	2850	50	hearth feature on a pronounced ridge west of the main site, 10-11 m asl
DhSe-2	Shoemaker Bay	charcoal; charbon de bois	2860	90	Zone C, soil containing many small round pebbles, 1.2-1.6 m depth, from a trench feature
CACCo308	Stone Valley	charcoal; charbon de bois	2860	12 0	
48FR308	Lookingbill	unknown; inconnu	2860	75	
BbGa-___2	Gordon Island North	charcoal; charbon de bois	2860	60	Trench 1, Sq. 8, Feature 10, 17 cm depth
AKKTZ133	Cape Espenberg	organic sediment; sédiment organique	2870	75	oil-soaked cemented sand associated with a dense localized artifact scatter including check-stamped sherds, end-blades, and burned bone
AKPET206	Snoose Creek	wood; bois	2870	60	wood-stake fish weir
5GN212	Iola	charcoal; charbon de bois	2870	80	cultural feature
DILg-33	The Forks	charcoal; charbon de bois	2870	80	cultural horizon, 2.85 m depth
BIGf-2	Hynes	charcoal; charbon de bois (10 g)	2870	50	hearth, squares T5B and T6B, 30-45 cm depth
35LIN468	Marion Creek	charcoal; charbon de bois	2880	80	feature 54
24PH3396	Cree Crossing	charcoal; charbon de bois	2880	70	Holocene terrace, occupation 1, feature 4, a rock-filled, basin-shaped hearth partly exposed in the cutbank
NiNg-10	Menez	charcoal and soil; charbon de bois et sol	2880	10 5	test cut 4, 10-18 cm depth in midden 0-20 cm deep
32DU955C	Big Black	charcoal; charbon de bois	2880	60	Block 2, 813N/E344, 14-24 cm depth, feature 5, a small hearth



33TU57	Johnson site II	charcoal; charbon de bois	2880	90	basin-shaped hearth with Ashtabula points
TjFd-10	Rivendell	mammal bone collagen; collagène osseux de mammifères	2880	70	house feature C
19WR517	Millbury III	charcoal; charbon de bois	2880	10 0	feature 1B, 40-45 cm depth
DcRw-35	Orveas Bay	charcoal; charbon de bois	2890	70	
BdGi-__4	Madoc Quarry	charcoal; charbon de bois	2890	70	flotated from a deep basin-shaped hearth
CfDk-11	Goguen	charcoal; charbon de bois	2890	60	burial pit feature covered in hematite
AKFAI-VP	Goldstream	bison bone collagen; collagène osseux de bison	2900	80	male bison skull
CAIny372	Rose Spring	charcoal; charbon de bois	2900	80	72-84" depth, Early Rose Spring
EiNs-4	Sjovold	charcoal; charbon de bois	2900	70	Layer XI, hearth feature F11-a, intermittent faint grey soil in buff sandy silt, 169-178 cm depth
EkNm-1	Bradwell	human bone collagen; collagène osseux humain	2900	80	burial
18KE74	Bissel-Ferris #50	marine shell; coquillage	2900	70	with no associated diagnostic artifacts
18FR100	Monocacy	charcoal; charbon de bois	2900	95	zone 5, base of second cultural level, with steatite-tempered pottery, the first pottery in the Potomac valley, Marcey Creek
35LA567	Kirk Park 3	charred plant remains; restes de plantes carbonisés	2910	60	composite sample, feature 2
45DO331	Moses Coulee Cave	charcoal; charbon de bois	2910	60	
5EA128	Dotsero	human bone collagen; collagène osseux humaine	2910	55	burial with corner-notched projectile points
20SA581	Weber I	charcoal; charbon de bois	2910	70	subunit Ib, feature 201, with small notched points
CT75-30	Cedar Lane	unknown; inconnu	2910	60	
100E1674	Nahas Cave	charcoal; charbon de bois	2920	70	unit S2/W2, Level 6, 50-60 cm depth, with non-diagnostic bone and groundstone artifacts and lithic debris
15ED1	Mammoth Cave	charcoal; charbon de bois	2920	60	selenite mine in Flint Alley
33AD-?	Serpent Mound	charcoal; charbon de bois	2920	65	obtained by coring, ca. 132 cm depth, below the original surface on which the mound was built, probably stratum 9
32SN111	Nelson	bone collagen; collagène osseux	2923	40	
3S-?	Marble Bluff	cultigen; cultigène	2926	40	
21WD6	Blueberry Lake	pottery encrustation; tarte de poterie	2930	50	

10BO120	Big Gallagher Creek	sediment; sédiment	3080	50	humates extracted from C horizon sediments in unit B
24LC1325	Wolverine Heights	charcoal; charbon de bois	3080	40	sinkhole, levels 7 and 8, believed to represent a natural fire
32LM236	Stroh	bone collagen; collagène osseux	3080	70	No. 177, 280 cm depth, and No. 179, 265 cm depth, at same horizontal provenience, with fire-cracked rock and chipped stone artifacts
45PI72	Dupont Southwest	charcoal; charbon de bois	3082	70	
36CL52	State Road Ripple	unknown; inconnu	3085	70	
18CH155	Guntower	marine shell; coquillage	3085	70	60 cm depth
15MF10	Hooton Hollow	human feces; fèces humaines	3090	55	lot V3, unknown provenience
20IS46	Brandt	human bone collagen; collagène osseux humain	3090	45	bundle 1, with broad stemmed points
46PU161	Crosscutter	unknown; inconnu	3090	60	
19SU-?	Boylston Street Fish Weir	sediment; sédiment	3090	80	master core 8, sample 42, 0.79 m above sea level
18KE128	Plummer #22	marine shell; coquillage	3095	80	with no associated diagnostic artifacts
48SW3555	South Black Butte Creek	carbonized wood; bois carbonisé	3100	90	hearth
DkNu-3	Niska	bison bone collagen; collagène osseux de bison	3100	80	cultural layer
ME73.10	Young	charcoal; charbon de bois	3105	50	component 2, feature 3, southwest quadrant, 45-55 cm depth, Susquehanna Archaic
11CW170	Riverton	charcoal; charbon de bois	3110	10 0	Level 4, 18-24" depth, at top of zone III, at the juncture of the upper portion of the shell midden and overlying midden without shell
444WM119	White Oak Point	unknown; inconnu	3110	70	with Bushnell ceramics and Calvert projectile points
33TR1	Byler / Buylar Mound	unknown; inconnu	3115	80	
18KE57	Andelot #100	marine shell; coquillage	3115	75	with no associated diagnostic artifacts
35DO130	Tahkenitch Landing	charcoal; charbon de bois	3120	80	stratum 2B
35DS219	Hot Springs Boat Ramp	charcoal?; charbon de bois?	3120	90	feature 6, pit
46KA104	Hansford	unknown; inconnu	3120	70	Broadspear points and thick grit/steatite tempered pottery
19PL540	Plymouth Street	charcoal; charbon de bois	3120	10 0	with Small Stem and Atlantic points
36CE230	Jacks Mill	unknown; inconnu	3125	65	
35LA793	Dale Beam	charcoal; charbon de bois	3130	90	
EdRi-25	Parker	charcoal; charbon de bois	3130	10 0	bottom of a roasting pit

10NP143	Hatwai	charcoal; charbon de bois	3130	90	floor of House 1
24MA171	Barton Gulch	bison bone apatite; apatite osseux de bison	3130	70	Area A
42SA8477	Shadow Shelter	charcoal; charbon de bois	3130	70	scattered charcoal, 92 cm below datum
FbNs-3	Carruthers	bone collagen; collagène osseux	3130	80	nine test profiles yielding comminuted bone fragments
FdMi-1	Steepprock Lake	charcoal; charbon de bois	3130	110	bottom dark red sand zone, square 200n/30w, Level 5, 25.4 cm depth, submitted to date the lower level but reassigned to the upper level
33FR38	William H. Davis Mound	unknown; inconnu	3130	60	
NYCA69	Zawatski	charcoal; charbon de bois	3130	65	Susquehanna Transitional feature
CT163-3	Beaver Brook	unknown; inconnu	3130	90	
FbNp-17	Amisk	bone collagen; collagène osseux	3135	75	Level 2, paleosol in sandy loam, 5 cm thick, varies 23-40 cm depth
26WA-?	Wizard Beach	unknown; inconnu	3140	120	suborganic stratum, a gray-brown midden containing abundant roof fall and artifacts
26CH16	Hidden Cave	plant remains; restes de plantes	3140	110	stratum 4, Devils Gate phase
10OE565	Bachman	charcoal; charbon de bois	3140	65	
5LA1055	Carrizo Ranches	charcoal; charbon de bois	3140	60	hearth in rock shelter, 20 cm depth
11S-?	Cahokia	charcoal; charbon de bois	3140	100	
6NL79	Griffin	unknown; inconnu	3140	60	
19BR-?	Read Farm B	charcoal; charbon de bois	3145	65	feature 47, a large shallow hearth, 26 cm deep
DcRt-13	Bowker Creek	marine shell; coquillage	3150	120	black soil mixed with well-rotted shells and fire-cracked pebbles
35WA486	Elk Creek	unknown; inconnu	3150	110	
5JF142	LoDaiska	charcoal; charbon de bois	3150	100	squares O8-9, J9, and K9, 68-76" depth, scattered, but all with Middle Period materials, Willowbrook
33HU-?	Bores	bone collagen; collagène osseux	3150	110	
SIHh-1	Cape With	bone collagen; collagène osseux	3150	60	hearth in dwelling feature
36LU105	Gould Island	unknown; inconnu	3150	60	
BIFg-8	Jacques	charbon de bois; charcoal	3150	130	foyer, dans le puits 34N, 10,5W
AKKOD044	Anton Larsen Bay	charcoal; charbon de bois	3160	70	hearth
DkSg-2	Sandwick Midden	charcoal; charbon de bois	3160	80	
DfRu-13	Montague Harbour	charcoal; charbon de bois	3160	130	black humus, gravel, Test Cut 2, S0-5' E3-5', 94" depth

23HI216	Phillips Spring	charcoal; charbon de bois	3170	90	unit E, feature 1969, 3.2-3.3 m below datum, Sedalia 3
16.0	Tunica Bayou	plant remains; restes de plantes	3170	90	
28WA15	Miller Field	charcoal; charbon de bois	3170	12 0	Hearth 9, feature C-F61, with no associated artifacts but assigned to Marcey Creek
EcRi-1	Drynoch Slide	wood; bois	3175	15 0	failure zone beneath mud slide overlying Mazama tephra, portion of tree trunk beneath slide and covering vegetation in situ
22HA35	Claiborne	charcoal; charbon de bois	3175	14 0	Level III
42WN1666	Down Wash	charcoal; charbon de bois	3180	14 0	hearth exposed in arroyo cut of Locus C, with no associated diagnostics
DjOn-10	Kajewski	charred bone; os carbonisé	3180	80	scattered in square 49D on the surface of a buried slump block in the lowest level of the site
NiNg-7	Wellington Bay	charcoal; charbon de bois	3180	12 0	section 3, test cut 1, culture layer, 18-20 cm depth
5LO101	Dipper Gap	charcoal; charbon de bois	3180	80	Layer D, top, feature 16, 20 cm depth
21HB26	LaSalle Creek	pottery encrustation; tarte de poterie	3180	60	
15PE8	Hall Shelter	unknown; inconnu	3180	12 0	Zone IVA, level 10
46BX73	OSB Two	unknown; inconnu	3180	80	
GaFf-1	Rivière Laforge	charbon de bois; charcoal	3180	60	puits 9s 33e, échantillon E-5, horizon Bf, 20 cm sous la surface
35DO205	South Umpqua Falls Rockshelter	charcoal; charbon de bois	3190	50	
FkMh-5	Pas Reserve	charcoal; charbon de bois	3190	60	pit in pea gravel, organic silt, Unit 2n8w, Layer 2, 1.14 m below datum, at base of lowest occupation level
33WO86	Freeworth	charcoal; charbon de bois	3190	65	Satchell complex
45CL422	Covington	charcoal; charbon de bois	3200	80	
CASJo112	Stockton	human bone collagen; collagène osseux humaine	3200	15 0	
26PE3d	Guano Cave	wood; bois	3200	13 0	twigs from a habitation level composed mainly of guano and dust, 22-28" depth
11MX66	Angelly	unknown; inconnu	3200	45	pit with a black-on-white buff plate rim
32SN102	Pipestem	human bone collagen; collagène osseux humain	3205	70	burial, individual A
42KA433	Benchmark Cave	plant remains; restes de plantes	3210	55	warp-faced plain weave sandal (FS 142.11) from feature 33
23CP40	Collins Rockshelter	charcoal; charbon de bois	3210	90	general fill of a cultural deposit within a bluff shelter,

					152 cm depth
46CB56	Weed Shelter	unknown; inconnu	3210	11 0	Buffalo phase
BbHj-___2A	Knechtel I	fish bone collagen; collagène osseux de poisson	3210	55	stratum 5, from adjacent units squares E and F
44WR1	Habron	charcoal; charbon de bois	3210	12 0	square 9-19, 127 cm depth, with Morrow Mountain-type projectile points
19NF-?	Ponkapoag	charcoal; charbon de bois	3210	10 0	with Neville points
5BL141	Blue Lake Valley	charcoal; charbon de bois	3215	90	stone circle, 2 m in diameter, interpreted as a hunting blind
AKTLM016	Upper Susistna River	charcoal; charbon de bois	3220	90	
FjPp-1	Mace	bone collagen; collagène osseux	3220	75	basin-shaped boiling or cooking pit with a base at 60 cm depth containing yellowish-white ash between black organic layers, fish bone, and fired rock
10LH15	Jaguar Cave	bone collagen; collagène osseux	3220	80	main occupation, hearth I
EeOv-68	Saahkómaapína = Boy Chief	bone collagen; collagène osseux	3220	15 0	Block 3, occupation 2
15CE19	Indian Camp Lake	unknown; inconnu	3220	70	unit 1
20IR24	Minong	charcoal; charbon de bois	3220	13 0	Pit 77, a thin dark stratum 4.3 ft depth, Old Copper culture
36HU1	Sheep Rock Shelter	charcoal; charbon de bois	3220	16 0	E25/S15, level 79 inches
CT132-44	Woodchuck Knoll	unknown; inconnu	3220	10 0	
EkTa-?	Stirling Island	marine shell; coquillage	3230	90	core through midden
24PA504	Myers-Hindman	bone collagen; collagène osseux	3230	11 0	Level 4, directly associated with a rock-lined hearth dated by GaK-2629
36PI14	Zimmerman	charcoal; charbon de bois	3230	12 0	Hearth 4, level 3, fishtail period, Orient phase
EiBh-60	Brador Tumulus II	charcoal; charbon de bois	3230	80	stone-lined burial chamber at base of mound, 1.5 m depth, with red ochre, full channeled gouges and triangular points
5GF110	Sisyphus Shelter	unknown; inconnu	3240	75	
14BU9	Snyder	charcoal; charbon de bois	3240	85	
11GE-?	Helton	charred plant remains; restes de plantes carbonisé	3240	70	test square 1, level 10, 0.8-0.9 m below the top of cultural Horizon 2, 1.4-1.5 m depth, Kampsville phase
46NI252	GAI No. 9	unknown; inconnu	3240	50	
DjMq-3	Kisbey	human bone collagen; collagène osseux humain	3245	80	burial
19BR39	Plain Street	charcoal; charbon de bois	3245	70	with Small Triangle points

48CR4001	Espy-Cornwell	bone collagen; collagène osseux	3250	60	bison bone level
24PH8	Johnson Bison Kill	human bone collagen; collagène osseux humain	3250	70	test pit 4
5LR144	Kinney Spring	charcoal; charbon de bois	3250	80	bank
EgKx-15	Thunderbird	bone apatite; apatite osseux	3250	13 0	Unit 10
PfJv-2	Tasealuk	charcoal; charbon de bois	3250	11 0	Feature 214, a hearth within a house, 14.64 m asl
19BR56	Bay Street I	charcoal; charbon de bois	3250	18 0	units R85/S5
35HA1261	Dunn	charcoal; charbon de bois	3255	65	House 1 floor
42UN-?	Thorne Cave	charcoal; charbon de bois	3260	12 0	Level 8
20KE20	Lac LaBelle	charcoal; charbon de bois	3260	70	test unit 50, level 2, 15 cm depth, a stained area that appears to be associated with root activity
TjFd-3	West Wind	charcoal; charbon de bois	3260	70	hearth feature 1, in dwelling
AKXMK111	Tiny Island Passage II	charcoal; charbon de bois	3270	70	bank profile, soil 1, 60 cm depth
CAMrn152	Pochecho	human bone collagen; collagène osseux humaine	3270	70	burial 4
10AA68	Dry Creek Rockshelter	bone collagen; collagène osseux	3270	11 0	Level 12, a layer of fine gray- brown sediment with northern side-notched, Elko series, Humbolt series, and Pinto series points
24CB91	Shield Trap	bison bone collagen; collagène osseux de bison	3270	60	stratum II, 97 cm below datum
22CR504	Teoc Creek	charcoal; charbon de bois	3270	20 0	square 10S-10E, Level 6, 0.794-0.915 m depth
20SA8	Andrews	human bone; os humain	3270	15 0	burial in fossil beach of Algoma phase, the younger of two burial complexes, intruded through the component dated by M-941
46PU100	Corey	unknown; inconnu	3270	60	
BIDb-10	Beausejour Beach	charcoal; charbon de bois	3270	60	Cultural stratum located 3 meters above Archaic horizon.
DgRr-6	Glenrose Cannery	charcoal; charbon de bois	3280	10 5	Component II, XU 1/5 balk, Level 37, 90 cm depth
KkLn-13	Migod Island	charcoal; charbon de bois	3280	80	in sand, Test pit A, 25-40 cm depth, Level 2, 10 cm below Level 1
BiGb-___1	Marshall's Bay 1	charcoal; charbon de bois	3280	12 0	hearth just below minor Contact materials which extended to 15 cm depth
ME29.9	Turner Farm	human bone apatite; apatite osseux humain	3280	18 0	Occupation 3, W30/S65, feature 18-1975, a primary inhumation, Susquehanna Archaic

AKPET190	El Capitan Cave	otter bone collagen; collagène osseux de loutre	3290	60	juvenile individual in a coastal den
EfQu-10	Blind Bay Rock Shelter	charcoal; charbon de bois	3290	14 0	Zone I, concentration with thin layer of beach gravel, the lowest part of the earliest cultural zone, 2.39-2.7 m N, 0.95-1.1 m E, 1.35-1.40 m BD
5AH6	Witkin	human bone collagen; collagène osseux humaine	3290	80	burial of a male, 25-30 years of age, in a flexed position, probably seated, facing south, with two bifaces and a worked deer skull and metapodial
33FR895	Marsh Run	unknown; inconnu	3290	80	
33RO385	Sabre Farms	unknown; inconnu	3290	14 0	
33WA78	Pipeline	unknown; inconnu	3290	11 0	
33LU10	Gladieux	unknown; inconnu	3290	70	
19BR188	Newcomb Street	charcoal; charbon de bois	3295	22 0	
45SA116	McClellan Meadows	charcoal; charbon de bois	3300	60	
CASac145	Franklin	human bone collagen; collagène osseux humaine	3300	15 0	
CAMod-?	King's Dog	charcoal; charbon de bois	3300	10 0	Pit M-11, 75" depth
48SU867	Harrower	unknown; inconnu	3300	80	level G
41.0	San Pedro Springs	charcoal; charbon de bois	3300	14 0	House 4 floor, zone 4, north part of the site
EaLf-1	Lockport	charcoal; charbon de bois	3300	29 5	Bed H/I, N125/W34, contact of Beds H and I, 2.10 m depth
33SC17	Scioto County Home	charcoal; charbon de bois	3300	11 0	75 cm below the top of feature 9, a Late Archaic shell midden
33ER-?	Dillon	unknown; inconnu	3300	11 0	
GhGk-4	Poste-de-la- Baleine	charcoal; charbon de bois	3300	11 0	central burned area of house F, constructed on a boulder field
18KE27	Andelot #3	marine shell; coquillage	3300	70	with no associated diagnostic artifacts
20GS28	Pinegrove Cemetery	charcoal; charbon de bois	3305	13 5	Feeheley phase or Satchell complex
AKHEA001	Teklanika West	charcoal; charbon de bois	3310	10 0	component II, in the Bw horizon of the modern soil
DfSj-100	Little Beach	human bone collagen; collagène osseux humain	3310	70	cairn burial B-7
20MD-VP	Bailer mammoth	plant remains; restes de plantes	3310	16 0	apparently associated with Jefferson mammoth remains
DhDm-1	La Martre	charbon de bois; charcoal	3310	12 0	puits no 510, sur la 7e terrasse, entre 6 et 18 cm de la surface
19SU8	Calf Island	charcoal; charbon de bois	3315	14 0	feature 10, presumably associated with the small number of Late Archaic artifacts found at the site

NH38-6	Eddy	charcoal; charbon de bois	3315	85	well defined feature at the base of the upper stratum, 63-69 cm depth, with Vinette I pottery
24PH401	Keaster	charcoal; charbon de bois	3320	80	Layer 1
41VV190	Centipede Cave	freshwater mollusc shell; coquille de mollusque d'eau douce	3320	12 0	lower zone
AiHc-_75	Henry Morgentaler	charcoal; charbon de bois	3320	10 0	Locus A pit feature
26WA202	Shinner site F	plant remains; restes de plantes	3325	90	S-twined basketry, burial 1, 40" depth
MkPk-3	Bloody Falls	charcoal; charbon de bois	3330	90	structure 1, square O-17, hearth in yellow sand, 55-60 cm depth
42WN420	Cowboy Cave	plant remains; restes de plantes	3330	80	probably stratum 4c, provenience unknown, grass from a skin bag recovered in 1973 testing
15BT5	Carlston Annis	unknown; inconnu	3330	80	C3-5, 75-85 cm depth
33WA4	Anderson Village	unknown; inconnu	3330	14 5	
18CE5	Harlan Mill quarry	charcoal; charbon de bois	3330	16 0	hearth, 1.37 m depth, at east end of excavation
DgRr-2	St. Mungo Cannery	charcoal; charbon de bois	3340	65	unknown, 1.4 m asl
42SA17092	Salt Pocket Shelter	charcoal; charbon de bois	3340	11 0	basin hearth within midden deposit, encountered in a 1 x 1 m test unit
HiLp-1	Kame Hills	charcoal; charbon de bois	3340	65	sand matrix, Units 554 and 559, Level 3, 15-20 cm depth
QiLd-1	Brooman Point	caribou bone collagen; collagène osseux de caribou	3340	40	House 12, 5.38W0.19, lower dark layer
19ES-?	Wheeler	charcoal; charbon de bois	3340	90	
AKXHP311	Croxton	charcoal; charbon de bois	3350	60	Area J, a lower stratigraphic unit, with microblades, burin spalls, burins, and flake-knives
AKXMK119	Kafia River Mouth South	charcoal; charbon de bois	3350	90	bank profile, 61 cm depth
FhQl-29	Mountain Creek site (1073R)	charcoal; charbon de bois	3350	13 0	cultural layer with a McKean point
EE:12:2	Hereford Dairy Ranch	charcoal; charbon de bois	3350	15 0	rock-filled hearth under 1 m of silt on ancient erosional slope ca. 15 m above the San Pedro River, with no associated artifacts
FaNq-30	Graham	human bone collagen; collagène osseux humain	3350	55	cremation burial in a sand dune, 10 cm depth or less
FhNa-10	Bushfield West	organic sediment; sédiment organique	3350	21 0	organic-rich silt, 2.45 m depth
15BT10	Read	unknown; inconnu	3350	70	



ME	Hunneman	charcoal; charbon de bois	3350	20 0	square C/8-14, pit 20-22" below datum, later stages of Archaic, not far below Vinette I pottery
ME91.1	Hathaway	charcoal; charbon de bois	3355	12 5	component III, feature VIII, burial 52
45CL31	Vancouver Lake	charcoal; charbon de bois	3360	70	
10CL10	Bison Rockshelter	charcoal; charbon de bois	3360	10 0	layer 16b, feature 14, an earth oven bedded on layer 17, Beaverhead phase
42SV6	Sudden Shelter	charcoal; charbon de bois	3360	85	middle of stratum 22, dating the termination of component 3
20EM-?	Ponshewaing Point	charcoal; charbon de bois	3360	27 0	feature complex 3
46KA142	Burning Springs Branch	unknown; inconnu	3360	80	
BIGj-__2	Montgomery Lake	charcoal; charbon de bois	3360	80	Sq. 51, hearth, 25-38 cm depth
10CW45	Big Island	charcoal; charbon de bois	3370	17 0	basal gravel of lower terrace of Big Island
DgMr-1	Long Creek	charcoal; charbon de bois	3370	14 5	Level 5, uppermost of the clay and silt levels, overlain by sand and gravel
20IR6	Siskiwit	charcoal; charbon de bois	3370	13 0	Pit 66, with several partly grooved hammerstones, to provide minimum date for abandonment of mine, Old Copper culture
33HA17	Sand Ridge	charcoal; charbon de bois	3370	11 0	burial pit, level 18, with a semi-flexed adult female
47RI4	Price III	human bone; os humain	3380	15 0	feature 25, 1.3 ft depth, burial 4 in a large pit containing 8 levels of burials
ME42.1	Nevin	fish bone collagen; collagène osseux de poisson	3380	85	bottom of section 1A.3/1E
FbNp-25	Thundercloud	bison bone collagen; collagène osseux de bison	3382	55	Level 5b, the middle one of three sub-levels of Level 5
DIPa-4	Woodpecker Island Bluff	human bone amino acid; aminoacide d' os humain	3390	90	locally cemented mudflow filling channels in Pleistocene sediments
42EM625	Pint Size Shelter	charcoal; charbon de bois	3390	17 0	top of stratum 3, the lower component with Gypsum and Elko corner-notched points and slab metates
DeIo-__1	Sturdy Bay	charcoal; charbon de bois	3390	14 0	base of Hearth 1, 15 cm depth
36PI7	Brodhead-Heller	charcoal; charbon de bois	3390	10 0	weathered argillite chips and a Dry Brook type point, 107-122 cm depth
KdDq-23	Closure Annex	charred animal remains; restes d'animaux carbonisés	3390	21 0	consolidated, squares 2 and 11, 6-13 cm depth, thin midden in gravel
42WN418	Great Gallery	paint; peinture	3400	65	Barrier Canyon Style rock art
48FR1484	Split Rock Ranch	charcoal; charbon de bois	3400	90	house F4, feature 4-4

DiNj-8	Willowbunch	human bone collagen; collagène osseux humain	3400	90	burial beneath a cairn, covered with colluvium
21NR29	Mooney or Halstad	charcoal; charbon de bois	3400	50	base of soil horizon 3AB, 160 cm depth, associated with Archaic artifacts, bison bones, and lithic debris
13ML-VP	Waubonsie	charcoal; charbon de bois	3400	28 0	stream channel alluvium, Hatcher Member, De Forest Formation, charcoal from the entire section combined
15MF1	Newt Kash Shelter	cultigen; cultigène	3400	15 0	
ME38.53	Vassalboro	charcoal; charbon de bois	3400	50	fire-cracked rock feature
35UN95	Marshmeadow	charcoal; charbon de bois	3410	70	
10CW39	Ash	charcoal; charbon de bois	3410	13 0	unit 1, 105-115 cm depth, Harder phase
FhNa-86	Crown	bone collagen; collagène osseux	3410	11 0	component 2, eastern block, level 4, XU 5n3w, 35-40 cm depth
41VV167	Eagle Cave	charcoal; charbon de bois	3410	80	stratum IIa
20BE307	Stover	charcoal; charbon de bois	3410	10 0	feature 5, a firepit
NjHa-1	Kapuvik = Jens Munk	walrus bone collagen; collagène osseux de morse	3410	12 0	terrace at 41 m asl
36BV292	Connoquenessing	charcoal; charbon de bois	3410	90	feature 34
NH47-22	Seabrook Marsh	wood; bois	3410	15 0	C-1-1
15OH94	Peter Cave	charcoal; charbon de bois	3415	10 5	level A-6, ca. 75 cm depth
36LY37	Canfield Island	unknown; inconnu	3415	11 5	
PjRa-2	Umingmak	burned wood and bone; bois et os brûlé	3420	15 0	twigs and burned bone, area A, test cut 9, in midden, 10-18 cm depth
26LA1	Toquima Cave	charcoal; charbon de bois	3420	18 0	west wall of trench 11, 70 cm below datum
DI Ou-9	Laidlaw	bone collagen; collagène osseux	3420	13 0	Feature 1, within the rectangular enclosure
DaJi-___1	Renshaw	charcoal; charbon de bois	3420	80	small pit containing considerable chipping debris
SfFl-6	Topo	willow charcoal; charbon de saule	3420	60	hearth
19BR214	G.B. Crane	charcoal; charbon de bois	3425	26 5	
AKXPM001	Hot Springs	unknown; inconnu	3430	95	
AKCRG381	Wolf's Lair	wood; bois	3430	60	unmodified log #307 in sea cave
35CR616	Rough	charcoal; charbon de bois	3430	20 0	in Mazama ash

48GO305	Hell Gap	charcoal; charbon de bois	3430	20 0	Adams' locality, buried fireplace 1.5 ft below the top of a 7-ft terrace, overlying a late "Altithermal" paleosol, base of geologic unit G
39HN204	Lightning Spring	charcoal; charbon de bois	3430	27 0	stratum 8, feature 17
32ME366	Taylor Bluff	charcoal; charbon de bois	3430	70	cultural layer on a low terrace
8V2	Cotten	marine shell; coquillage	3430	10 0	square 15R1, level 16, with Orange Plain and Orange Incised pottery
RICV3	Flat River	charcoal; charbon de bois	3430	10 0	cremation pit 4, containing a burned stem knife, near pit 5 which yielded nine burned points diagnostic of the Stone Bowl Industrial age
ME74.8	Eddington Bend	charcoal; charbon de bois	3430	14 5	gray crematory pit fill, 140 cm depth
19MM147	Wapanucket 8	charcoal; charbon de bois	3435	85	small twigs, 52 cm depth, in refuse pit, Feature 349, dug into reworked glacial till
HcQh-6	Pulp Mill	bone collagen; collagène osseux	3440	12 0	180 cm depth
FbNs-1	Harder	bone collagen; collagène osseux	3440	12 0	cultural layer in paleosol in dune depression, unit On/0w
11LW1	Robeson Hills	charcoal; charbon de bois	3440	12 5	fill of Pit S-3, originating at the junction of midden and subsoil, >48" below the midden surface
15OH13	Bowles	unknown; inconnu	3440	80	A3-11, 140-160 cm depth
FbNp-22	Cut Arm	bison bone collagen; collagène osseux de bison	3441	50	occupation 8, upper level, with a McKean lanceolate point
19BR119	Bear Swamp 2	charcoal; charbon de bois	3445	80	feature 65, dispersed in possible garbage pit, 55 cm below the plow zone
AKSIT283	Wilson Cove Fort	marine shell; coquillage	3450	70	shelter 1, 44 cm depth
CASis4	Nightfire Island	charcoal; charbon de bois	3450	90	stratum 10
24JF226	Palmer Quarry	charcoal; charbon de bois	3450	90	east wall of trench 2B, 140 cm depth, with no diagnostic artifacts
48LN1296	Shute Creek	charcoal; charbon de bois	3450	90	area E, feature 17
48JO303	Grey-Taylor	charcoal; charbon de bois	3450	40	hearth in upper Layer II, with McKean series and other point types
48SW5982	Bald Knob	soil; sol	3450	70	feature T32, a possible house pit
41TV87	Barton Road	charcoal; charbon de bois	3450	15 0	zone III, non-cultural unit
3LA4	Shane's Mound	human bone; os humaine	3450	80	charred bone from central cremation, Early Ceramic, Bellevue phase, Marksville-like
47IA80	Gottschall Rockshelter	charcoal; charbon de bois	3450	70	feature 1, sample 86C2, a Late Archaic hearth

11CW319	Swan Island	charcoal; charbon de bois	3450	12 0	level 6, 30-36" depth
33WA92	Wood 73	unknown; inconnu	3450	90	
15MF36	Cloudsplitter Rockshelter	cultigen; cultigène	3450	15 0	
46NI275	GAI No. 32	unknown; inconnu	3450	70	
SfFj-20	Hearth	conifer charcoal; charbon de conifère	3450	90	driftwood beneath boiling stones in a hearth feature
VTCH46	Winooski	charcoal; charbon de bois	3450	17 5	Level 4, Trench 2, feature 79, a surface or pit hearth with bone, fired rock and flakes
AKSIT086	Cosmos Cove Weir	wood; bois	3460	60	wood-stake fish weir
48SW5981	Lost Minkey	soil; sol	3460	70	feature T4, a possible housepit
5JF63	Cherry Gulch	bone collagen; collagène osseux	3460	75	
33SC282	Ira Bays Rockshelter	unknown; inconnu	3460	80	
15BE272	Glacken	charcoal?; charbon de bois	3460	80	pit feature with a dense concentration of Late Archaic artifacts and a Merom-Trimble projectile point
19WR268	Charlestown Meadows	charcoal; charbon de bois	3460	90	
BgFo-___1	Glengarry Cairn	charcoal; charbon de bois	3464	80	lower component
AKKIR096	Lisburne	charcoal; charbon de bois	3470	50	Area 22, stone-boiling feature, microscopic fragments recovered from an archived soil sample
AKBLR-?	Porcupine River Cave 1	charcoal; charbon de bois	3470	90	contact of Units 1 and 2, Sattler's unit A/B, square N6/E5, 125 cm below datum
EkNv-36	Billet	charcoal; charbon de bois	3470	12 0	Area C-2, XU 122-L1, immediately adjacent to a hearth feature and directly below a bison mandible
5GN1668	Dillon Trail	charcoal; charbon de bois	3470	80	cultural feature
CT61-25	Candlewood Hill	unknown; inconnu	3470	60	
19MD199	Vincent	charcoal; charbon de bois	3470	12 5	pit fill containing stone artifacts, calcined bone, charcoal lumps and rock spalls
JfEl-1	Cordeau = Dia-1	charbon de bois; charcoal	3470	16 0	aire L
21MA6	Haarstad Mound	freshwater mollusc shell; coquille de mollusque d'eau douce	3475	19 5	Arvilla phase
DkSf-2	Millard Creek	charcoal; charbon de bois	3480	19 5	Area D, Layer 3b, 1.7-2.1 m depth
26WA1435	Thompson	charcoal; charbon de bois	3480	11 0	composite sample, particles scattered through unit F, both F1 and F2, Martis complex
26CH18	Lovelock Cave	human bone collagen; collagène osseux humaine	3480	60	burial F-5

EcNI-1	Mortlach	charred bison bone; os de bison carbonisé	3480	20 0	Zone 8, buried C horizon, pale yellow coarse sand, 74-84" (190-215 cm) depth
5CR1	Draper Cave	charcoal; charbon de bois	3480	65	126 cm depth
RbJu-1	Port Refuge	charcoal; charbon de bois	3480	14 0	driftwood, Upper Beaches component, interior of Feature 21
15JF550	Guthrie Beach	unknown; inconnu	3480	10 0	feature 81, Lone Hill
BhFl-1e	Pointe-du-Buisson, Station 4	charbon de bois; charcoal	3480	13 0	alignement de 2 foyers appartenant probablement à une même unité d'habitation
ME54.1	Burnham	charcoal; charbon de bois	3480	13 0	associated with a large, rhyolite biface tip
42BO365	Remnant Cave	wood; bois	3485	37 0	arrow mainshaft, stratum 6, about one foot above the charcoal sample dated by SI-2336
EaLa-1	Whitemouth Falls	bison bone collagen; collagène osseux de bison	3485	17 5	component 2
36LU49	SES-8	unknown; inconnu	3485	95	
18KE9	Andelot #4	marine shell; coquillage	3485	80	with no associated diagnostic artifacts
IfPo-1	Wentzel Lake	plant remains; restes de plantes	3490	10 0	large continuous band of humic matter with a concentration of flakes in component IIa
21LN2	Pedersen Village	charcoal; charbon de bois	3495	85	Late Archaic occupation level below a Middle Woodland level
EgKx-1	Wanipigow	charcoal; charbon de bois	3495	15 5	Wanipigow Lake area, Unit 24, 47-55 cm depth, post mold no. 2
35DO265	Apple Creek Campground	charcoal?; charbon de bois?	3500	11 0	
NA-5607	Walnut Canyon	wood; bois	3500	10 0	split-twig figurines, north wall of Walnut Canyon, combined sample from six specimens
14CF330	Williamson	charcoal; charbon de bois	3500	10 0	lower unit II, 5.0 ft depth, El Dorado
13DW-VP	Willard Cave	bone collagen; collagène osseux	3500	60	Level 6, south talus eoulis, 76-91 cm level, 168 cm depth
15KT6	Combs	charcoal; charbon de bois	3500	11 0	Feature 4, a firepit, 17 cm depth
KdDq-13	Site Thirteen	charred animal remains; restes d'animaux carbonisés	3500	20 5	dripped on sand, 10 cm depth, above permafrost
EiBi-5	Pointe-Rocheuse	charbon de bois; charcoal	3500	30 0	puits N-14, W-04, fragments de bois prélevés dans de petites lentilles de sol H présentes dans l'horizon Ae-1, gris rosâtre
FbNs-1	Harder	bison bone collagen; collagène osseux de bison	3505	10 5	cultural layer in paleosol in dune depression, unit 5n/0w
18KE127	Plummer #21	marine shell;	3505	50	with no associated diagnostic

		coquillage			artifacts
ME74.8	Eddington Bend	charcoal; charbon de bois	3505	30	cremation 8
AKNOB002	Iyatayet	charcoal; charbon de bois	3509	23 0	charcoal flecks in mud, section IYZ-5B, representing the Denbigh Flint Complex
45CL31	Vancouver Lake	charcoal; charbon de bois	3510	10 0	
45KI428	West Point	charcoal; charbon de bois	3510	80	
LA-9224	Querencia	charcoal; charbon de bois	3510	16 0	
EgKx-1	Wanipigow	charcoal; charbon de bois	3510	13 5	Wanipigow Lake area, Unit 24, 40-55 cm depth, post mold no. 1
3SB29	Sliding Slab Rock Shelter	plant remains; restes de plantes	3510	90	square N3/E1, levels 18-22, 170-220 cm depth, stratum 8
20SA620	Bridgeport	charcoal; charbon de bois	3510	80	unit 107N/101W, levels 10-11
33JA159	Rais Rockshelter	unknown; inconnu	3510	13 0	
33MU304	Hunter I	unknown; inconnu	3510	80	
18KE74	Bissel-Ferris #50	marine shell; coquillage	3510	75	with no associated diagnostic artifacts
CT132-44	Woodchuck Knoll	charred wood; bois carbonisé	3510	14 0	hearth overlain by ca. 1.1 m of floodplain silt loan, 7.6 m asl
19WR517	Millbury III	charcoal; charbon de bois	3510	60	feature 1A, 40 cm depth
EcNx-1a	Gray	human bone collagen; collagène osseux humain	3515	10 5	cemetery, burial unit 84, with a single bone tool among the ochre-stained bones
AKXPM001	Hot Springs	unknown; inconnu	3520	95	
AKKOD324		charcoal; charbon de bois	3520	60	erosion profile
AKFYU-VP	Black River bison	bison bone collagen; collagène osseux de bison	3520	40	male bison skull with both horn sheaths
DkSf-2	Millard Creek	charcoal; charbon de bois	3520	11 0	Area C, Layer 3, 1.5 m depth
DeRt-2	Pender Canal	human bone collagen; collagène osseux humain	3520	17 0	Main Midden deposit, 36.50S/19.00W, 90-100 cm depth, Burial 85-17
EdRi-11	Landels	deer bone collagen; collagène osseux de cerf	3520	70	upper Stratum II
CAIny372	Rose Spring	charcoal; charbon de bois	3520	80	84-92" depth, either Early Rose Spring or Pinto
48JO357	Middle Fork	charcoal; charbon de bois	3520	10 0	hearth
FbNp-22	Cut Arm	bison bone collagen; collagène osseux de bison	3520	60	occupation 8, lower level, with no diagnostic artifacts but most likely affiliated with the McKean series
5CR1	Draper Cave	charcoal; charbon de bois	3520	70	71 cm depth

39FA302	George Hey	charcoal; charbon de bois	3520	70	feature 6, a slab-lined basin-shaped hearth in the upper of two main cultural horizons, with a pitted mano and a Duncan point
5LO101	Dipper Gap	charcoal; charbon de bois	3520	85	Layer D, bottom, feature 10, 50 cm depth
PjLd-5	Matoos	fox bone collagen; collagène osseux de renard	3520	90	feature 16, in house floor, 18 m asl
36LY37	Canfield Island	unknown; inconnu	3520	75	
36BU23	Lower Black's Eddy	charcoal; charbon de bois	3520	10 0	
19BR119	Bear Swamp 2	charcoal; charbon de bois	3520	18 0	with small triangle, Orient, and Susquehanna points
33RO186	Harness 28	unknown; inconnu	3525	95	
AKXMK059	Kukak Bay Refuge	charcoal; charbon de bois	3530	70	village midden at base, geological beach terrace sample for sea level estimate
AKSUM025	North Point	wood; bois	3530	70	test pit 9, 40-44 cm depth, older than artifacts, dating the base of a wood layer in stratigraphic unit 3
35LK2737	Big M	charcoal; charbon de bois	3530	10 0	picked from a soil sample from feature 1, an oval hearth
10AA68	Dry Creek Rockshelter	bone collagen; collagène osseux	3530	85	Level 13, a layer of tightly packed rockfall and yellow-brown sandy sediment with five northern side-notched points and a leaf-shaped notched point
EE:12:2	Hereford Dairy Ranch	charcoal; charbon de bois	3530	10 0	rock-lined hearth exposed in wall of wash in brown alluvial sand 30 cm above basal contact with gray mudstone, with no associated artifacts
24PA504	Myers-Hindman	charcoal; charbon de bois	3530	11 0	Level 4, a rock-lined hearth
5PE648	Recon John Shelter	charcoal; charbon de bois	3530	10 0	grid A-1, levels 20-22, stratum C/C'
23BE125	Rodgers Shelter	charcoal; charbon de bois	3530	80	horizon 3
11J814	Little Muddy Rock Shelter	charcoal; charbon de bois	3530	14 0	Crab Orchard I
28BU56	Savich Farm	charcoal; charbon de bois	3530	70	feature 135, a terminal Archaic hearth pit sealed off from the Woodland component by at least 10.2 cm of soil
19NF-?	Ponkapoag	charcoal; charbon de bois	3530	80	with Archaic Notched points
42SV6	Sudden Shelter	charcoal; charbon de bois	3535	95	middle of stratum 17, dating rapid increase in use of the site
FbNp-16	Newo Asiniak	bone collagen; collagène osseux	3535	23 0	Level 7, processing area, well sorted sand and gravel, 95-100 cm depth

EfKv-6	C5-b	charcoal; charbon de bois	3535	17 5	Unit 3s1e, Level 6, upper hearth, 18-23 cm depth
QkHn-12	Field School	charcoal; charbon de bois	3535	90	feature 6, an axial-passage tent ring, 6-7 m asl
19BR-?	Read Farm B	charcoal; charbon de bois	3535	13 0	feature A-2, a hearth uncovered near the plow zone
45SA300	Pointless	charcoal; charbon de bois	3540	10 0	
FhNg-25	Below Forks	charcoal; charbon de bois	3540	70	Paleosol #11
12DA9	Prairie Creek	wood; bois	3540	90	stratum 7, 0.6 m depth
33PK153	Maderia Brown	unknown; inconnu	3540	60	
33RO385	Sabre Farms	unknown; inconnu	3540	13 0	
46NI275	GAI No. 32	unknown; inconnu	3540	60	
19SU-?	Boylston Street Fish Weir	sediment; sédiment	3540	70	master core 8, sample 36, 0.24 m above sea level
ME9.16	Great Diamond Island	charcoal; charbon de bois	3540	19 0	Area B, unit 2R1, feature 18, stratum II
NY	Engelbert	charcoal; charbon de bois	3545	10 0	S-2A, feature 39, with Susquehanna Broad points in levels above and below S-2A, Frost Island phase
35CS43	Bandon	sediment?; sédiment?	3550	90	core 5
35DO383	Susan Creek Campground	charcoal; charbon de bois	3550	60	composite sample
CASDi149	C.W. Harris	charcoal; charbon de bois	3550	15 0	trench 1, level 7, 1.1 m below datum, providing young limit on level between La Jollan and Diegueño periods
24HL946	Laulo	sediment; sédiment	3550	70	feature B8, analytic unit 1
24CB1332	Spiro	sediment; sédiment	3550	70	feature 34
32MZ58	Mondrian Tree	charcoal; charbon de bois	3550	85	bulk, zone 7, BHT-3, F-250, 280 cm sd
KdLw-1	Mosquito Lake Overlook	charcoal; charbon de bois	3550	12 5	hearth, 1 m in diameter, 10-15 m from stratified bank, 5 cm depth
47GT24	Osceola	human bone; os humain	3550	12 5	burial 5, 2.5-5 ft depth, below a layer containing isolated fragments of late Woodland pottery and broken chert points
15PO17	Skidmore	unknown; inconnu	3550	60	zone C, Maple Creek
33AS?	Ringler	wood	3550	70	dugout canoe in a peat bog
BhFl-1e	Pointe-du-Buisson, Station 4	charbon de bois; charcoal	3550	20 0	à environ 30 cm de la surface, au-dessus de l'argile, sous un foyer appartenant à un alignement de 2 foyers formant probablement une unité d'habitation
CT54-23	Carrier	unknown; inconnu	3550	90	
19MM147	Wapanucket 8	charcoal; charbon de bois	3550	13 0	feature 18, a hearth in subsoil but excavated into sand layer below, 45-72 cm depth
26NY301	Gatecliff Shelter	charcoal; charbon de bois	3555	85	horizon 8, hearth D, with juniper charcoal



5ST98	Porcupine Peak	unknown; inconnu	3555	21 5	
23CL11	Nebo Hill	plant remains; restes de plantes	3555	65	feature 2
AKXMK115	Aguchik Island Cove	charcoal; charbon de bois	3560	80	geological beach terrace sample for sea level estimate
AKCRG381	Wolf's Lair	wood; bois	3560	60	unmodified log #308 in sea cave
DhRq-21	Pitt River	charcoal; charbon de bois	3560	18 0	Mackenzie deposit, Block D, unit 2, Layer D
EhPv-?	Banff	charcoal; charbon de bois	3560	13 5	upper part of natural layer 12, a silty BC horizon associated with occupation 6
10GG191	Crutchfield	bone collagen; collagène osseux	3560	90	feature B2, a small cobble feature
PeJv-3	Parker	charcoal; charbon de bois	3560	80	Feature 3, a hearth within a dwelling, 39.29-39.52 m asl
13BN103	Logansport	charcoal; charbon de bois	3560	80	feature 7, a large rather shallow basin-shaped feature, 1.7 m depth, in the most deeply buried cultural stratum
15AD70	Rogers Cave	wood; bois	3560	11 0	burned torch fragments
15CR73	Grayson	unknown; inconnu	3561	86	Maple Creek
AKAFG207	Sukoi Bay Terrace	charcoal; charbon de bois	3570	60	lower component, test pit A, stratum 7, 128 cm depth
DgRr-6	Glenrose Cannery	charcoal; charbon de bois	3570	95	Component II, XU 1/5 balk, Level 55, 270 cm depth
24CA74	Sun River	charcoal; charbon de bois	3570	80	Level I, unit 43N/419W, feature E bottom, 0-15 cm depth, a rock-filled pit hearth with fire-broken rock, a core fragment, and flakes
24PH3396	Cree Crossing	charcoal; charbon de bois	3570	40	Pleistocene terrace, feature 1, filled with heat-altered rock, organically stained sediment, burned bone and charcoal flecks
5LR161	Phoebe Rock Shelter	charcoal; charbon de bois	3570	60	Level 3, feature 14, a large hearth
36PI7	Brodhead-Heller	charcoal; charbon de bois	3570	10 0	Hearth 2, with 2 Perkiomen jasper scrapers, and jasper chips
6HT117	Bugbee-Hathaway	unknown; inconnu	3570	23 0	
AKXBD020	Village (RaEc-2)	charcoal; charbon de bois	3580	14 0	Level 2, 9-11 cm depth, square N25/E5
AKCRG433	Thorne River	wood; bois	3580	60	wood-stake fish weir or trap
FbNp-10	Red Tail	bison bone collagen; collagène osseux de bison	3580	80	Level 11, unit 124n/108e, SW quad, Ahkb22, very dark fine sandy loam, 110-112 cm depth
RcJh-3	Cardigan Strait	spruce charcoal; charbon d'épinette	3580	15 0	driftwood in coarse dry gravel in and around a hearth in Ruin 2
20MB30	Holcombe	charcoal; charbon de bois	3580	20 0	feature 3, a fire pit containing charcoal and some flint debris
33CS-?	Eppley Rockshelter	unknown; inconnu	3580	65	

BhFn-7	Cadieux	charbon de bois; charcoal	3580	14 0	aire B, fosse dépotoir
CAAla-?	West Berkeley	charcoal; charbon de bois	3585	11 5	large shell mound, 156-168" depth
IfPo-1	Wentzel Lake	plant remains; restes de plantes	3585	60	discontinuous bands of humus, unit A, about 20 above S-1245
GaEl-3	Lac Caniapiscaw	charcoal; charbon de bois	3585	95	pit c, from a dense concentration of charcoal at the bottom of the pit. A single quartz fragment was found within the pit fill.
AKAMR001	Onion Portage	charcoal; charbon de bois	3590	12 0	between Bands 5 and 6, isolated level
DjSp-1	Yuquot	charcoal; charbon de bois	3590	19 0	Zone I, stratum Ia, level 36, 5.4 m below crest of midden, in wet sand and pebbles with waterworn artifacts and faunal remains, ca. 6 m asl
DgRx-5	Duke Point	human bone collagen; collagène osseux humain	3590	12 5	component II, mass burial, individual #6, east quadrant of unit 215, in soil and shell approaching bedrock (B78-83)
DgRr-1	Crescent Beach	charcoal; charbon de bois	3590	85	south trench, layer C-V1, unit Lne, 100-110 cm depth
24PH2886	King	bison bone collagen; collagène osseux de bison	3590	80	XU-6, occupation 1
HiLp-1	Kame Hills	bison bone collagen; collagène osseux de bison	3590	90	sand-humus matrix, test pit 5, Level 4, 25 cm depth
13ML-VP	Waubonsie	charcoal; charbon de bois	3590	75	stream channel alluvium, Hatcher Member, De Forest Formation, base of the section
28WA15	Miller Field	charcoal; charbon de bois	3590	10 0	pit 5, feature C-F60, a circular, sub-conical pit with Perkiomen points
BhFl-1a	Pointe-du-Buisson, Station 1	charbon de bois; charcoal	3590	90	Hector-Trudel, puits P-77, associé à un foyer
ME39.4	Somerville	charcoal; charbon de bois	3590	60	fire-cracked rock feature
DILg-33	The Forks	fish bone collagen; collagène osseux de poisson	3595	80	cultural horizon, Unit 14, 3.0 m depth, same horizon as BGS-1483
9FL100	Plant Hammond	freshwater shell; coquille de mollusque d'eau douce	3595	90	feature 10, a sub-mound midden with Swift Creek and Candy Creek sherds
KdDq-10	Loon	charred animal remains; restes d'animaux carbonisés	3597	78	cinder-like material of fat and sand from upper limit of permafrost
DgRs-2	Tsawwassen	human bone collagen; collagène osseux humain	3600	60	Zone D, burial D-48, Trench D1, unit D1, in pit from Layers DE/DH contact or lower Layer DE
5RB312	La Posada	charcoal; charbon de bois	3600	13 0	feature 3, firepit
14CF330	Williamson	charcoal; charbon de bois	3600	19 0	lower unit II, 4.6 ft depth, El Dorado

22CR504	Teoc Creek	charcoal; charbon de bois	3600	16 0	square 10S-10E, Level 4, 0.55-0.67 m depth
46MS180	Henderson School	unknown; inconnu	3600	60	
36PI14	Zimmerman	charcoal; charbon de bois	3600	80	Hearth 59, level 4, with a Susquehanna Broad spearpoint
19BR56	Bay Street I	charcoal; charbon de bois	3605	14 5	macine unit I
JcRw-13	Julian	charcoal; charbon de bois	3610	11 0	component 3/4, square 67, 8N/1W, hearth feature 13.111.2
24LC1325	Wolverine Heights	charcoal; charbon de bois	3610	40	dispersed across all test excavation units, believed to represent a natural fire
24BW675	Pilgrim	bison bone collagen; collagène osseux de bison	3610	29 0	stone circle 11
DjOm-?	Battle Creek	soil; sol	3610	10 0	palaeosol in alluvial fan
EiNs-4	Sjovold	bison bone collagen; collagène osseux de bison	3610	11 5	Layer XXI, unit 5, buff-brown clay, sedimentary bed 14, 402-413 cm depth
29.0	Honest Injun Cave (GS3)	charcoal; charbon de bois	3610	13 0	zone F, 374 BSD, with few cultural remains but assigned to San Jose
36BV292	Connoquenessing	charcoal; charbon de bois	3610	14 0	feature 54
SgFm-16	Bight	muskox bone collagen; collagène osseux de boeuf musqué	3610	60	midden just outside the southwest wall of dwelling feature 1, 21 m asl
19WR66	Paquette	charcoal; charbon de bois	3610	90	feature C, 20 cm depth, with charred nutshell, burned bone, and a Snook Kill point base fragment
EbOp-16	Cactus Flower	charcoal; charbon de bois	3615	95	occupation 6, unit 5, Sq. 0s4w, Feature 21, a basin-shaped hearth
26WA196	Kramer Cave	plant remains; restes de plantes	3620	80	Z-twined basketry, part of a cache, grotto 3, section H, 48" depth
FjPh-101	Flach	charcoal; charbon de bois	3620	32 0	northwest corner of northeast test block, at the bottom of the fossil bison level
KeNi-4	Whitefish Lake	charcoal; charbon de bois	3620	12 5	Level 5, in sand, lowest level, southwest end of site
32ML111	Anderson Tipi Ring	charcoal; charbon de bois	3620	90	2 m west of transit station #3
KkLn-2	Grant Lake	charcoal; charbon de bois	3620	10 5	square A, Feature 2, from concentration in duff, 25 cm depth
23CP40	Collins Rockshelter	charcoal; charbon de bois	3620	90	general fill near the floor of the shelter, 72-78" depth, with no diagnostic artifacts
CaFg-4	Delacroix	charbon de bois; charcoal	3620	12 0	secteur B, puits D-40/41, foyer, dans une couche noire charbonneuse

NH	Smyth	charcoal; charbon de bois	3620	11 0	fire pit with a shattered spear point and flint chips
ME91.1	Hathaway	charcoal; charbon de bois	3620	15 0	component III, feature III
HdDe-5	Lac de la Hutte Sauvage	calcined bone; os calcinés	3620	65	tent structure 1, square 0/2E, within fill of a large central depression
CACal236	Commanche	human bone collagen; collagène osseux humaine	3630	30 0	
26PE450	Sand Island	charcoal; charbon de bois	3630	60	feature 2
5RB454	Hanging Hearths Shelter	charcoal; charbon de bois	3630	70	occupation level?, context 98
48FR1468	McIntosh	charcoal; charbon de bois	3630	70	feature 3, hearth matrix
39FA68	Kolterman	charcoal; charbon de bois	3630	17 5	component B, trench B, square 2, charcoal-stained sand with McKean points
DdJf-__5	Stevens	charcoal; charbon de bois	3630	55	feature
36NM80	Bachman	unknown; inconnu	3630	21 0	
42WN420	Cowboy Cave	charcoal; charbon de bois	3635	55	stratum 4c, with Gypsum points and split-twig figurines
PgHb-7	Arnakadlak	caribou bone collagen; collagène osseux de caribou	3635	14 0	test pit, 15-25 cm depth
26NY345	Triple T Shelter	charcoal; charbon de bois	3640	85	charcoal from oxidized zone in stratum 2B
41.0	San Pedro Springs	charcoal; charbon de bois	3640	13 0	House 3 floor, zone 4, south part of the site
EaLg-9	Wright	bison bone collagen; collagène osseux de bison	3640	10 0	section A, 1.4 m depth, in a palaeosol developed in silty clay
47RI4	Price III	human bone; os humain	3640	15 0	feature 25, 2.0 ft depth, burial 22
NiHf-1	Kaleruserk = Parry Hill	caribou bone; os de caribou	3640	12 3	house ruin on 52 m terrace
36CL52	State Road Ripple	unknown; inconnu	3640	60	
35CLT47	Palmrose	charcoal; charbon de bois	3650	10 0	Unit D, level 4
45FR46H	Seed Cave	plant remains; restes de plantes	3650	11 0	
EeOv-68	Saahkómaapína = Boy Chief	bone collagen; collagène osseux	3650	80	Block 4, occupation 1
14BU9	Snyder	charcoal; charbon de bois	3650	14 0	zone D, 88-140 cm depth, a refuse pit representing the El Dorado phase
EcKw-14	Two Eagles	bone collagen; collagène osseux	3650	40	cultural layer
23HI216	Phillips Spring	charcoal; charbon de bois	3650	70	unit E, first level of pit feature 424, 2.8-2.9 m below datum
BbGn-__2	McIntyre	charcoal; charbon de bois	3650	85	Feature 5
BjGh-__3	South Peninsula 1	charcoal; charbon de bois	3650	10 0	hearth pit

BgFo-___1	Glengarry Cairn	charcoal; charbon de bois	3650	90	lower component
ME90.2D	Sharrow	charcoal; charbon de bois	3650	11 0	feature 7, stratum 4, Susquehanna Archaic
ME73.10	Young	charcoal; charbon de bois	3650	65	component 2, feature 3, northwest quadrant, 40-45 cm depth, Susquehanna Archaic
15MF36	Cloudsplitter Rockshelter	unknown; inconnu	3656	60	
AKXHP308	Punyik Point	charcoal; charbon de bois	3660	15 0	H-16, southeast quad, lower part of a midden filling a house depression, representing the Denbigh Flint Complex
42UT104	Spotten Cave	charcoal; charbon de bois	3660	11 0	zone Ie
EfKv-39	LM-8	charcoal; charbon de bois	3660	75	component 5, associated with Raddatz occupational debris
13CD10	Rock Run Shelter	charcoal; charbon de bois	3660	60	50-52" depth
6LF33	Fenn	unknown; inconnu	3660	15 0	
6LF7	Lovers Leap	unknown; inconnu	3665	18 0	
35LNC62	Yaquina Head	charcoal; charbon de bois	3670	70	feature 12 in shell, dating the onset of intensive shellfish exploitation
DjPm-36	Welsch	bison bone collagen; collagène osseux de bison	3670	13 0	buried stone circle, 90-100 cm depth
48FR2064	Sandtrap	charcoal; charbon de bois	3670	12 0	possible housepit
36PI22	Peters-Albrecht	charcoal; charbon de bois	3670	10 0	feature 6, a fire pit with the base of a Lehigh type point, considered transitional between Archaic and Woodland periods
CkEk-2	Laforêt	charbon de bois; charcoal	3670	90	fosse elliptique de 1,8 cm de longueur, 0,8 m de largeur et 37 cm de profondeur, contenait de quelques fragments d'os et de débris végétaux
10OE2614	Mud Springs	charcoal; charbon de bois	3680	10 0	thin occupational surface below House 1
10BO1	Silver Bridge	charcoal; charbon de bois	3680	10 0	charcoal-stained area with a rock feature that may be a hearth
EiPo-51	Hitching Post Ranch	bison bone collagen; collagène osseux de bison	3680	75	bone bed surrounding a spring vent
42SA21153	Turkey Pen	plant remains; restes de plantes	3680	60	warp-faced plain weave sandal (PN 524.2) found under large roof spall, top of unit 4
41VV456	Hinds Cave	charcoal; charbon de bois	3680	80	analysis unit 3, area B, block B, lens VIIA
KkLn-4	Migod	charcoal; charbon de bois	3680	16 0	sand, 8N/4E, Level 4
13PM40	A.C. Banks	charcoal; charbon de bois	3680	65	196-226 cm depth

13JK20	Henry Schnoor Rockshelter	charcoal; charbon de bois	3680	70	square S5A, levels 26-29, 52-58" depth, 2.5 ft below culture-bearing horizons, at the beginning of a snail fauna sequence
11PK488	Brush College School	wood; bois	3680	70	feature 2-01
QkHn-17	Twin Pond	charcoal; charbon de bois	3680	90	driftwood? in feature 1, an axial-passage tent ring, 6-9 m asl
15JO19	Sparks Rockshelter	charcoal; charbon de bois	3680	85	stratum 2
33LE165	Brady Run Rockshelter 3	unknown; inconnu	3680	13 0	
NH38-6	Eddy	charcoal; charbon de bois	3680	85	feature at the base of the upper stratum, a presumed Woodland context but without associated pottery
EaNg-1	Avonlea	bone collagen; collagène osseux	3685	13 5	hearth, unit 6, 10-15 cm below the plow zone
18KE44	Andelot #11	marine shell; coquillage	3685	75	with no associated diagnostic artifacts
DfRu-8	Helen Point	charcoal; charbon de bois	3690	70	Carlson's assemblage 3
CALak261	Houx	charcoal; charbon de bois	3690	13 0	hearth, Feature 11, ca. 90" depth, in buried A horizon
EaOp-4	Stampede Camp	charcoal; charbon de bois	3690	95	unit 17, feature 5, a large rock-filled basin hearth
BbHj-__2A	Knechtel I	charcoal; charbon de bois	3690	45	stratum 5, square E
10IH369	Island Bar Midden	soil extract; extrait de sol	3695	55	bulk humates from a lower paleosol with cultural materials
GbTo-33	Lachane	charcoal; charbon de bois	3700	15 0	Area E, Trench I, Level 9, burial features in shell dump area
35DS219	Hot Springs Boat Ramp	charcoal?; charbon de bois?	3700	90	feature 6, pit
35GM91	Morris	charcoal; charbon de bois	3700	85	stratum 4
10CR60	Road Creek Waterhole	soil; sol	3700	70	Bag 5, 58N/10E, Level 80, 6a cm below unit datum
5LR252	Spring Gulch	charcoal; charbon de bois	3700	10 5	feature 33, basin-shaped hearth near top of level 5, Loc. 1
32DU336	Alkali Creek	soil; sol	3700	40	humates from soil in excavation unit 8, stratigraphic unit IIb, layer 10/11, paleochannel, 138-153 cm below datum
QkHn-38	Hind	caribou bone collagen; collagène osseux de caribou	3700	70	feature 4, an unidentified feature type, 7-8 m asl
ME30.42	Goddard	charcoal; charbon de bois	3700	50	S195/W65, feature 3, with a plummet and pecking stones, Moorehead
24CB1266	Buckeye	sediment; sédiment	3710	60	feature C3
5MT2242	Ridgeline Camp	charcoal; charbon de	3710	90	

		bois			
DgMr-1	Long Creek	charcoal; charbon de bois	3710	70	Level 4, lower portion, within coarse sand and gravel, Grid B, 20N56½E
11S650	George Reeves	charred wood; bois carbonisé	3710	12 0	fill of Titterington phase pit, feature 25
BIDb-10	Beausejour Beach	walrus bone collagen; collagène osseux de morse	3710	50	organic sandy matrix on the low-tide beach
15BE249	Watson Gravel	unknown; inconnu	3715	40	
45OK11	Narrows	charcoal; charbon de bois	3720	16 0	Kartar phase
26WP230	Amy's Shelter	charcoal; charbon de bois	3720	70	Brown VII zone, C10/C11 balk, ca. 180-200 cm depth, with stemmed indented-base points and small flake tools
24PH8	Johnson Bison Kill	human bone collagen; collagène osseux humain	3720	80	test pit 4
19WR-?	Cedar Swamp 3	charcoal; charbon de bois	3720	70	processing area for deer and fish with Atlantic points
24SW264	Cremer	bone collagen; collagène osseux	3730	11 0	trench A, soil horizon 9Akb, 200 cm depth
FaNr-2	Grandora	paleosol; paléosol	3730	80	cultural layer, 1.4 m depth
33SC282	Ira Bays Rockshelter	unknown; inconnu	3730	90	
15PE8	Hall Shelter	unknown; inconnu	3730	16 0	Zone IVA, level 9
46LG164	Dingess Crossing South	unknown; inconnu	3730	60	
JcRw-3	Klondike	charcoal; charbon de bois	3740	11 0	Area B, Component 4, square 40, Horizon H, clayey loam under 3 cm of bone in hearth
26LN-?	O'Malley Shelter	charcoal; charbon de bois	3740	17 0	Level 3
10FR4	Weston Canyon Rockshelter	charcoal; charbon de bois	3740	14 7	Layer 7
EePl-218	Donald	bison bone collagen; collagène osseux de bison	3740	15 0	processing pit feature
20BE306	Rock Hearth	charcoal; charbon de bois	3740	80	feature 48, a structure, east wall trench
46PU197	Blue Three	unknown; inconnu	3740	50	
8SJ46	Summer Haven	marine shell; coquillage	3740	12 0	test pit 1, square B, 18-24" level, with steatite sherds, above Orange Incised sherds at 36-42" level
ME90.3	Brockway	charcoal; charbon de bois	3740	10 0	red ochre stained feature 1, stratum 3, Moorehead
AKKTZ122	Cape Espenberg	charcoal; charbon de bois	3750	80	occupation layer in an ephemeral camp, 18-22 cm depth
DkSg-2B	Mission Hill	charcoal; charbon de bois	3750	80	mound III, lower level, 2.5-3' depth
45SJ414	Staoik'w	sediment charcoal; charbon de bois	3750	60	

FfQi-1	Whitehorse Creek Rockshelter	charcoal; charbon de bois	3750	12 0	stratified deposits, a composite sample, 35-45 cm depth, with a hearth feature at 45 cm depth
42WN1666	Down Wash	charcoal; charbon de bois	3750	12 0	stratum 11, loose charcoal, with no associated diagnostics
EaOq-17	Southridge	bone collagen; collagène osseux	3750	13 0	sub-area B, scattered in units 12s0w and 12s2w
48LN1296	Shute Creek	soil; sol	3750	90	area E, feature 7
48SW2590	Maxon Ranch	charcoal; charbon de bois	3750	90	component II
LA-9261	Sandoval Springs	charcoal; charbon de bois	3750	16 0	F1, 2, 4, 6
36LU105	Gould Island	unknown; inconnu	3750	11 0	
SfFk-14	Delta Point	willow charcoal; charbon de saule	3750	50	feature 1, a dwelling
19PL-?	Oak Island	charcoal; charbon de bois	3750	10 0	pit in the upper of two Archaic components, with Susquehanna and Atlantic points
ME17.43	Stanley	swordfish bone collagen; collagène osseux d'espardon	3750	80	bone midden, with contracting stem points, gouges, celts, a barbed bone point, many plummets, and a copper point or knife
DhDn-2b	Du Ruisseau, Station B	charbon de bois; charcoal	3750	18 0	en association avec le foyer, entre 27 et 32 cm sous la surface
DfSi-4	Ch'uumat'a	charcoal; charbon de bois	3760	80	back trench, N44-46/W86-88, 4.0 m depth, base of crushed shell, at the base of the midden
42KA265	Captains Alcove	charcoal; charbon de bois	3760	75	hearth 1, occupation A, subarea 2 of shelter
48FR424	Sand Wash	charcoal; charbon de bois	3760	10 0	feature T105, a possible housepit
5GN222	Dry Creek	charcoal; charbon de bois	3760	21 0	cultural feature
DgMp-65	Site 9	bone collagen; collagène osseux	3760	75	Level 3
47WN1	Reigh	human bone; os humain	3760	12 5	burials in a gravel layer with no stratification, 1.5-5 ft below a bulldozed surface, with Old Copper and Glacial Kame artifacts
AKBEN053	Kuzitrin Lake	charcoal; charbon de bois	3770	80	feature 37, level 4, representing the Denbigh Flint Complex
AKPET205	Straight Creek Weir	wood; bois	3770	80	wood-stake fish weir
45ST207	Kasimer or Casimir	charcoal; charbon de bois	3770	10 0	
32BO213	Red Fox	charcoal; charbon de bois	3770	90	rock-filled basin-shaped firepit, 3.4 ft depth, in component 4, at top of soil zone below aeolian zone, with Duncan points and a possible dwelling



15BE272	Glacken	charcoal?; charbon de bois	3770	80	pit feature with a dense concentration of Late Archaic artifacts
36WH297	Meadowcroft Rockshelter	charred plant remains; restes de plantes	3770	90	basketry, upper third of stratum IIb, feature 46 upper
BhGc-___1	White Lake 1	charcoal; charbon de bois	3770	60	cultural layer
ME42.1	Nevin	bone collagen; collagène osseux	3770	40	grave 5, burial V
AhHk-__54	George Davidson	charcoal; charbon de bois	3780	90	pit feature 3, in occupation layer capped by riverine silt, Satchell complex
36LU90	Jacobs	unknown; inconnu	3780	60	
DjRi-5	Esilao	charcoal; charbon de bois	3790	13 0	33'S/12'7"W, 69" depth, 1.5' above M-1544
TjFf-5	Daylight	willow charcoal; charbon de saule	3790	95	hearth feature
AKXMH072	Whitmore Ridge	charcoal; charbon de bois	3800	18 0	A2b horizon of buried paleosol, overlying cultural deposit
DgRs-1	Beach Grove	charcoal; charbon de bois	3800	60	Layer IV-B, shelly stratum
5LR144	Kinney Spring	charcoal; charbon de bois	3800	70	L.87-97 R24, feature 9
39LK7	Hilde	bone collagen; collagène osseux	3800	11 0	burials of 17-18 individuals in 7-10 graves, with many bifacial preforms and some use of red ochre
23BU21B	Snodgrass	charcoal; charbon de bois	3800	16 0	structure 17, 2.36 m below datum
11P4	Rench	charcoal; charbon de bois	3800	80	scattered flecks, 1.5 m depth, stratum 3, with no culturally diagnostic artifacts but with chipped stone debitage
QkHn-27	Rocky Point	willow? charcoal; charbon de saule?	3800	90	feature 17, an amorphous tent ring, 6-7 m asl
36HU1	Sheep Rock Shelter	charcoal; charbon de bois	3800	18 0	Level 6, a well defined fire pit, 98.5-105" below datum
GhGk-4	Poste-de-la-Baleine	charcoal; charbon de bois	3800	70	structure 17, square DD85, level III
BkGg-14	Morrison's Island 3	charcoal; charbon de bois	3800	90	hearth in sq. T4-DD, 25-35 cm depth
TiFo-1	Kettle Lake	charcoal?; charbon de bois	3800	80	cultural layer, 97 m asl
7NC-E-41	Delaware Park	charcoal; charbon de bois	3800	10 0	semisubterranean pit house with a grooved axe and biface cache
6LF1	Hopkins	unknown; inconnu	3800	12 0	
45CA1	Waatch	charcoal; charbon de bois	3810	60	lower bracketing date for a complex of shell strata exposed on the upland side of the area
10MA143	Scaredy Cat Cave	ash; cendre	3810	70	test unit 2, 30 cm depth
FjPi-29	Strathcona	bone collagen; collagène osseux	3810	80	
48SW4381	Paradox Ridge	unknown; inconnu	3810	70	component 1, BF2
5GN10	Willow Creek	charcoal; charbon de	3810	13	cultural feature

		bois		0	
ME15.231	Rosie	charcoal; charbon de bois	3815	90	S17/E10, SP4, feature 7, with a plummet, Moorehead
AKHEA130	Walker Road	charcoal; charbon de bois	3816	79	palaeosol 2, ca. 30 cm depth
42TO13	Danger Cave	organic matter; matière organique	3819	16 0	cultural level 4, charred bat guano, twigs, plant fragments, 48-52" depth, feature 5
45KI435	Mule Spring	charcoal; charbon de bois	3830	70	
15McL12	Kirland	unknown; inconnu	3830	80	
15BH103	Zilpo Cemetery	charcoal; charbon de bois	3830	70	hearth
28HU-?	Byram	charcoal; charbon de bois	3830	10 0	with straight stemmed points
28CU8	Fralinger 1	charcoal; charbon de bois	3830	10 0	stratum 2, small hearth with large square stemmed projectile points and a chipped celt, Susquehanna
TjFd-3	West Wind	willow charcoal; charbon de saule	3830	95	Feature 6
KeDq-5	Annawak	charred animal remains; restes d'animaux carbonisés	3834	77	cinder-like material in sand
DhRp-7	Fort Langley	charcoal; charbon de bois	3835	11 0	Feature 89
15MF379	Buck Creek Shelter	unknown; inconnu	3840	60	
15PI11	Slone	charred wood; bois carbonisé	3840	12 0	Feature 4, an earth oven in Zone 2, a heavy midden band, 127 cm depth
9McI-?	Sapelo Shell Ring	marine shell; coquillage	3840	95	relatively undisturbed shell ring ca. 50 m diameter, 2-3 m high, 1 m depth
19PL540	Plymouth Street	charcoal; charbon de bois	3840	70	with Small Triangle points
26CH16	Hidden Cave	plant remains; restes de plantes	3850	11 0	stratum 2, but probably derived from stratum 4 in view of other dates in the sequence
45FE45	Ksunku / Weatherford	charcoal; charbon de bois	3850	14 0	stratum 5, Ksunku phase
48CR3962	Great Divide Basin	unknown; inconnu	3850	90	
AgHk-__16	Adder Orchard	charcoal; charbon de bois	3850	90	Unit 1, Feature 1
48LA312	Pine Bluffs	charcoal; charbon de bois	3860	10 0	
11DW-?	Pabst	charcoal; charbon de bois	3860	80	F1-75, Middle/Late Archaic refuse pit
NiHf-2	Lyon Hill	walrus bone collagen; collagène osseux de morse	3860	12 0	terrace 41 m asl
VTFR26	Boucher	organic matter; matière organique	3865	70	feature 40 (re-dated by Pitt-187)
39CU779	Beaver Creek Shelter	charcoal; charbon de bois	3870	70	unit 11, feature 85-1, a hearth, 100.00 m, gray to reddish brown, argillaceous, laminated quartz sandstone

DhMn-1	Oxbow Dam	bison bone collagen; collagène osseux de bison	3870	80	Level 6, unit 99N/29E, northwest quadrant, 128 cm below datum
TkAt-4	Sojourn	charcoal; charbon de bois	3870	10 0	hearth feature 1, in dwelling on upper terrace
ObRw-1	Qugyuk	caribou bone collagen; collagène osseux de caribou	3880	80	S9/W64, S9/W65, level 3, 20- 30 cm depth, upper area, a composite sample
35LA439	Long Tom	charcoal; charbon de bois	3880	90	oven
24MA171	Barton Gulch	charcoal; charbon de bois	3880	60	Area C, feature 1
NA-5607	Walnut Canyon	wood; bois	3880	90	split-twig figurines, north wall of Walnut Canyon, combined sample from three specimens
11A51	Scenic Vista	charred plant remains; restes de plantes carbonisé	3880	70	feature 57, a Titterington component pit with a large quantity of chert tool manufacturing debris and several broken and complete Sedalia blades
BIDn-2	Cow Point	maple charcoal; charbon d'érable	3882	34	Burial 13, N50.24/W61.40
26EU843	James Creek Shelter	organic matter; matière organique	3890	10 0	Horizon 6, culturally sterile, 1-2/85 cm below datum
5LR-VP	Chimney Rock Animal Trap	bone collagen; collagène osseux	3890	10 5	0.6 m depth in natural animal trap, with evidence of temporal mixing as some artifacts date to AD 500
10VY67	Big Creek Cave	charcoal; charbon de bois	3900	90	1 m depth
42KA2753	Beaucoup Alcove	human feces; fèces humaine	3900	60	one of five human feces collected from the surface of an alcove during its initial documentation
ThAx-1	Dodge River	charcoal; charbon de bois	3900	80	hearth feature 1, in dwelling
ME90.2C	Brigham	charcoal; charbon de bois	3900	90	stratum 9, with a stemmed projectile point with a ground tip, Moorehead
25CN55	Sidney burial	human bone collagen; collagène osseux humain	3910	60	burial of a young adult male and an infant, with red ochre and grave goods, exposed in a road cut
ME29.9	Turner Farm	walrus bone collagen; collagène osseux de morse	3920	25	Occupation 2, E15/S80, Moorehead
46NI251	GAI No. 8	unknown; inconnu	3930	60	
42KA3711	Vandals Hearth	charcoal; charbon de bois	4070	50	hearth disturbed by vandals
19ES-?	Wheeler	charcoal; charbon de bois	4070	60	with Small Stem points
BiGu-__2	Buck Lake No. 2	charcoal; charbon de bois	4080	60	cultural pit no. 1, 0.6-1.2 m depth
KdDq-11	Closure	charred animal remains; restes d'animaux carbonisés	4087	81	west trench, in upper permafrost zone, 12 m asl
18KE-no#	Cory-Diker #1	marine shell; coquillage	4095	80	with no associated diagnostic artifacts

13PK251	Brassica Bench	charcoal; charbon de bois	4100	70	feature 10, cultural fill of a basin-shaped pit, 0.43-0.55 m below orifice, to date earliest habitation of site
11MO552N	Go Kart North	charred plant remains; restes de plantes carbonisé	4100	80	fill of Titterington phase pit, feature 13
33HA45	DuPont	charcoal; charbon de bois	4100	65	large, possibly communal, earth oven, 75 cm depth
EdQx-43	Baker	charcoal; charbon de bois	4110	60	unit 62, feature 1, 130-148 cm depth
10BM56	Bobcat Cave	charcoal; charbon de bois	4110	70	Area A, stratum IV, feature consisting of frozen sagebrush stalks and bison remains
23RA136	Flowers	charcoal; charbon de bois	4110	85	feature 12, a basin-shaped pit, with a large amount of hematite and manos with red stains, suggesting pigment processing
33SC17	Scioto County Home	charcoal; charbon de bois	4110	70	Feature 3m a cooking pit sealed off by the bottom of feature 9
QkHn-22	Far	charcoal; charbon de bois	4110	90	driftwood, feature 10, an ovate depression, 14-15 m asl
DgRr-2	St. Mungo Cannery	charcoal; charbon de bois	4120	50	unknown, 5.2 m asl
10NP143	Hatwai	charcoal; charbon de bois	4120	110	small branch or house timber, lower floor of House 2, a pit house, 15.35-15.40N/141.18-141.40E, Tucannon phase
15ED1	Mammoth Cave	wood; bois	4120	70	twigs, lower cave, C7, Jessup Avenue
35LA420	Chalker	unknown; inconnu	4130	100	
DkPj-1	Head-Smashed-In Buffalo Jump	bone collagen; collagène osseux	4130	100	test X, 1.6 m below the bottom of Pelican Lake, no associated projectile points (CMC sample form); south area, layer 16a (Reeves, 1978)
33MU29	Lawler	unknown; inconnu	4130	100	
6HT15	Lewis-Walpole	charcoal; charbon de bois	4130	90	test pit 30N/15-16E, 20 cm depth to surface of hearth
CASis4	Nightfire Island	charcoal; charbon de bois	4140	110	stratum 5
35LK2758	DJ Ranch	charcoal; charbon de bois	4140	60	
19DK44	Hornblower II	charcoal; charbon de bois	4140	100	feature 10, a pit opening near the bottom of stratum 3, 81 cm depth, with a quartz point complex
FbNp-25	Thundercloud	bison bone collagen; collagène osseux de bison	4145	90	Level 5c, unit 20S/2E, the lowest of three sub-levels of Level 5, 33-47 cm depth
47GT156	Brogley Rock Shelter	charcoal; charbon de bois	4145	65	squares G and N, 2.24 m depth

19BR120	Bear Swamp 1	charcoal; charbon de bois	4145	65	red ochre burial, 60 cm below the base of the plow zone, with Squibnocket Triangle, Small Stem, and Bare Island points
23CR149	Pot Shelter	charcoal; charbon de bois	4150	12 5	Level 9
38RD18	Nipper Creek	charcoal; charbon de bois	4150	70	colluvium, 40-50 cm depth, with a Savannah River Late Archaic midden
CaGn-___1	Radiant 3	charcoal; charbon de bois	4150	13 5	Sq. E33, 43-56 cm depth with massive quartz chips
ME71.19	Sebasticook Fish Weir	plant remains; restes de plantes	4150	70	horizontal log bark, #116
5GA151	Granby	charcoal; charbon de bois	4160	11 0	feature 6, subfeature A, an arrangement of daub placed in a pit
23MN275	Hatten Mound	human bone collagen; collagène osseux humaine	4160	65	layer 3, with cremated bone in bundles, flexed and semi-flexed, with 3 chipped stone daggers and some Late Archaic projectile points
36LA65	Piney Island	unknown; inconnu	4160	10 5	
18KE9	Andelot #4	marine shell; coquillage	4160	85	with no associated diagnostic artifacts
ME	Hunneman	charcoal; charbon de bois	4160	70	cultural feature
KkDn-2	Shaymarc	charred animal remains; restes d'animaux carbonisés	4160	13 5	Pit 8, 15 cm depth
DhRq-22	Park Farm	charcoal; charbon de bois	4170	12 0	base of test pit 2, concentrated charcoal
26EK25	Deer Creek Cave	charcoal; charbon de bois	4170	15 0	hearth 2, 15-31 cm depth, in pit 2
47IA1	Governor Dodge Rockshelter	charcoal and bone; charbon de bois et os	4170	65	square A6, level 13, feature 15, 3.6-3.9 ft depth, and square Z6, level 11, 3.0-3.3 ft depth, with large side-notched (Raddatz like) points
46NI269	GAI No. 26	unknown; inconnu	4170	90	
19PL584	Powell	charcoal; charbon de bois	4175	14 5	feature 15, a firepit originating at 20 cm depth, with fire-cracked rock, felsite and quartz chips, and nearby a ground slate effigy
EeSu-8	Bear Cove	charcoal; charbon de bois	4180	90	black greasy loam with pebbles and sand at base of shell layer, 114 cm depth, ca. 8 m asl
45WH34	Ferndale	charcoal; charbon de bois	4180	12 0	intrusive firepit >1 m deep, at 117 cm depth of pit containing abundant marine shell remains, ca. 8 m asl, Marpole component
10OE1689	Givens Hot Springs	charcoal; charbon de bois	4180	11 0	House 2, with northern side-notched and Humbolt series points

FaNq-5	Moon Lake	bone collagen; collagène osseux	4180	90	cultural layer in paleosol developed in dune sand, a composite sample (ca. 2 kg) from more than one excavation unit
11MS1348	CB-North	plant remains; restes de plantes	4180	40	area B, feature 1
CT41-50	Salmon River Cove	charcoal; charbon de bois	4180	95	with Brewerton Eared-Notch points
39HN204	Lightning Spring	charcoal; charbon de bois	4190	10 0	stratum 9, feature 20
21TO1	Sauk Valley Man	human bone collagen; collagène osseux humain	4190	70	burial
15PI92	Martin Justice	unknown; inconnu	4190	80	feature 1
AKAFG011	Slate	charcoal; charbon de bois	4200	14 0	square N48/E76', southwest quadrant, Level 7, 24-28" depth, in a band at the bottom of the cultural layers
24PA195	Corwin Springs	charcoal; charbon de bois	4200	15 0	occupation layer
GbOs-100	Caribou Island	charcoal; charbon de bois	4200	14 0	possible hearth in palaeosol, stratum 4, square JJ50, 35-65 cm depth, below Duncan points in yellow sand
DIMa-1	Stott	soil; sol	4200	11 5	humic acid extracted from a paleosol, Area F (1982), Unit 99
15ED175	Lee Cave	plant remains; restes de plantes	4200	65	cave interior, Marshall Avenue, K83
15PE50	Enoch Fork Rockshelter	unknown; inconnu	4200	10 0	
7NC-E-46	Hawthorn	charcoal; charbon de bois	4200	75	pit feature with stemmed and notched points
CT58-1	Ashland Lake	unknown; inconnu	4200	90	
TgAt-1	Burin Delta	charcoal; charbon de bois	4200	70	hearth
46FA191	Taylor	unknown; inconnu	4205	11 5	
DjOw-1	Fletcher	bison bone collagen; collagène osseux de bison	4210	11 5	test 5, level 11, mottled dark grey and rust coloured sand, 165-170 cm depth, split of sample dated by RL-560
5LK159	Dead of Winter	charcoal; charbon de bois	4210	80	lithic site with a Mallory point
47MT71	Chautauqua Grounds	wood; bois	4210	60	wood shaft preserved in copper harpoon found on site surface
45DO387	Plew	charcoal; charbon de bois	4220	12 0	
48SW127	Tower	charcoal; charbon de bois	4220	10 0	feature T88, a possible house pit
5LO19	Frasca	charcoal; charbon de bois	4220	15 0	composite sample mixed with charred bone, top of the westernmost edge of the arroyo
ME14.18	Great Moshier Island C	marine shell; coquillage	4225	15 0	immediately outside House 1 with a small stemmed point

DjPj-3	Layton	bison bone collagen; collagène osseux de bison	4230	10 5	stratum III, the lowest of three occupation zones
42UN-?	Thorne Cave	charcoal; charbon de bois	4230	12 5	Level 7, campfire in lowest habitation layer, ca. 6 ft depth, overlain by 3-4 ft of sterile sand
24BH1726	Benson's Butte	charcoal; charbon de bois	4230	50	feature 20-76, a rock-filled firepit, 6N/38W, level I, 60 cm depth, with McKean series and other point types
DaGt-1	Lac Opasatica	charbon de bois; charcoal	4230	70	structure 3
46MO1	Cotinga Mound	unknown; inconnu	4235	65	Adena
DhRk-8	Maurer	peat; tourbe	4240	11 0	
15JF60	Hornung	charcoal; charbon de bois	4240	95	Unit 13, level 4, 23-30 cm depth
FhQm-1	Devona Cave (239R)	charcoal; charbon de bois	4242	90	fifth excavation level
FiPp-2	Cormie Ranch	bone apatite; apatite osseux	4245	12 5	occupation 3, butchering feature no. 20, location 2, 135'S/205'W, 80 cm depth, lowest living floor
20SA2	Schultz	wood; bois	4250	15 0	unit 1a, deep test, 563E590
SfFk-6	Tusk	charcoal; charbon de bois	4250	60	driftwood?, upper component, sand beneath boulders on a beach terrace, 29 m asl
SfFi-1	Cairn	charred spruce wood; bois d' épinette carbonisé	4250	80	driftwood, locality 1(A), central hearth of dwelling feature, 17 m asl
36CE230	Jacks Mill	unknown; inconnu	4255	90	
DIOp-2	Ross Glen	calcined bone; os calcinés	4260	14 0	level 2, 544 g of tiny burned fragments from ancillary feature 12
VTCH46	Winooski	charcoal; charbon de bois	4260	23 5	Level 5, Trench 2, feature 81, a surface or pit hearth with bone and ceramic scrap?
26CH18	Lovelock Cave	bat feces; fèces de chauve-souris	4270	11 0	older guano layer, pre- occupation level
42SV1325	Aspen Shelter	charcoal; charbon de bois	4270	21 0	base of cultural deposits with gypsum projectile points
48SW5982	Bald Knob	soil; sol	4270	70	feature T26, a possible house pit
18KE31	Bissel-Ferris #2	marine shell; coquillage	4275	90	with no associated diagnostic artifacts
48LA549	Horse Creek	charcoal; charbon de bois	4280	11 0	feature 6, a hearth
31HX7	Gaston or Roanoke Rapids	charcoal; charbon de bois	4280	17 5	70-76" depth, with Halifax projectile points
CT83-8	Hubbard Brook	unknown; inconnu	4280	12 0	
CT	Bliss	charcoal; charbon de bois	4280	12 0	with Brewerton Eared-Notch points

29CX1	Folsom	charcoal; charbon de bois	4283	25 0	hearth in fill of secondary channel cut through original deposit of bison bone and Folsom artifacts
24CB84	False Cougar Cave	charcoal; charbon de bois	4290	11 5	stratum ID, 60 cm below datum
3.0	Banks	charcoal; charbon de bois	4290	11 0	Trench 8+13, Unit A, Level 2, about 2 ft depth
20SA-?	Kantzler	unknown; inconnu	4290	75	reworked Middle Archaic horizon
18KE46	Andelot #14	marine shell; coquillage	4290	85	with no associated diagnostic artifacts
19WR268	Charlestown Meadows	charcoal; charbon de bois	4290	28 0	later component focused on a quartz flake-tool industry and the processing of aquatic resources, with Neville, Vosburg and small triangle points
19ES196	Shattuck Farm	charcoal; charbon de bois	4290	14 5	
EcKx-4	Sinnock	organic sediment; sédiment organique	4295	90	fine organic sediment with charcoal inclusions in a pit feature
ME73.9	Hirundo	charcoal; charbon de bois	4295	95	Area A, zone II, hearth
GgQq-7	Wood Bog	peat; tourbe	4300	10 0	ca. 90-95 cm depth
10IH-VP	Tolo Lake	mammoth bone collagen; collagène osseux de mammoth	4300	70	lacustrine sediment containing mammoth and bison bones
48FR1602	Crooks	charcoal?; charbon de bois	4300	70	house B, feature 1
19PL203	Wapanucket site 6	charcoal; charbon de bois	4300	12 5	burial no. 2 and 3, 40-85 cm depth, with red ochre, gouges, plummet, semilunar knife and sharpening stones
15JO23a	Dameron Rockshelter	charcoal; charbon de bois	4305	65	stratum III, lower level of midden (F-5) on talus slope
45SK-?	Skamania Landing	unknown; inconnu	4310	80	
NH47-22	Seabrook Marsh	human bone collagen; collagène osseux humain	4310	25 5	burial 3, with small stemmed points
EcNx-4	East Pasture	bone collagen; collagène osseux	4315	60	Level 3, western area, unit 70n/143w, black to brown sand, 40 cm thick
35LA658	Stamp	unknown; inconnu	4320	80	
DjOn-?	South Pediment 2	charcoal; charbon de bois	4320	95	fireplace on buried soil covered by 19 cm colluvium
48SW2369	Bairoil Tipi Ring	unknown; inconnu	4320	18 0	
AKXMH289	Landmark Gap Trail	charcoal; charbon de bois	4330	12 5	Feature 1, a dish-shaped depression in stratum II, associated with a dense concentration of artifacts
35BA523	Tamsnag	unknown; inconnu	4330	11 0	



42KA2756	Co-op	charcoal; charbon de bois	4330	80	hearth 3, buried by ca. 8 m of alluvium, with debitage, 2 biface fragments, a mano fragment, but no diagnostics
EE:12:1	Lehner	soil extract; extrait de sol	4330	20 0	humates extracted from reddish-brown soil on unit G2a exposed in trench B, first and second humate extractions combined.
21NR9	Canning	charcoal; charbon de bois	4330	11 5	feature 1, an irregular charcoal stain with bone fragments and flakes but no diagnostic artifacts
11RA501	Modoc Rockshelter	charcoal; charbon de bois	4330	90	1987 units L and M, stratum 8E, 125.09-124.71 m asl
EaNw-1	Blumenhof	human bone collagen; collagène osseux humain	4335	10 0	burial
35DO130	Tahkenitch Landing	charcoal; charbon de bois	4340	80	stratum 2A
48LA303	Petsch Springs	charcoal; charbon de bois	4340	11 0	
18KE39	Grove Farm #2	marine shell; coquillage	4340	85	with no associated diagnostic artifacts
SdFi-4	Blake	charred organic matter; matière organique carbonisée	4340	80	component 2, beneath a sandstone slab near feature 1, 20.9 m asl
6NH48	Binette	charcoal; charbon de bois	4340	12 0	near the north entrance and east wall of shelter A, 221 cm below datum, near the bottom of the stratigraphic level pertaining to the Vosburg component
19HD-?	Palmer or Epa	charcoal; charbon de bois	4340	90	feature 3, a trash pit with fire-cracked rock, the tip of a pestle, quartz and quartzite flakes
CASMa-?	Stanford Man I	human bone collagen; collagène osseux humaine	4350	13 0	
CASJo68	Blossom	calcined human bone; os calcinés humaine	4350	12 5	cremation pit 3, 50" depth
10CW39	Ash	charcoal; charbon de bois	4350	10 0	Unit 3, 50-60 cm depth, Harder phase
48BH657	Eagle Shelter	carbonized wood; bois carbonisé	4350	80	stratum 6, 6.6 g of charred wood and organic sediment, field collected
15BT5	Carlston Annis	charcoal?; charbon de bois	4350	85	Level 20, D14-2-20, 188-200 cm depth
41LU1	Lubbock Lake	sediment extract; extrait de sédiment	4355	80	humins, trench 39, substratum 4/, marsh sediment
6LF2	Kirby Brook	charcoal; charbon de bois	4355	18 5	with Small Stem points
FbNp-17	Amisk	bison bone collagen; collagène osseux de bison	4358	45	Level 5, paleosol in loam, 10-15 cm thick, varies 70-95 cm depth
CASBr4966	Henwood	organic matter; matière organique	4360	28 0	

26EK11	South Fork Rockshelter	charcoal; charbon de bois	4360	30 0	refuse midden in Pit 1, 120" depth, with Humboldt concave base A and Humboldt basal notch points
41VV167	Eagle Cave	charcoal; charbon de bois	4360	12 0	stratum III
RbJu-1	Port Refuge	charcoal; charbon de bois	4360	90	driftwood, Upper Beaches component, interior of Feature 16
11S640	McLean	charred wood; bois carbonisé	4360	12 0	fill of north half of Falling Springs phase pit, feature 28
RcHw-4	Cape Storm	conifer charcoal; charbon de conifère	4360	60	driftwood? in coarse gravel within Ruin 4, 0-10 cm depth
15OH2	Indian Knoll	deer bone; os de cerf	4362	22 5	band 6" thick, at the 1 ft level
15JF10	Lone Hill	bone collagen; collagène osseux	4365	18 5	deposit disturbed by earthmoving equipment
HcQh-6	Pulp Mill	sediment; sédiment	4370	10 0	75 cm depth
GkLr-61	Victoria Day	bone collagen; collagène osseux	4370	60	Feature 1, a limb bone
33SA-VP	Fremont	peccary bone; os de pécarí	4370	15 0	15 ft below top of a sand ridge, possibly a dune, that forms part of the Lake Warren beach ridge
FhNa-86	Crown	bison bone collagen; collagène osseux de bison	4375	85	component 4, western block, level 7, XU 13n17w, 65 cm depth
23BO-?	Brynjulfson Cave 1	bone carbonate; carbonate osseux	4375	11 0	Cave 1, bone collected randomly from cave fill across ca. 12 m distance
BdGu-___6	Atherley Narrows	cedar wood; bois de cèdre	4375	95	fish wier stake, section 2, east pattern
26CL243	Corn Creek Dunes	charcoal; charbon de bois	4380	10 0	Hearth 9
10BT62	Saw Mill Canyon	soil; sol	4380	20 0	dark brown soil, test pit 8, 40-47 cm depth
48SW5175	Sweetwater Creek	charcoal; charbon de bois	4380	20 0	component 2, feature 5
48HO120	Grass Creek	charcoal; charbon de bois	4380	80	housepit Feature 31, fill
EbJd-___1	Pikitigushi River	charcoal; charbon de bois	4380	16 0	test trench, cultural refuse just below 5 cm layer of burned humus
AKSLT067	Iluluk	calcined bone; os calcinés	4390	10 0	collected from several squares
EISx-1	Namu	human bone collagen; collagène osseux humain	4390	16 0	main trench, burial B 4J1, 2 m depth, Period 4
18KE216	Groves #AB	marine shell; coquillage	4390	85	with no associated diagnostic artifacts
SfFl-2	Digarmulen	spruce charcoal; charbon d'épinette	4390	80	driftwood in a stone-covered hearth feature
19NF5	Green Hill	charcoal; charbon de bois	4390	70	firepit ca. 3 cm depth, with Neville, Brewerton Side-notch, Vosburg, and Small Stem points

AKPET-VP	Lawyers Cave	porcupine bone collagen; collagène osseux de porc-épic	4395	70	bottom of a 20-m deep pit
AKFAI091	Owl Ridge	charcoal; charbon de bois	4400	70	middle of unit 6
35CU75	Blacklock Point	charcoal; charbon de bois	4400	90	
10TF564	Big Leon's Bank	bone collagen; collagène osseux	4400	11 0	
5GF110	Sisyphus Shelter	unknown; inconnu	4400	95	
5GA680	Hill-Horn	charcoal; charbon de bois	4400	70	feature 9, a wattle and daub feature
20IR24	Minong	charcoal; charbon de bois	4400	15 0	exploratory trench 4, 2.6-6.8 ft depth, in undisturbed tailing deposit, associated only with hammerstones, Old Copper culture
33WA83	Oglesby-Harris	unknown; inconnu	4400	50	
SfFk-12	Skraeling ASTt #7	spruce charcoal; charbon d' épinette	4400	11 0	driftwood in floor area of isolated central passage dwelling, 5-10 cm depth
19MD-?	Spy Pond	charcoal; charbon de bois	4400	11 0	
DjPo-47	Maple Leaf	bison bone apatite; apatite osseux de bison	4405	15 0	component 3, hard, blocky red peat, just above Mazama tephra, Mapleleaf subphase
24CH669	Hoffer	soil; sol	4410	80	Area B, unit 19N/21W, Level 10, occupation BXII
48CR304	Scoggin	charcoal; charbon de bois	4410	90	
48GO9	Bass-Anderson	charcoal?; charbon de bois	4410	10 0	
36CN164	Memorial Park	charred wood; bois carbonisé	4410	40	component VII, feature 189
19MD388	Clamshell Bluff	deer bone collagen; collagène osseux de cerf	4410	70	
DgRn-23	Hatzic Rock	charcoal; charbon de bois	4420	18 0	postmold
10CL23	Cottontail Rockshelter	charcoal; charbon de bois	4420	14 5	test pit 2, level 20, 290-303 cm depth, with Bitterroot points
DaJi-__1	Renshaw	wood; bois	4420	60	well preserved wood shaft in the tang of a copper spear point
15LV-?	Branstetter Shelter I	charcoal; charbon de bois	4420	28 0	40-50 cm depth
EiBi-5	Pointe-Rocheuse	charbon de bois; charcoal	4420	80	puits N-16, W-03, concentration de charbon de bois épousant la forme d'une cuvette pouvant être les restes d'un contenant en bois
LgRk-1	Great Bear River	caribou bone collagen; collagène osseux de caribou	4430	24 0	Pit 2, S50/W45
45ST59	Pete's Place or Snag Cove	charcoal; charbon de bois	4430	50	

CASDi-?	Silver Strand	marine shell; coquillage	4430	31 0	Station A, level III, lower stratum of somewhat consolidated sand, with La Jollan artifacts
5ME82	DeBeque Rockshelter	charcoal; charbon de bois	4430	15 0	
48FR1484	Split Rock Ranch	charcoal; charbon de bois	4430	60	house F1, feature 1-4, hearth
FhNc-81	Broken Axle	bone collagen; collagène osseux	4430	13 5	lowest and best cultural level
41VV82	Coontail Spin	charcoal; charbon de bois	4430	14 0	zone A-4, feature 1, beneath a rock overhang
14BU25	Milbourn	charcoal; charbon de bois	4435	10 0	
41CM3	Wunderlich	freshwater mollusc shell; coquille de mollusque d'eau douce	4445	20 5	Area B, square N207/W195, 198.5-199.0 ft elevation, with Pedernales dart points
12HR3	Ferry Landing	bone collagen; collagène osseux	4445	12 0	surface, submitted because no charcoal was recovered
36PI13A	Faucett	charcoal; charbon de bois	4445	13 0	with Lackawaxen points
CACCo308	Stone Valley	charcoal; charbon de bois	4450	40 0	soil matrix of burial, lowest of three levels, 16.5 ft depth
GIQp-6	St. Charles Oblate Church	sediment; sédiment	4450	90	Level 21, 299-303 cm depth
48LN329	Green River Basin	charcoal; charbon de bois	4450	70	feature 4
24PR5	Powers-Yonkee	charcoal; charbon de bois	4450	12 5	area 1, with projectile points and a large bison skull
18KE17	Plummer #1	marine shell; coquillage	4450	80	top of deposit, with steatite tempered Marcey Creek and Mockley ceramics in a shell midden
FhNa-10	Bushfield West	paleosol; paléosol	4455	80	paleosol, 2.75 m depth, Stratum #16
35LK2992	Bowling Dune	charcoal; charbon de bois	4460	16 0	feature 8, a cache pit
12CL1	Old Clarksville	charcoal; charbon de bois	4460	18 0	midden deposit, unit F, 60.9-68.5 cm below datu
BbGa-__2	Gordon Island North	charcoal; charbon de bois	4460	70	Trench 2, Sq. 9, 15-20 cm depth
8OK11	Buck	unknown; inconnu	4465	14 0	
EeRh-61	Rattlesnake Hill	charcoal; charbon de bois	4470	40 0	cultural Zone III, layer 8
26WA525	Blazing Star Cave	wood; bois	4470	11 0	two digging sticks associated with a human burial from one of the lower levels
48FR113	Crooks Creek	charcoal; charbon de bois	4470	15 0	feature T152, a possible housepit
33PI467	Peters Cemetery	unknown; inconnu	4470	75	
33CT29	Bullskin Creek	plant remains; restes de plantes	4470	75	feature 12, a shallow pit containing a cache of ceremonial objects, 74 cm depth, below the base of the overlying midden

20WA-VP	Kuhl mastodon	wood; bois	4470	16 0	log ca. 15 cm diameter, touching a mastodon rib, ca. 180 cm depth
8JE121	Sloth Hole	plant remains; restes de plantes	4470	60	stratum 10, deteriorating sapropel overlying a butchered mastodon fibula, a bifacial preform and a hammerstone
ME26.6	Davis-Tobie	unknown; inconnu	4470	15 0	test section with small stemmed points, a plummet, a gouge, an atlatl weight, a net weight, and a Squibnocket triangle
EiBi-17	Presqu'île des Belles-Amours	charbon de bois; charcoal	4470	45 0	foyer
18KE79	Groves #AF	marine shell; coquillage	4475	85	with no associated diagnostic artifacts
NiTs-4	Satkualuk	charcoal; charbon de bois	4480	50	hearth in buried living floor, 70-75 cm depth
39BF225	Sitting Crow	charred bone; os carbonisé	4480	25 0	feature 7, a shallow hearth in Mound 3, with a preceramic occupation defined by thin triangular points with slightly convex side and concave base
12HR103	Hoke	bone collagen; collagène osseux	4480	18 5	basal level
15JF550	Guthrie Beach	unknown; inconnu	4480	80	feature 6, Lone Hill
19MD339	Castle Hill	charcoal; charbon de bois	4480	11 0	large pit feature, with Neville and Merrimack points
GaQs-1	Smoky	bone collagen; collagène osseux	4490	14 0	unit 38, along the 3rd baseline, hundreds of small fragments, both burned and unburned, 25-45 cm depth
42BO36	Hogup Cave	feces; fèces	4490	10 0	stratum 10, square 95L80 (FS 163)
BB:2:13	Winkleman Hearth	charcoal; charbon de bois	4490	70	hearth 3, from 13 cm alluvial terrace exposed in arroyo, 9.2 m below terrace surface, with no associated artifacts
FcMv-1	Greenwater Lake	human bone collagen; collagène osseux humain	4490	10 5	burial exposed in a road-cut
46BR31	East Steubenville	freshwater mussel shell; coquille de mollusque d'eau douce	4495	25 5	Panhandle phase
10CL3	Veratic Rockshelter	charcoal; charbon de bois	4500	17 0	layer 29, feature 11, with Bitterroot points
11GE-?	Helton	charred plant remains; restes de plantes carbonisé	4500	12 0	test square 1, levels 1B, 2, 2NW, and 3, dispersed in a shell midden, 20-40 cm depth
QkHn-13	Ice Breaker Beach	charcoal; charbon de bois	4500	80	driftwood?, feature 14, an ovate tent ring, 8-9 m asl
19PL161	Titicut	charcoal; charbon de bois	4500	30 0	hearth in the lowest level, 3 ft depth, with small triangle and small stem points

DkPp-11	Racehorse Rockshelter	bone collagen; collagène osseux	4505	23 5	subunits 6A, 6B, 6C, 6D, 6E, 6F, and 6H, unit 1, level 6, associated with a soil change, the first appearance of large mammals and cultural materials
41CM3	Wunderlich	charcoal; charbon de bois	4505	30 0	Area A, square N155/W40, stratum B, 193.0-193.5 ft elevation, with Nolan dart points
ME42.1	Nevin	marine shell; coquillage	4505	60	section 1B.1/4E-1A.2/2E, 2nd shell layer
DhRp-7	Fort Langley	charcoal; charbon de bois	4510	60	
24LN1037	LAURD project	charcoal; charbon de bois	4510	10 0	occupation layer
26WP230	Amy's Shelter	charcoal; charbon de bois	4510	60	Brown IX zone, Square C11, ca. 280-310 cm depth, with Humboldt concave-based points and small flake tools, the earliest intensive occupation
42SA-?	Dust Devil Cave (NA7613)	charcoal; charbon de bois	4510	13 0	
EcNx-1a	Gray	human bone collagen; collagène osseux humain	4510	14 0	cemetery, burial unit 56, with ochre-stained bones and tools as well as avian tracheal segments that may have been worn as beads
5ST85	Vail Pass Camp	charred wood; bois carbonisé	4510	12 0	feature 14, a hearth remnant assigned to Occupation II
41VV456	Hinds Cave	charcoal; charbon de bois	4510	70	analysis unit 5, area AW, lens IXB
11BR-?	Buckshaw Bridge	charcoal; charbon de bois	4510	70	
46NI250	GAI No. 7	unknown; inconnu	4510	60	
FbNs-1	Harder	bison bone collagen; collagène osseux de bison	4515	15 0	cultural layer in paleosol in dune depression, unit 20s/0w
KjNb-6	Junction	charcoal; charbon de bois	4515	14 0	Level 1, southwest part of site, scattered throughout the square, in the bottom level
35JE278	Suttle Lake Methodist Camp	charcoal; charbon de bois	4520	11 0	
26CH18	Lovelock Cave	bat feces; fèces de chauve-souris	4520	11 0	older guano layer, pre-occupation level
42EM625	Pint Size Shelter	charcoal; charbon de bois	4520	21 0	bottom of stratum 3, the lower component with Gypsum and Elko corner-notched points and slab metates
5GN200	Phone Booth	charcoal; charbon de bois	4520	12 0	cultural feature
DgMr-1	Long Creek	charcoal; charbon de bois	4520	17 0	Level 5, lower zone of carbonaceous material below calcareous silty clay
41VV167	Eagle Cave	charcoal; charbon de bois	4520	12 0	stratum IId
36BV292	Connoquenessing	charcoal; charbon de	4520	10	feature 51

		bois		0	
EeOv-68	Saahkómaapína = Boy Chief	bone collagen; collagène osseux	4530	80	Block 3, occupation 1
NY	Engelbert	charcoal; charbon de bois	4530	20 0	hearth in sand and gravel under 3-4 ft of refuse midden, Lamoka
45DO387	Plew	charcoal; charbon de bois	4540	14 0	
11J814	Little Muddy Rock Shelter	charcoal; charbon de bois	4540	15 0	
BIGk-__17	Whitson Lake W2A	charcoal; charbon de bois	4540	70	Sq. S-100, 26.7-38.1 cm with quartz chips and a Brewerton point
19FR15	WMECO	charcoal; charbon de bois	4540	16 0	with Atlantic points
PeFr-1	Mittimatalik	seal bone collagen; collagène osseux de phoque	4545	15 5	base of midden, 50 cm thick, 8 m asl, with Predorset harpoon heads
DkSg-1	Tsolum River Mound	charcoal; charbon de bois	4550	20 0	mound I, trench Z, within a patch of red earth, 15 cm depth
DjOw-1	Fletcher	bison bone collagen; collagène osseux de bison	4550	12 0	test 1, level 9, irregular thin black Ah soil horizon, 175- 180 cm depth
25SF1	Signal Butte	charcoal; charbon de bois	4550	22 0	Horizon 1A, the lower level
33CT29	Bullskin Creek	plant remains; restes de plantes	4550	35 5	feature 6, an earth oven originating within but near the base of the midden deposit, 43 cm depth
12FL1	Reid	charcoal; charbon de bois	4555	70	Level 7, test pit 1
ME29.9	Turner Farm	charcoal; charbon de bois	4555	95	Occupation 2, E5/S85, feature 15-1973, a pit, Moorehead
35JE319	Heath Cliffs	charcoal; charbon de bois	4560	60	southern locus, component III, Warm Springs phase
24CA74	Sun River	charcoal; charbon de bois	4560	70	Level V, unit 44N/268W, feature G, a concentration of fire-broken rocks, burned and unburned bison and pronghorn bones, and a few flakes
20SA581	Weber I	charcoal; charbon de bois	4560	20 0	subunit IIIa, feature 233, with large side-notched points
15MO28	Ray Hill	unknown; inconnu	4560	17 0	
BdGu-__6	Atherley Narrows	birch wood; bois de bouleau	4560	11 5	fish wier stake, section 2, east pattern
36PI13A	Faucett	charcoal; charbon de bois	4560	11 0	with Lackawaxen points
11S-?	Cahokia	charcoal; charbon de bois	4570	21 0	
33VI-?	Wheelabout Rockshelter	charcoal; charbon de bois	4570	24 0	circular pocket of square 3-B, lowest level of shelter, generally affiliated with Laurentian tradition
46BX73	OSB Two	unknown; inconnu	4570	14 0	

26CL243	Corn Creek Dunes	charcoal; charbon de bois	4580	10 0	Hearth 6
48BH657	Eagle Shelter	carbonized wood; bois carbonisé	4580	11 0	stratum 6, 4.1 g of charred wood, field collected
FbNp-17	Amisk	bison bone collagen; collagène osseux de bison	4580	60	test pit, 2.65 m depth, upslope from main occupation area
5DA259	Willow Creek	charcoal; charbon de bois	4580	65	test excavation in bone bed
RcHw-VP-5	Cape Storm	whale bone collagen; collagène osseux de baleine	4580	60	gravel beach, 16.5 m asl
ME74.1	Bradley Cemetery	plant remains; restes de plantes	4580	12 0	cemetery, birch bark from a fire-kit
DgRr-2	St. Mungo Cannery	marine shell; coquillage	4590	11 5	unknown, 1.4 m asl
DgRr-6	Glenrose Cannery	wood; bois	4590	50	cut stake lying horizontally in the lowest cultural layer, Operation 1 (DgRr-6: 7020)
45WH224	Desolation Quarry	charred wood; bois carbonisé	4590	80	
HcQh-6	Pulp Mill	sediment; sédiment	4590	10 0	95 cm depth
DaJi-__1	Renshaw	plant remains; restes de plantes	4590	50	well preserved plant fiber of bark forming a binding of haft around the shaft of a unilaterally barbed copper harpoon point
CASBa-?	Drake	human bone collagen; collagène osseux humaine	4600	25 0	5 ft level in a reddish midden layer under 4 ft of black midden, the bones heavily coated with caliche
14BU9	Snyder	charcoal; charbon de bois	4600	12 5	
3SB29	Sliding Slab Rock Shelter	plant remains; restes de plantes	4600	60	square N3/E1, level 27, 260-270 depth, stratum 1A
11S640	McLean	charred wood; bois carbonisé	4600	80	fill of north and south halves of Falling Springs phase pit, feature 82
FIQs-30	Grande Cache Lake	charcoal; charbon de bois	4605	75	unit 6, level 3, 20-25 cm depth
45SA116	McClellan Meadows	charcoal; charbon de bois	4610	11 0	
42BO36	Hogup Cave	wood; bois	4610	10 0	stratum 8, square 100L80, sticks collected from full thickness of layer (FS 204)
48LN1296	Shute Creek	soil; sol	4610	80	area E, feature 152
29.0	Honest Injun Cave (GS3)	charcoal; charbon de bois	4610	35 0	
RbJu-1	Port Refuge	seal bone collagen; collagène osseux de phoque	4610	65	Cold component, midden south of Feature 19, on and in limestone gravel, 0-10 cm depth
11GE119	Cypress Land	charred plant remains; restes de plantes carbonisé	4610	70	feature 10, a pit



13CK405	Cherokee Sewer	organic sediment; sédiment organique	4615	23 0	buried A1 horizon of soil 4, 1.45-1.65 m below the alluvial fan surface in a three inch soil core
15CR73	Grayson	unknown; inconnu	4615	80	
AKXPA119	Hidden Falls	charcoal?; charbon de bois?	4620	11 0	component 2
10OE1689	Givens Hot Springs	charcoal; charbon de bois	4620	27 0	House 1, with a hopper-mortar base
5BL170	Ptarmigan	charcoal; charbon de bois	4620	95	possible association with a corner-notched projectile point component
46NI275	GAI No. 32	unknown; inconnu	4620	80	
26LN-?	O'Malley Shelter	unknown; inconnu	4630	17 0	
24SW651	Jarrett	charcoal; charbon de bois	4630	25 0	charcoal and ash, roasting pit, levels 15/16, with large side- notched dart points
46MS180	Henderson School	unknown; inconnu	4630	60	
46NI251	GAI No. 8	unknown; inconnu	4630	10 0	
ME71.19	Sebasticook Fish Weir	wood; bois	4630	80	noncultural wood recovered from a vibracore, VC-93-02: 294-299, to date basal organics in the vicinity of the Woodland stake concentration
AKXMK056	Russian Anchorage	charcoal; charbon de bois	4640	60	lower component, test pit A, stratum 6, 112 cm depth
26CH1f	Spirit Cave	human bone; os humain	4640	50	male, scattered bone in site
42UT104	Spotten Cave	charcoal; charbon de bois	4640	12 0	zone Ib
19BR120	Bear Swamp 1	charcoal; charbon de bois	4640	80	with Brewerton Side-notched, Squibnocket Triangle, Beekman Triangle, and Small Stem points
18KE36	Drayton Manor #1	marine shell; coquillage	4645	55	with no associated diagnostic artifacts
LgRk-1	Great Bear River	plant remains; restes de plantes	4650	20 0	Pit 2, S50/W45, 1 m depth
10IH66	Weis Rockshelter	charcoal; charbon de bois	4650	70	charcoal and humus, substratum 5c, one of the latest of the Old Cordilleran components at this site
41WM235	Wilson-Leonard	human bone; os humaine	4650	31 0	Unit 1, pit excavated from the Leanne Soil
47GT156	Brogley Rock Shelter	charcoal; charbon de bois	4655	75	square G, 2.55-2.51 m depth
40MU261	Cheek Bend Cave	charcoal; charbon de bois	4655	75	Stratum 6
45LE225	Riffe Lake or Champion Bridge	unknown; inconnu	4660	50	
10GG191	Crutchfield	freshwater mollusc shell; coquille de mollusque d'eau douce	4660	10 0	burned shell with a house structure, feature A1, and northern and Bitterroot side- notched points
19MD388	Clamshell Bluff	turtle bone collagen; collagène osseux de	4660	70	midden

		tortue			
42SV6	Sudden Shelter	charcoal; charbon de bois	4670	14 0	middle of stratum 14, component 2, with Hawken side-notched, McKean lanceolate, Sudden side-notched, Elko corner-notched and Silver Lake points
48FR1484	Split Rock Ranch	charcoal; charbon de bois	4670	10 0	house F4, feature 4-6
15BT5	Carlston Annis	charcoal?; charbon de bois	4670	85	Level 15, D14-2-15, 138-150 cm depth
41VV620	Seminole Sink	human bone collagen; collagène osseux humaine	4671	64	zone 2, burial
24PA504	Myers-Hindman	charcoal; charbon de bois	4680	22 0	Level 3, an unlined hearth
LA-9224	Querencia	charcoal; charbon de bois	4680	14 0	hearth exposed by wind in aeolian sand resting on Dakota sandstone, probably preceramic
TkAt-4	Sojourn	charcoal; charbon de bois	4685	70	upper terrace, Feature 5, a midpassage hearth, Units 3d and 3e, 0-10 cm depth
EgPn-480	Stonepine	bone collagen; collagène osseux	4690	70	occupation 3
41VV213	Baker Cave	charcoal; charbon de bois	4690	14 0	operations 2-3, upper part of pre-Archaic deposits
NH31-20-5	Belmont-Tilton	charcoal; charbon de bois	4695	16 5	hearth
BkGg-12	Morrison's Island 6	charbon de bois; charcoal	4700	15 0	sépulture 17
EaLa-1	Whitemouth Falls	bison bone collagen; collagène osseux de bison	4705	15 0	component 3
15MF36	Cloudsplitter Rockshelter	unknown; inconnu	4707	10 0	
NiTs-4	Satkualuk	charcoal; charbon de bois	4710	10 0	hearth? with ceramics, 5-15 cm depth, in deflated area of site
10LE-?	Kamiah	charcoal; charbon de bois	4710	18 0	same trench as WSU-1323, 140-160 cm depth, to provide lower limit for association of Cascade and side-notched points
EgPm-126	Cinema Park	bison bone collagen; collagène osseux de bison	4710	16 0	alluvial fill, Terrace 2, about 70 cm below a hearth
24JF292	Sheep Rock Spring	charcoal; charbon de bois	4710	60	
GbOs-100	Caribou Island	soil; sol	4710	15 0	paleosol sample, humic acid extracted at the Alberta Research Council, stratum 4, squares II50 and JJ50, 20-60 cm depth
39CU779	Beaver Creek Shelter	charcoal; charbon de bois	4710	11 0	top of unit 14, capping several thick gravel layers, 99.37 m
41LU1	Lubbock Lake	bison bone apatite; apatite osseux de	4710	50	area 7, substratum 4A

		bison			
14LV315	Lansing Man	human bone; os humaine	4710	20 0	unknown, collected in 1902
19BR-?	Read Farm B	charcoal; charbon de bois	4710	60	section A, feature 7, a large pit, 2 m deep, >4 m diameter, with a large quantity of fire-cracked rock, 146 cm depth
BbGn-__2	McIntyre	charcoal; charbon de bois	4715	27 0	Feature 1, a hearth pit
NH	Smyth	charcoal; charbon de bois	4715	24 0	N2/E2, 57-60" depth, stratum 5A
AKTLM030	Fog Creek	charcoal; charbon de bois	4720	13 0	stratigraphic horizon 8
47MO3	Silver Creek	charcoal; charbon de bois	4720	75	feature 5, 1.65-3.05 ft depth, devoid of artifacts
11RA501	Modoc Rockshelter	charcoal; charbon de bois	4720	15 0	main shelter, stratum 9E, 1955 unit 35R0, 124.65-124.35 m asl
15JF630	Railway Museum	unknown; inconnu	4720	70	with Saratoga-like points
19MM147	Wapanucket 8	charcoal; charbon de bois	4720	14 0	feature 66, a pit extending 52-82 cm in depth, believed to be part of an earlier component with a Palaeoindian graver and several flakes of marine chert
EfMw-3	Sedo	human bone collagen; collagène osseux humain	4725	80	sand, recently eroded by wind, 0-30 cm depth
28BE167	Twombly Landing	charcoal; charbon de bois	4725	80	with Taconic stem point
48LA549	Horse Creek	charcoal; charbon de bois	4730	12 0	feature 1, a hearth
21RW53	Jackpot Junction	charcoal; charbon de bois	4730	11 0	
13CD10	Rock Run Shelter	charcoal; charbon de bois	4730	50	64-72" depth
ME	Hunneman	charcoal; charbon de bois	4730	90	cultural feature
48SW1668	Ten Mile Draw	charcoal; charbon de bois	4740	80	component 2, 3.0 m depth
EiBj-23	Ruisseau au Saumon	charbon de bois?; charcoal?	4740	12 0	inconnu
AKBEN053	Kuzitrin Lake	charcoal; charbon de bois	4750	17 0	feature 37, level 2, representing the Denbigh Flint Complex
45SJ414	Staolk'w	sediment charcoal; charbon de bois	4750	60	
CASis4	Nightfire Island	charcoal; charbon de bois	4750	11 0	stratum 6
19WR268	Charlestown Meadows	charcoal; charbon de bois	4750	13 0	feature 134, a red earth filled feature containing a Brewerton side-notched point of quartzite, and an Atlantic point possibly intrusive
19ES-?	Wheeler	charcoal; charbon de bois	4750	10 0	
48SW2590	Maxon Ranch	charcoal; charbon de	4760	13	component II, house F43, fill

		bois		0	
21WW4	Alton Anderson	bone collagen; collagène osseux	4760	10 0	
BhFl-1e	Pointe-du-Buisson, Station 4	charbon de bois; charcoal	4760	18 0	foyer central d'un alignement de 3 foyers appartenant probablement à la même unité d'habitation
46LG164	Dingess Crossing South	unknown; inconnu	4770	60	
FhNa-86	Crown	soil and charcoal; sol et charbon de bois	4775	90	component 5, cultural level 13, eastern block
35LK2758	DJ Ranch	charcoal; charbon de bois	4780	13 0	
45ST65	China Bend or Nshiitkwu	charcoal; charbon de bois	4780	14 0	floor of sealed house, Area A, Stratum 7
10BT62	Saw Mill Canyon	soil; sol	4780	20 0	dark brown soil, test pit 8, 64- 71 cm depth
48LA312	Pine Bluffs	charcoal; charbon de bois	4780	80	
NH47-22	Seabrook Marsh	human bone apatite; apatite osseux humain	4780	18 5	burial 3, with small stemmed points
5EA799	Yarmony	charcoal; charbon de bois	4790	70	feature 14
KkLn-4	Migod	charcoal; charbon de bois	4790	13 0	Trench 1, stratum 6, 66 cm depth
JcRw-13	Julian	bison bone collagen; collagène osseux de bison	4800	16 0	component 5, composite sample, 68-85 cm below ash layer, lowest component
19PL-?	Oak Island	charcoal; charbon de bois	4800	11 0	with Small Stem points
FdOt-1	Anderson	bison bone collagen; collagène osseux de bison	4805	15 0	Test B, Level 7
FaNq-25	Gowen 1	bone collagen; collagène osseux	4810	13 0	cultural layer in paleosol III Ahkb, 75-78 cm depth
AdHk-___1	Hind	human bone apatite; apatite osseux humain	4815	12 5	Burial 15A, cremation, Unit F-11, 40-50 cm depth
CaGn-___1	Radiant 3	charcoal; charbon de bois	4815	45	Sq. L24, 41-48 cm depth with ground slate point
45WT1	Riparia	freshwater mollusc shell; coquille de mollusque d'eau douce	4820	90	
13MN2	Turin	human bone; os humain	4820	12 5	skeleton 3, 13-14 ft level, an adolescent found flexed on its left side in burial pit with red ochre and a side-notched projectile point
36WH297	Meadowcroft Rockshelter	charcoal; charbon de bois	4820	85	firepit, middle third of stratum IIb, feature 46 upper
5JF142	LoDaiska	charcoal; charbon de bois	4840	12 5	square K11, 90-94" depth, middle of layer containing artifacts similar to Level III at Danger Cave, with primitive Chapalote maize
14PO1	Coffey	charcoal; charbon de bois	4840	95	Horizon III-5

19NF-?	Ponkapoag	charcoal; charbon de bois	4840	45	with Small Triangle points
AKPET-VP	Lawyers Cave	bear bone collagen; collagène osseux d'ours	4845	60	bottom of a 20-m deep pit
EdRi-6	Oregon Jack Creek	wapiti bone collagen; collagène osseux de wapiti	4850	10 0	cultural layer, units 8 and 9, Feature 1
26NY301	Gatecliff Shelter	charcoal; charbon de bois	4850	10 0	horizon 14, hearth A, with piñon charcoal
10CR60	Road Creek Waterhole	soil; sol	4850	90	unit B-J8, 68 cm below unit datum, and J6, 72 cm below unit datum
48FR1602	Crooks	charcoal?; charbon de bois	4850	70	house A, feature 3
42TO13	Danger Cave	unknown; inconnu	4860	11 0	stratum 30, cultural level 4?
41BO-?	BZT-1	humic acid; acide humique	4870	40	sediment sample found outside a human skull
35LK2737	Big M	charcoal; charbon de bois	4880	11 0	sample picked from ca. 9 litres of soil from the fill of structure 1
FgQm-59	Site 243R	charcoal; charbon de bois	4890	50	component II/III
ME91.1	Hathaway	charcoal; charbon de bois	4915	75	component I, burial 40
45SA264	Lost	charcoal; charbon de bois	4930	60	
CAOra85	Bolsa Chica Mesa	marine shell; coquillage	5070	60	grooved rectangle bead
FdNf-2	St. Brieux	human bone collagen; collagène osseux humain	5085	80	burial, 1.83 m depth
35DO153	The Narrows	charcoal?; charbon de bois?	5090	80	
35DO130	Tahkenitch Landing	charcoal; charbon de bois	5100	70	stratum 4B
24SW264	Cremer	charcoal; charbon de bois	5100	70	trench A, soil horizon 12Akb, 235 cm depth
15JF60	Hornung	charcoal; charbon de bois	5100	75	Unit 20, level 6, 38-46 cm depth, general midden
AKXBD020	Village (RaEc-2)	charcoal; charbon de bois	5110	90	Level 6
DkPj-1	Head-Smashed-In Buffalo Jump	bison bone collagen; collagène osseux de bison	5120	10 0	
19SU-?	Boylston Street Fish Weir	plant remains; restes de plantes	5125	11 5	master core 8, 1.85 m below sea level
CASMa-?	Stanford Man I	human bone collagen; collagène osseux humaine	5130	70	
48SW127	Tower	charcoal; charbon de bois	5130	11 0	feature T91, a possible house pit
48SW5175	Sweetwater Creek	charcoal; charbon de bois	5130	90	component 1, feature 7A
12W162	Bluegrass	unknown; inconnu	5130	80	
15ED371	McCoy Hollow Rockshelter	unknown; inconnu	5130	95	feature 1

35CU82	Cape Blanco Lithic	charcoal; charbon de bois	5140	90	base of cultural deposits
35LNC62	Yaquina Head	unknown; inconnu	5140	70	
10IH1639	Lower Pittsburg Landing	unknown; inconnu	5140	12 0	Cascade phase
11GE-?	Helton	charred wood; bois carbonisé	5140	75	near center of horizon 6, stratigraphically equivalent to ISGS-197, -198, and -199
10IH-VP	Tolo Lake	sediment; sédiment	5150	11 0	carbonate from lacustrine sediment containing mammoth and bison bones
LA-9348	Ojito Dunes	charcoal; charbon de bois	5160	12 0	hearth in lower dune sand
FaNq-32	Gowen 2	bone collagen; collagène osseux	5160	15 0	cultural layer in paleosol VAhkb, 69-78 cm depth
48CR2353	Medicine House	charcoal?; charbon de bois	5160	12 0	
35JE51	Johnson	charcoal?; charbon de bois?	5170	70	feature 48 floor
24CB84	False Cougar Cave	charcoal; charbon de bois	5175	10 5	stratum ID1, 94 cm below datum
15ED69	Jagger Ridge Rockshelter	unknown; inconnu	5175	70	zone B
19WR-?	Cedar Swamp 3	charcoal; charbon de bois	5190	70	pit feature with chipping debris, deer bone, hazelnuts, charcoal, and a Brewerton notched point
45LE223	Layser Cave	charcoal; charbon de bois	5200	17 0	stratum 8
DhMn-1	Oxbow Dam	charcoal; charbon de bois	5200	13 0	zone 2-3, possibly a mixture of Green's Levels 6 and 7
3RA19	Scatters	human bone collagen; collagène osseux humaine	5200	10 0	base camp with extensive midden on levee
AKPET408	On Your Knees Cave	deer bone collagen; collagène osseux de cerf	5210	60	coastal bear den
CbGw-__2	Campbell Bay	charcoal; charbon de bois	5210	90	Sq. N0E0, Feature 1
NYCA69	Zawatski	unknown; inconnu	5210	70	Brewerton
45DO482	East Wenatchee	proboscidean bone collagen; collagène osseux de proboscidien	5215	90	feature 1, a pit containing the Richey-Roberts cache
IfPo-1	Wentzel Lake	charcoal; charbon de bois	5220	10 0	organic lens, 85-87 cm depth
12HR5	Miller	charred plant remains; restes de plantes carbonisés	5220	20 0	composite sample from a midden resting on a stratum of mussel shells, no associated features, 15.2 - 38.1 cm depth
28BE-VP	Bergen mastodon	mastodon bone collagen; collagène osseux de mastodonte	5220	12 0	peat, 1.8 m depth, 20-28 cm above thin tan lacustrine clay over coarse outwash of the most recent glaciation
25RW28	Doyle	freshwater mollusc shell; coquille de mollusque d'eau douce	5225	13 0	refuse pit, 46-61 cm above house floor, Keith variant

ObRw-1	Qugyuk	bison bone collagen; collagène osseux de bison	5230	20 0	caribou kill-site with no diagnostic artifacts
5GA1513	Upper Twin Mountain	charcoal; charbon de bois	5230	21 0	composite sample from bison bone bed with Goshen projectile points
5ST161	Carter Gulch	charcoal; charbon de bois	5230	80	hearth with abundant lithic artifacts, especially obsidian
22QU522	Denton	charcoal; charbon de bois	5230	12 5	0.3-0.5 m depth
ME90.2C	Brigham	charcoal?; charbon de bois	5235	35	stratum 8
DjRi-7	South Yale	charcoal; charbon de bois	5240	10 0	Terrace III, gritty sandy loam, scattered through deposit
26HU58	Wallmann bison	bison bone collagen; collagène osseux de bison	5240	23 0	partly buried, badly deteriorated bison skeleton with a Scottsbluff point nearby
24CB1266	Buckeye	sediment; sédiment	5250	70	feature 9
47OC45	Oconto	charcoal; charbon de bois	5250	11 0	area 1, feature 10, a burial feature
45PI72	Dupont Southwest	charcoal; charbon de bois	5260	70	
24MA1376	Elk Creek	sediment; sédiment	5260	60	stratum XIII, cultural layer, 135-145 cm depth
48SW5981	Lost Minkey	charcoal; charbon de bois	5265	80	bulk medium charcoal
EISx-10	Fougner Bay	charcoal; charbon de bois	5270	60	core 2, 103-104.5 cm depth, basal cultural deposit, 440 cm asl
24MA565	Steel's Pass	unknown; inconnu	5270	60	excavation unit 6S/4E, stratum III
15PI16	Thacker	charcoal; charbon de bois	5270	80	midden concentration at Slone to Thacker phase campsite
DhDn-2b	Du Ruisseau, Station B	charbon de bois; charcoal	5270	90	dans la couche de sable gris, en association avec des éclats
EeSu-1	Fort Rupert	charcoal; charbon de bois	5275	11 0	Layer 3, a stratum of mixed shell and earth
1Lu496	Dust Cave	charred material; matière carbonisé	5280	13 0	zone D4, N60/W64, Level 6, 160-178 cm depth, Feature 47/136, with Benton points
46BO25	James Creek	charcoal; charbon de bois	5280	80	hearth, with three Kirk Stemmed points
36AR188	Brown	charcoal; charbon de bois	5280	17 0	feature 19, a possible hearth with two Brewerton side- notched points
28SX-?	Rockelein	charcoal; charbon de bois	5280	11 0	fire pit with Stark-like points
32SL100	Pretty Butte	charcoal; charbon de bois	5285	65	hearth containing only 0.3 g of charcoal as well as charcoal- stained soil
48LN1468	Taliaferro	charcoal; charbon de bois	5290	19 0	component I, feature 21
11MO722	Leingang	charred wood; bois carbonisé	5290	90	fill of east half of Late Archaic pit, feature 58, probably Falling Springs phase
11MH-?	Woodstock	bone collagen; collagène osseux	5290	22 0	

10CW225	Swamp Creek	charcoal; charbon de bois	5300	16 5	occupation level 140-150 cm depth
5BL67	Hungry Whistler	charcoal; charbon de bois	5300	13 0	6SW/2SE, 11-19 cm depth, base of stratigraphic unit 2, with a stemmed projectile point, chipping debris and oxidized pebbles
20SA8	Andrews	charcoal; charbon de bois	5300	15 0	feature 11, with fragmentary human skull but no cultural material
46MG9	Rohr Shelter	charcoal; charbon de bois	5310	90	hearth in block A2, 32-36" depth, just above sterile yellow sand with an Archaic artifact
36CE230	Jacks Mill	unknown; inconnu	5310	75	
CAMod-?	King's Dog	bone collagen; collagène osseux	5330	12 0	occupation surface at 117 cm depth, with large side-notched projectile points
24MA171	Barton Gulch	charcoal; charbon de bois	5330	17 0	Area E
45WT134	Hatiuhpuh	freshwater mollusc shell; coquille de mollusque d'eau douce	5340	70	
14MO304	William Young	charcoal; charbon de bois	5340	16 0	center of occupation zone, with lanceolate points, large chipped blades and fired clay effigy heads
BkGg-11	Allumette Island 1	human bone collagen; collagène osseux humain	5340	80	burial A-6, to date the earlier half of the Laurentian tradition
26NY345	Triple T Shelter	charcoal; charbon de bois	5350	10 0	charcoal scatter from throughout stratum 3F
5BL70	Mt. Albion	charcoal; charbon de bois	5350	13 0	1N/10W and 1N/11W, 27-35 cm depth, base of hearth B, a small prepared basin dug from the eroded upper surface of unit 5
11PK500	Napoleon Hollow	charred plant remains; restes de plantes carbonisé	5350	70	feature 38, level 1, Middle Archaic stratum of colluvial fan, 2.3 m depth, block II, Helton component
48SW6777	Farson	charcoal?; charbon de bois	5360	10 0	house F8, feature 8C
11S695	Mund House	charred plant remains; restes de plantes carbonisé	5360	10 0	float sample of fill from Falling Springs phase pit, feature 22
26CH16	Hidden Cave	plant remains; restes de plantes	5365	90	stratum 4, Devils Gate phase
23MN732	Pigeon Roost Creek	charcoal; charbon de bois	5370	35 0	horizon 5
ME90.2D	Sharrow	charcoal; charbon de bois	5370	12 0	feature 15, stratum 4, Laurentian Archaic
AKFAI-VP	Goldstream	moose bone collagen; collagène osseux d'orignal	5380	55	
15OH2	Indian Knoll	deer bone; os de cerf	5382	30 0	mound at 1.0 ft level
CT	Bliss	unknown; inconnu	5385	18	



				0	
EgPm-3	Mona Lisa	bison bone apatite; apatite osseux de bison	5390	17 0	Locality C, upper of two bone beds above Mazama ash, with one side-notched point
5RB1008	Brady	unknown; inconnu	5390	21 0	
5LR284	Lightning Hill	charcoal; charbon de bois	5390	16 5	
ME74.8	Eddington Bend	unknown; inconnu	5390	70	
EISx-1	Namu	dog bone collagen; collagène osseux de chien	5400	50	basal deposits of an excavation unit, Period 2
24BW626	Indian Creek	charcoal?; charbon de bois	5400	10 0	unit 4, Level 21c
20SA192	Schmidt	charcoal; charbon de bois	5400	20 0	stratum 1, upper part of tan sand of earliest occupation, 4- 5 ft depth, Dustin
15BL35	Main	unknown; inconnu	5400	13 0	feature 141
15PI92	Martin Justice	unknown; inconnu	5400	11 0	feature 33
42BO268	Swallow Shelter	charcoal; charbon de bois	5410	17 0	ca. 3 ft into stratum 1, 4 ft above bedrock, small pieces from a small, thin lens with very sparse cultural material
EaLg-9	Wright	bone collagen; collagène osseux	5410	80	section A, 2.55 m depth
JcRw-14	Hughes	charcoal; charbon de bois	5420	11 5	disseminated at base of lake proglacial lake silt on varved lake clay
DfRu-8	Helen Point	charcoal; charbon de bois	5420	23 0	Carlson's assemblage 1
45CH302	Stemilt Creek Village	freshwater mollusc shell; coquille de mollusque d'eau douce	5420	80	
11PK-?	Joe Gay Mounds	unknown; inconnu	5420	80	Helton phase occupation beneath a Middle Woodland mound
JcRw-1	South Klondike	charcoal; charbon de bois	5430	17 0	Floor 14-3, hearth in upper section of geological stratum 14
5GN191	Kezar Basin	charcoal; charbon de bois	5430	90	cultural feature
NkTm-8	Hutchison Bay	caribou bone collagen; collagène osseux de caribou	5440	14 0	test pit, N15/W0, 30-70 cm depth
DjPp-3	Crownsnest Dance Hall	bone collagen; collagène osseux	5440	16 0	summer camp, Level 1, buried soil associated with Lusk and Pryor Stemmed points
32ME-VP	Zap or Spring Creek	wood; bois	5440	20 0	alluvium 25 ft below the top of the terrace, with bones of Bison crassicornis
11PK477	Elledge	plant remains; restes de plantes	5440	90	feature 21
31HX7	Gaston or Roanoke Rapids	charcoal; charbon de bois	5440	17 5	fireplaces 1, 2, and 3, 54-62" depth, with Halifax projectile points
19ES80	Bull Brook I	charcoal; charbon de	5440	16	unknown

		bois		0	
10NP143	Hatwai	sediment; sédiment	5450	12 0	organic fraction of Overbank Lamina "B" from buried channel at intersection of lower point bar and creek, 0.5-1.0N/48-50E
46LG163	Beech Branch	unknown; inconnu	5450	70	
AKXPM-?		charcoal; charbon de bois	5460	22 0	
AKXMH111	Phipps	charcoal; charbon de bois	5460	60	buried soil 1, the A horizon above the Denali occupation
LA4974	Lucy	soil extract; extrait de sol	5460	60	humates extracted from layer 6, the lowermost of three dark gray clay bands overlying Sandia points in layer 7
ME52.16	Norridgewock	charcoal; charbon de bois	5460	60	fire-cracked rock feature
26WP107	Newark Cave	charcoal; charbon de bois	5470	40 0	area 1, level 3
24CB202	Sorenson	charcoal; charbon de bois	5475	19 0	component 4, feature 11
EdRi-11	Landels	deer bone collagen; collagène osseux de cerf	5480	70	middle and lower Stratum II, mixed with possible early Nesikep material
FB9366	Pendejo Cave	plant remains; restes de plantes	5480	60	lower portion of Zone C, unit W3N1, sandal fragment, feature 1, stratum 3
46KA142	Burning Springs Branch	unknown; inconnu	5480	60	
EcRg-1B	Valley Mine	beaver bone collagen; collagène osseux de castor	5490	19 0	cultural component II, unit H69, 4 cm depth
48SW5982	Bald Knob	unknown; inconnu	5490	80	
13SR153	Buchanan	wood; bois	5490	11 0	
33ST-VP	Whitaker mammoth	gyttja	5490	23 5	peaty gyttja with plant rootlets overlying grey clay gyttja associated with the right forelimb, skull, and tusks of a mammoth
42KA2546	Bechan Cave	charcoal; charbon de bois	5500	80	auger test, uncertain context and association, assigned to cultural period 2
13PM40	A.C. Banks	freshwater mollusc shell; coquille de mollusque d'eau douce	5500	70	fragments at 335.3 cm depth
11P4	Rench	charcoal; charbon de bois	5500	13 0	feature 26, stratum 3, 2.4 m depth
46KA27	St. Albans	charcoal; charbon de bois	5500	45 0	core drill 3, 4.3-4.4 ft depth
33CU34	Squaw Rockshelter	charcoal; charbon de bois	5500	85	stratum 4, with knotted cordage
DbEj-11	Lavoie	charbon de bois; charcoal	5500	10 0	couche IIc, N20W10
14PO1	Coffey	charcoal; charbon de bois	5505	10 5	Horizon III-7
EdRg-2	Knoll	deer bone collagen; collagène osseux de	5510	90	cultural component III, unit K9, level 2

		cerf			
48SW1900	Washakie	charcoal; charbon de bois	5510	70	feature
GgQq-7	Wood Bog	peat; tourbe	5520	10 0	ca. 105-110 cm depth
HcQh-6	Pulp Mill	sediment; sédiment	5520	10 0	170 cm depth
5BL67	Hungry Whistler	charcoal; charbon de bois	5520	19 0	7NE/4SE, 10-15 cm depth, stratigraphic unit 2, with two Mount Albion corner-notched points
GhQt-4	Saskatoon Mountain	charcoal and soil; charbon de bois et sol	5530	17 0	Level P1, 55 cm depth
48SW1455	Deadman Wash	charcoal; charbon de bois	5530	14 0	component 3
19FR15	WMECO	charcoal; charbon de bois	5530	18 0	
FdOt-1	Anderson	bison bone collagen; collagène osseux de bison	5540	16 0	Test B, Level 7
41LU1	Lubbock Lake	sediment extract; extrait de sédiment	5545	10 0	humins, trench 39, substratum 4/, marsh sediment
10NP143	Hatwai	charcoal; charbon de bois	5550	22 0	fill of large pit intrusive into fill of House 1, 10-12N/128-130E, stratigraphically more recent than Tx-3263 and WSU-1842, Tucannon phase
41VV167	Eagle Cave	charcoal; charbon de bois	5550	13 0	stratum IId
KkLn-4	Migod	charcoal; charbon de bois	5550	12 0	Trench 1, stratum 7, 86.3 cm depth
46KA104	Hansford	unknown; inconnu	5550	80	Hansford phase
SfFk-6	Tusk	walrus bone collagen; collagène osseux de morse	5550	38 0	upper component, partially buried on a raised beach terrace, 29 m asl
DhRq-22	Park Farm	wood; bois	5560	90	branch in sandy mud, 2.2 m depth in a backhoe trench
24MA1144	Cherry Creek	sediment; sédiment	5560	11 0	level 10, occupation layer with two large basalt stemmed or corner-removed points
48SW2590	Maxon Ranch	charcoal; charbon de bois	5560	28 0	component I
33ST-VP	Whitaker mammoth	gyttja	5560	24 5	peaty gyttja with plant rootlets overlying grey clay gyttja associated with the right forelimb, skull, and tusks of a mammoth
36CL52	State Road Ripple	unknown; inconnu	5565	29 5	
18KE38	Groves #1	marine shell; coquillage	5565	65	with no diagnostic artifacts
24CB91	Shield Trap	bison bone collagen; collagène osseux de bison	5570	75	stratum II/III, 1.03 m below datum
32SL100	Pretty Butte	soil; sol	5570	11 0	hearth containing only 0.3 g of charcoal as well as charcoal-stained soil

36PI13A	Faucett	charcoal; charbon de bois	5570	20 0	with Vosburg points
42UT104	Spotten Cave	charcoal; charbon de bois	5580	12 0	zone Ib
15LV156	Morrisroe	charcoal; charbon de bois	5580	10 0	Unit 1, level 3, stratum 2
NYCA69	Zawatski	charcoal; charbon de bois	5580	22 5	with a serrated corner-notched point
EISx-1	Namu	human bone collagen; collagène osseux humain	5590	10 0	main trench, burial B 1.11B.1, 1.5 m depth, one of the two oldest burials from the site, Period 2
24PA504	Myers-Hindman	charcoal; charbon de bois	5590	15 0	Level 3, an unlined hearth
41VV456	Hinds Cave	charcoal; charbon de bois	5590	70	analysis unit 5, block B, lens XIII A
41VV620	Seminole Sink	human bone collagen; collagène osseux humaine	5590	18 0	zone 2, burial
1Lu496	Dust Cave	charred material; matière carbonisé	5590	50	zone D4, N62/W64, Level 6, 175-185 cm depth, Feature 15, with Benton points
10IH1892E	Deep Gully	unknown; inconnu	5600	80	Cascade phase
10LH63	Beta Rockshelter	charcoal; charbon de bois	5600	17 5	Block S-5e and S-4e, Layer 6d, 380-390 cm below Datum 1, or possibly from incipient soils 6B or 6C
5GN191	Kezar Basin	charcoal; charbon de bois	5600	12 0	cultural feature
23CR149	Pot Shelter	charcoal; charbon de bois	5600	12 5	Level 25
19SU-?	Boylston Street Fish Weir	peat; tourbe	5600	14 0	lower peat, 2.64 and 2.66 m below sea level, IBM building site
ObRw-11		caribou bone collagen; collagène osseux de caribou	5610	65	near a hearth feature, 5 cm depth
AKXMK106	Tiny Island Village	charcoal; charbon de bois	5630	60	lower component, test pit A, stratum 5, 105 cm depth
48CR3961	Great Divide Basin	soil; sol	5630	12 0	stratum C, feature
CAMod-?	King's Dog	bone collagen; collagène osseux	5640	15 0	
FaNq-56	Norby	bone collagen; collagène osseux	5640	12 0	cultural layer and bone bed in paleosol in alluvial sand
19BR187	Norton Reservoir	charcoal; charbon de bois	5640	28 0	
5BL70	Mt. Albion	charcoal; charbon de bois	5650	14 5	3N/1W, 23-28 cm depth, base of the fill of hearth A, a depression in the upper surface of stratigraphic unit 4
10CL3	Veratic Rockshelter	charcoal; charbon de bois	5670	12 0	layer 29, feature 5, a hearth, with Bitterroot points
24CA74	Sun River	charcoal; charbon de bois	5670	19 0	Level VI, unit 44N/267W, feature I, a dense concentration of bone fragments, flakes and fire-broken rocks

48FR424	Sand Wash	charcoal; charbon de bois	5670	10 0	feature T104, a possible housepit
24CB84	False Cougar Cave	charcoal; charbon de bois	5670	11 0	stratum I, 70-80 cm depth, mixed charcoal sample derived from screen-washing of the entire 10 cm level
NY	Engelbert	charcoal; charbon de bois	5670	80	lower stratum 2, with Brewerton Eared-Notch points
AKFAI206	Moose Creek	charcoal; charbon de bois	5680	50	unit 5, natural charcoal in paleosol with the youngest Denali complex occupation level
10AA17	Swan Falls	freshwater mollusc shell; coquille de mollusque d'eau douce	5680	50	mussel shell feature near the lowest level
48SU846	McGinnis	charcoal; charbon de bois	5680	15 0	feature 1
11RI506	Mussel Beach	freshwater mussel shell; coquille de mollusque d'eau douce	5680	75	midden with non-diagnostic artifacts on the crest of a beach ridge about 20 m from the Mississippi River
18KE12	Bramble #1	marine shell; coquillage	5685	13 0	with no diagnostic artifacts
10OE565	Bachman	charcoal; charbon de bois	5690	10 0	
1JE57	O'Neal	charcoal; charbon de bois	5690	70	hearth, feature 9, square 8B47, 29-82 cm depth, with no associated artifacts
AKPSM027B	Putu	charcoal; charbon de bois	5700	19 0	Zone II, 7 combined samples
26NY345	Triple T Shelter	charcoal; charbon de bois	5700	10 0	charcoal scatter from oxidized area in stratum 3C
10IH1639	Lower Pittsburg Landing	unknown; inconnu	5700	70	Cascade phase
48FR1484	Split Rock Ranch	charcoal; charbon de bois	5700	80	feature 5-5, hearth
46FA191	Taylor	unknown; inconnu	5700	16 0	
EdRk-4	Nesikep Creek	bone collagen; collagène osseux	5715	19 0	Zone VII, fluvial? brown sand, resting on Nesikep Creek fan gravel
EgPm-3	Mona Lisa	bison bone apatite; apatite osseux de bison	5715	15 0	Locality C, lower of two bone beds above Mazama ash, with two side-notched points
48SW3039	Playa 3	charcoal; charbon de bois	5720	10 0	locality A, the lower of two components, large firepit
DgRr-6	Glenrose Cannery	charcoal; charbon de bois	5730	12 5	Component III, XU 1, Level 66, 360 cm depth
DjPo-25	Bill White	bone collagen; collagène osseux	5730	18 0	Level 4, interpreted as a winter camp
5BL73	Albion Boardinghouse	charcoal; charbon de bois	5730	14 5	lower charcoal band below sterile Neoglacial loess
5JF63	Cherry Gulch	charcoal; charbon de bois	5730	22 0	cultural level with side- to corner-notched projectile points with convex bases
AKAMR001	Onion Portage	charcoal; charbon de	5735	15	Band 7, Level 1

		bois		5	
26PE14	Leonard Rockshelter	charred plant remains; restes de plantes carbonisés	5737	25 0	carbonized basketry, Area C, upper guano layer, with infant burial
45LI150	Lamona Rockshelter	wood; bois	5740	60	
DkPj-1	Head-Smashed-In Buffalo Jump	bone collagen; collagène osseux	5740	10 0	north area, layer 10d
FeNm-86	East Village Access	bone collagen; collagène osseux	5740	90	cultural level, unit 21N925E1, 0-10 cm below datum
FhNg-25	Below Forks	charcoal; charbon de bois	5740	10 0	east side of square 9S/2E, directly overlying the occupation layer, 1.75 m depth
39CU779	Beaver Creek Shelter	charcoal; charbon de bois	5740	11 0	unit 15, 99.10 m, feature 87-8
AKAFG008	Chert	charcoal; charbon de bois	5750	24 0	area N49'6"-50'6"/E43'-44', 32" depth, between layers of orange-yellow sediment usually considered sterile subsoil, the very base of the site
CASis4	Nightfire Island	charcoal; charbon de bois	5750	13 0	stratum 3
45OK78	Hymer	freshwater mollusc shell; coquille de mollusque d'eau douce	5750	70	
45BN495	Kennewick Man	human bone gelatin; gélatin osseux humain	5750	10 0	slumped from floodplain deposits, recovered from the surface
C:5:3	Stanton's Cave	feces; fèces	5760	20 0	Level 2
LA-9300-AT	Armijo Tank Shelter	charcoal; charbon de bois	5760	12 0	test trench 5, 86-97 cm below datum, level 9, Santa Ava-Atrisco
FaNq-25	Gowen 1	charcoal; charbon de bois	5760	14 0	cultural layer in paleosol IIIAhkb, 75-78 cm depth
AKPET190	El Capitan Cave	fish bone collagen; collagène osseux de poisson	5770	13 0	surface in a coastal bear den
23SN-VP	Old Spanish Cave	bat feces; fèces de chauve-souris	5770	15 0	guano from the bottom 4" of a 32" pile of guano
48HO4	Legend Rock	organic matter; matière organique	5775	80	subvarnish organic matter on a petroglyph
AKTLM128	Jay Creek Ridge	charcoal; charbon de bois	5780	10 0	
CASRI-?	Lobo Canyon	marine shell; coquillage	5780	16 5	bottom of a midden of the Highland culture
24CB1266	Buckeye	charcoal; charbon de bois	5780	19 0	feature 7
LA4974	Lucy	soil extract; extrait de sol	5780	70	humates extracted from layer 6, the uppermost of three dark gray clay bands overlying Sandia points in layer 7

5DA119	Roxborough Park I	charcoal; charbon de bois	5780	16 0	colluvial deposits, 1.2 m depth, with three projectile points, flake end scrapers, shallow-basin metates, and manos
10WN117	Braden	human bone collagen; collagène osseux humain	5790	12 0	mass grave with 191 obsidian blanks, six side-notched points, six turkey-tail blade, three Olivella beads, and other artifacts
26EK-?	Bonneville Estates Rockshelter	unknown; inconnu	5790	90	near the bottom of test units in a badly disturbed rockshelter, above tentatively identified Mazama tephra
BiCu-1	Debert	charcoal; charbon de bois	5790	13 2	charred root, not associated with artifacts, from section G
35JE319	Heath Cliffs	soil; sol	5800	19 0	southern locus, component III, Warm Springs phase
26NY301	Gatecliff Shelter	charcoal; charbon de bois	5800	17 0	horizon 15, hearth A
ME	Hunneman	charcoal; charbon de bois	5800	90	minute fragments in red ochre, grave 19
42KA433	Benchmark Cave	plant remains; restes de plantes	5810	70	warp-faced plain weave sandal (FS 77.5) from feature 35
5GN222	Dry Creek	charcoal; charbon de bois	5810	10 0	cultural feature
11GE-?	Helton	charred plant remains; restes de plantes carbonisé	5820	80	feature 1740a, Horizon 7A, 2.74-3.04 m below datum
ME90.2D	Sharrow	charcoal; charbon de bois	5820	11 0	feature 16, stratum 3, Laurentian Archaic
36CN164	Memorial Park	soil; sol	5830	13 0	component V, bulk sample from burial soil 5
48LA312	Pine Bluffs	charcoal; charbon de bois	5840	11 0	
20SE-VP	Harper	wood; bois	5840	80	peat
EcOo-31	Wahl	charcoal; charbon de bois	5860	90	fill of feature 5, a basin hearth, 245 cm depth
13SR153	Buchanan	charcoal; charbon de bois	5860	80	
FaNq-32	Gowen 2	bison bone collagen; collagène osseux de bison	5863	55	cultural layer in paleosol
45BN328	Plymouth	freshwater mollusc shell; coquille de mollusque d'eau douce	5880	65	
42GA3132	Casa del Fuego	charcoal; charbon de bois	5880	90	disseminated charcoal with five unlined pits originating from an old ground surface buried by ca. 1.8 m of sand
42KA443	Hermitage	plant remains; restes de plantes	5890	55	padding of warp-faced plain weave sandal (FS 19.1) from aceramic midden deposit, feature 9
11PK477	Elledge	plant remains; restes de plantes	5890	70	feature 14

45ST59	Pete's Place or Snag Cove	charcoal; charbon de bois	5900	50	
BcHb-42	Rentner	charcoal; charbon de bois	5900	90	feature containing ground slate and chipped stone points
13CK405	Cherokee Sewer	charcoal; charbon de bois	6080	70	east end of test trench 1-2, 13 cm above and intruded into cultural horizon 1 from silt and sand, the roots and base of a tree
44SC-VP	Darty Cave	bone collagen; collagène osseux	6090	80	
AKFAI-VP	Goldstream	beaver-gnawed wood; bois rongé par des castors	6100	80	
42TO-?	Sandwich Shelter	charcoal; charbon de bois	6110	90	hearth, top of stratum 8, maximum age of fauna
42SA21153	Turkey Pen	charcoal; charbon de bois	6120	70	hearth, feature 5, unit 3b, marking the end of early Archaic occupation of the shelter
KjNb-7	Duc	charcoal; charbon de bois	6120	110	in sand, sq. 39, lowest level, sublevel 5b
45KT1362	Sentinel Gap	bison bone collagen; collagène osseux de bison	6130	40	
11PK500	Napoleon Hollow	charred plant remains; restes de plantes carbonisé	6130	110	feature 36, levels 2P, 3, a shallow pit in colluvium, 1.6 m depth, uppermost eroded surface of the Helton Middle Archaic stratum, block II
44BA-VP	Back Creek Cave 2	bone collagen; collagène osseux	6130	35	
NiTs-4	Satkualuk	charcoal; charbon de bois	6140	70	buried living floor, 55-59 cm depth
11RA501	Modoc Rockshelter	charcoal; charbon de bois	6140	70	1989 central pit profile, stratum 3MT, 122.37-122.17 m asl
FdPe-4	Boss Hill	charred wood; bois carbonisé	6150	95	Locality 2, occupation 8, charred roots and twigs floated from several kg of pond sediments below Mazama ash
48SW5019	Rock Springs Uplift	charcoal; charbon de bois	6150	90	feature 2
AKPSM017	Hilltop	charcoal; charbon de bois	6160	130	charcoal mixed with soil organics
13MN2	Turin	bison bone; os de bison	6160	150	11'8" level, articulated in valley fill 30 ft southeast and 8 ft below human remains dated by M-932
DkNu-3	Niska	bison bone collagen; collagène osseux de bison	6170	70	cultural layer
EaLa-1	Whitemouth Falls	human bone collagen; collagène osseux humain	6170	110	Feature #10-76, a primary flexed human burial
23CY64	Arnold Research Cave	charcoal; charbon de bois	6180	150	square 100R23, very consolidated fill, apparently a midden against the east wall of the cave, 24-30" depth



11ST123	Smiling Dan	charcoal; charbon de bois	6180	10 0	lower portion of unit I1b, from the top of a possible A horizon of a paleosol weakly developed in the colluvium, with a thin lithic scatter
ME74.8	Eddington Bend	charcoal; charbon de bois	6180	70	W.B.S. ocher
42BO36	Hogup Cave	feces; fèces	6190	11 0	stratum 7, square 100L80 (FS92-155)
ME90.2C	Brigham	charcoal?; charbon de bois	6195	55	stratum 7
10BT46	Jackknife Cave	charcoal; charbon de bois	6200	15 5	Block L-6, feature 1, fire pit intrusive from Level VIII into Level IX
42EM-?	Joe's Valley Alcove	charcoal; charbon de bois	6200	19 0	Bed I, Level 3
5BL170	Ptarmigan	charcoal; charbon de bois	6205	17 0	
5GN212	Iola	charcoal; charbon de bois	6210	11 0	cultural feature
13LA152	Gast Spring	charcoal?; charbon de bois	6215	70	occupation surface, 5 m depth, identified in coring and subsequently tested to reveal a domestic structure with a pronounced basin and subfloor pit
12SP1	Raaf Shell Mound	freshwater mollusc shell; coquille de mollusque d'eau douce	6215	20 5	shell heap on the north bank of the Ohio River, 7 ft depth
AKKOD224	Uganik Island	charcoal; charbon de bois	6220	70	
48BH657	Eagle Shelter	soil; sol	6220	90	stratum 9, 6.8 kg of fill from feature 18, directly below the dripline
48FR113	Crooks Creek	charcoal; charbon de bois	6220	11 0	feature T123, a possible housepit
13CD-VP	Mud Creek	wood; bois	6220	11 0	sand underlying black silty clay in the east bank of Mud Creek, stream channel alluvium, De Forest Formation
EiBg-20	Blanc-Sablon 20 (Templier)	charcoal; charbon de bois	6220	70	pit S1/E3, 30-50 cm depth, above artifacts and 5 cm under paleosol associated with edged biface
20SA581	Weber I	bone collagen; collagène osseux	6230	19 0	subunit IIIa, N52/E6, with large side-notched points
10OE1689	Givens Hot Springs	freshwater mollusc shell; coquille de mollusque d'eau douce	6240	90	feature 3
45LE286	Elk Pass Quarry	charcoal; charbon de bois	6250	11 0	
32DU955A	Bobtail Wolf	bone amino acid; aminoacide osseux	6260	50	south terrace, Block 4, 473N/499E, 33 cm depth, Btn horizon, with a few flakes but no diagnostic artifacts
12W162	Bluegrass	unknown; inconnu	6260	12 0	
35DO153	The Narrows	charcoal?; charbon de	6270	13	hearth

		bois?		0	
45OK424	Lagoon	freshwater mollusc shell; coquille de mollusque d'eau douce	6280	90	
13ML224	Lungren	charcoal; charbon de bois	6280	12 0	fire pit, feature 4, 3.1 m depth, with side-notched, basally ground projectile points and plano-convex end scrapers
EeRh-61	Rattlesnake Hill	freshwater mollusc shell; coquille de mollusque d'eau douce	6290	12 0	cultural Zone II, layer 6
CASDi149	C.W. Harris	charcoal; charbon de bois	6300	29 0	large accumulation of stones, feature 5, with La Jollan artifacts
10IH66	Weis Rockshelter	charcoal; charbon de bois	6300	10 0	charcoal and humus, Trench 3, 3.4-3.6 m below Datum O, Old Cordilleran
1JA181	Russell Cave	charcoal; charbon de bois	6300	17 5	hearth, 5.5 ft depth
42SV6	Sudden Shelter	charcoal; charbon de bois	6310	24 0	near bottom of stratum 8, dating end of component 1, with Elko corner- and side-notched points
29RV2	Blackwater Draw 1	charred bone; os carbonisé de bison	6310	15 0	Bed E, carbonaceous silt
DdGt-5	Bérubé	os calcinés; calcined bone	6310	16 0	zone A, niveau 2, carré S6,E1, 7 sous la surface, en association avec des fragments de poterie et des pointes de projectile
46PU60	Amos Power Plant	unknown; inconnu	6315	16 0	
36WH297	Meadowcroft Rockshelter	charcoal; charbon de bois	6315	28 0	firepit, lower third of stratum IIb
19ES-?	Wheeler	charcoal; charbon de bois	6325	23 5	feature 208 (formerly 101-70)
48SW6275	Cully's Dump	charcoal; charbon de bois	6330	12 0	feature T59, a possible house pit
28BE-VP	Bergen mastodon	mastodon bone; os de mastodonte	6340	10 0	peat, 1.8 m depth, 20-28 cm above thin tan lacustrine clay over coarse outwash of the most recent glaciation
ME52.16	Norridgewock	charcoal; charbon de bois	6340	40	buried soil horizon
35LNC62	Yaquina Head	charcoal; charbon de bois	6350	14 0	below shell
42WN421	Walter's Cave	plant remains; restes de plantes	6350	85	warp-faced plain weave sandal (FS 576.1) from feature 54, with a painted clay figurine
5GN2192	Vandergift	charcoal; charbon de bois	6350	12 0	hearth
35LIN11	Cascadia Cave	charcoal; charbon de bois	6360	21 0	
10MA143	Scaredy Cat Cave	charcoal; charbon de bois	6370	90	test unit 4, stratum II, compacted brown silt and unburned sagebrush fragments

24JF292	Sheep Rock Spring	horse bone collagen; collagène osseux de cheval	6380	60	
23BY388	Jakie Shelter	charcoal; charbon de bois	6380	20 0	square 95L7, level 9, a hearth, combined with M-699 from the same level
ME74.106	Gilman Falls	unknown; inconnu	6380	65	
42WN420	Cowboy Cave	charcoal; charbon de bois	6390	70	stratum 4a, "sterile" red sand layer, actually part of the early Archaic occupancy of the cave
21YM47	Granite Falls	bison bone collagen; collagène osseux de bison	6390	10 0	bison butchering site with an extensive bone bed, fired- cracked rock, a bifacial knife, and a quartz chopper
45DO387	Plew	freshwater mollusc shell; coquille de mollusque d'eau douce	6400	12 0	
45FR46H	Seed Cave	charcoal; charbon de bois	6400	20 0	
15ED69	Jagger Ridge Rockshelter	unknown; inconnu	6400	90	zone D, Big Sandy II
AKEAG200	Lost Chicken Creek	organic matter; matière organique	6410	12 0	from skull of <i>Bootherium bombifrons</i>
11J814	Little Muddy Rock Shelter	charcoal; charbon de bois	6410	12 0	
DjPo-47	Maple Leaf	bison bone collagen; collagène osseux de bison	6420	16 0	component 3, hard, blocky red peat, just above Mazama tephra, Mapleleaf subphase
48NA185	Bates Creek	soil; sol	6420	21 0	humates extracted from carbonaceous silt alluvium with non-diagnostic flint artifacts
21CE1	Itasca	wood; bois	6430	12 5	pollen zone 3a, marl, 2.55 m depth, with bison bones
35UN74	Ladd Canyon	charcoal; charbon de bois	6450	90	
ME7.4	Limington	charcoal; charbon de bois	6450	60	fire-cracked rock feature
48SW1668	Ten Mile Draw	charcoal; charbon de bois	6460	13 0	component 1, 3.5 m depth
19BR108	Peace Haven 2	charcoal; charbon de bois	6460	75	base of a pit 80 cm below the plow zone, filled with sand, red ochre, a few calcined bone fragments, and a unique perforated stone object
EeRl-7	Keatley Creek	charcoal; charbon de bois	6470	90	Housepit 7, square M, stratum XIIIb (rim), with Kamloops points
42KA2687	Perfect Ruin	charcoal; charbon de bois	6480	70	hearth encountered below a Pueblo trash deposit in a 1 x 1 m test
5EA799	Yarmony	human bone collagen; collagène osseux humain	6480	60	burial
36SO153	Spruce Run	charcoal; charbon de bois	6490	30 0	with Brewerton Side-notched points
19WR-?	Cedar Swamp 3	charcoal; charbon de	6490	10	feature with a Neville preform

		bois		0	
35DO37	Tiller Ranger Station	charcoal?; charbon de bois?	6500	60	unit EU2
45SA202	Council Lake	charcoal; charbon de bois	6500	10 0	
26PE3d	Guano Cave	organic matter; matière organique	6500	15 0	fine sand of habitation level with a pollen spectrum indicating the most arid conditions of the sequence
CkEe-5	McInnes	charcoal; charbon de bois	6500	18 0	sq. 3, level 2b, 45 cm depth, at bottom of pit containing bone fragments, cracked rock, chips and a fragmentary knife or projectile point
13CK405	Cherokee Sewer	charcoal; charbon de bois	6505	14 5	composite of three samples from different provenience units
19PL-?	Oak Island	charcoal; charbon de bois	6505	12 0	
45ST65	China Bend or Nshiitkwu	charcoal; charbon de bois	6510	10 0	floor of sealed house, Area A, Stratum 7
11RA501	Modoc Rockshelter	charcoal; charbon de bois	6510	80	main shelter, stratum 4MT, 1984 unit E, feature 538, 122.04-121.72 m asl
26LN-?	O'Malley Shelter	charcoal; charbon de bois	6520	14 0	Level 1
24MA1376	Elk Creek	sediment; sédiment	6520	60	stratum VIII, cultural layer, 190-200 cm depth
12SP1	Raaf Shell Mound	freshwater mollusc shell; coquille de mollusque d'eau douce	6525	18 0	shell heap on the north bank of the Ohio River, 4 ft depth
45BN328	Plymouth	freshwater mollusc shell; coquille de mollusque d'eau douce	6530	65	
40WM31	Coats-Hines	plant remains; restes de plantes	6530	70	within the cusps of a mastodon tooth associated with 10 tool fragments and 24 resharpening flakes
NH39-1	Wadleigh Falls	charcoal; charbon de bois	6530	80	scattered charcoal within the upper component, 124.5-133 cm depth
36LY37	Canfield Island	unknown; inconnu	6535	11 0	
35DS34	Paulina Lake	unknown; inconnu	6540	15 0	
10BT62	Saw Mill Canyon	soil; sol	6540	23 0	dark brown soil, test pit 8, 80-100 cm depth
41VV456	Hinds Cave	charcoal; charbon de bois	6540	70	analysis unit 6, area A, block A, lens 5C
20WA-VP	Kuhl mastodon	mastodon bone; os de mastodonte	6545	25 0	outwash sand and gravel 12 miles southwest of Ann Arbor
EISx-1	Namu	charcoal; charbon de bois	6550	90	rivermouth trench, toward the top of stratum 2a, 330-340 cm depth, Period 1
42TO-?	Sandwich Shelter	charcoal; charbon de bois	6550	13 0	hearth, top of stratum 5 or bottom of stratum 6, maximum age of fauna

5GN191	Kezar Basin	charcoal; charbon de bois	6550	16 0	cultural feature
20SA192	Schmidt	charcoal; charbon de bois	6550	25 0	stratum 1, feature 7, a basin-shaped hearth, 2.15-3.0 ft depth, in the earliest preceramic occupation at the site, Dustin
EISx-5	King Island	marine shell; coquillage	6560	50	core 1, 363.5-365 cm depth, basal cultural deposit, 307 cm asl
42TO13	Danger Cave	plant remains; restes de plantes	6560	12 0	pickleweed chaff, cultural level 3
48SW3039	Playa 3	charcoal; charbon de bois	6560	42 0	locality B
RcHw-VP-5	Cape Storm	whale bone apatite; apatite osseux de baleine	6560	17 0	gravel beach, 38 m asl
NY	Engelbert	charcoal; charbon de bois	6560	10 0	feature 6, a small hearth 10 cm deep, originating in Stratum 2, 237 cm depth, with Neville points, Laurentian, Vergennes
ME	Hunneman	unknown; inconnu	6560	80	
1Lu496	Dust Cave	charred material; matière carbonisé	6570	19 0	zone K5/N2, N60/W64, Level 21, 270-275 cm depth, with Eva and Morrow Mountain points
45SA85	Vine	charcoal; charbon de bois	6580	50	
23HI216	Phillips Spring	charcoal; charbon de bois	6580	18 0	unit C2, 3.92 m depth, flotation recovery
CeEu-10	Saint-Augustin	charbon de bois; charcoal	6580	28 0	dans une bande noire d'un fossé, à environ 1 km au nord-east de l'emplacement du site et qui correspondrait à la couverture végétale d'origine
NH26-32	Weirs Beach	charcoal; charbon de bois	6595	19 5	pit feature containing a tan quartzite biface tip
15McL12	Kirland	unknown; inconnu	6600	80	
ME22.10	Oxford	charcoal; charbon de bois	6600	90	pit feature, likely a tree throw
45WH223	Damfino Lakes	charcoal; charbon de bois	6610	90	
10OE1689	Givens Hot Springs	freshwater mollusc shell; coquille de mollusque d'eau douce	6610	12 0	feature 3
36CL52	State Road Ripple	unknown; inconnu	6610	20 0	
AKKOD324		charcoal?; charbon de bois?	6620	60	erosion profile
FhQI-29	Mountain Creek site (1073R)	charcoal; charbon de bois	6620	12 0	cultural layer with a Mummy Cave point
JcRw-1	South Klondike	bone collagen; collagène osseux	6630	10 0	square 8, 1S/9E, cultural level A, geological stratum 14
48CR3815	WHD Sage Creek	charcoal; charbon de bois	6630	14 0	excavation unit 4, feature 1, a hearth

36WH297	Meadowcroft Rockshelter	charcoal; charbon de bois	6630	70	firepit, lower third of stratum IIb
25BT3	Logan Creek	charcoal; charbon de bois	6633	150	zone B, the second lowest lithic level, with large side-notched point, side-notched end scrapers, and bison bone
FeNm-86	East Village Access	bone collagen; collagène osseux	6635	185	cultural level, unit 21N923K1, 0-20 cm below datum
46KA165	Charleston Town Center	unknown; inconnu	6635	110	
41VV167	Eagle Cave	charcoal; charbon de bois	6640	120	stratum V, area C
AKXBD020	Village (RaEc-2)	charcoal; charbon de bois	6645	280	Level 9, 43-53 cm depth, square N110/W80
ME7.12	Standish	charcoal; charbon de bois	6650	80	feature containing flakes
42SV6	Sudden Shelter	charcoal; charbon de bois	6670	180	near bottom of stratum 5, component 1, with Pinto, Elko corner- and side-notched, Northern and Rocker side-notched, and Humboldt A-1 points
10MA143	Scaredy Cat Cave	ash; cendre	6680	80	test unit 4, stratum III, ash, charcoal, and partially burned sagebrush stalks
26HU102	Last Supper Cave	charcoal; charbon de bois	6710	110	stratum 4, a suborganic stratum closely associated with Mazama ash
KdLw-1	Mosquito Lake Overlook	charcoal; charbon de bois	6710	140	bottom (3rd) level of site, in sand
12HR304	Swan's Landing	charcoal?; charbon de bois	6710	140	with a Charleston corner-notched point in the face of the eroding bank
DkNv-2	Napao	bone collagen; collagène osseux	6715	205	cultural layer
DIPo-20	Gap	charcoal; charbon de bois	6720	170	Floor 3, Ah horizon of buried soil under volcanic ash, 2.1 m depth
39CU779	Beaver Creek Shelter	charcoal; charbon de bois	6720	100	unit 17?, 99.10 m, feature 86-23
23CY64	Arnold Research Cave	charcoal; charbon de bois	6720	150	square 100R23, very consolidated fill, apparently a midden against the east wall of the cave, 18-24" depth
NkTm-8	Hutchison Bay	caribou bone collagen; collagène osseux de caribou	6730	180	test pit, N15/W0, 30-70 cm depth
35KL231	Odell Lake	charcoal; charbon de bois	6730	70	
EdRk-8	Lehman	deer bone collagen; collagène osseux de cerf	6730	110	zone II, Horizon B, yellow sand and clay, increasingly gravelly downward
26WA205	Shiners site I	plant remains; restes de plantes	6730	90	grass lining, cache 1, level 2
42SA21153	Turkey Pen	charcoal; charbon de bois	6730	70	ash lens, feature 10, unit 3b
45LI150	Lamona Rockshelter	wood; bois	6740	60	

10IH1699	Kirkwood Bar	unknown; inconnu	6740	50	Cascade phase
42SA-?	Dust Devil Cave (NA7613)	charcoal; charbon de bois	6740	11 0	square F9, Hearth 35, top of stratum 4, Desha complex
46PU60	Amos Power Plant	unknown; inconnu	6740	75	
45OK424	Lagoon	freshwater mollusc shell; coquille de mollusque d'eau douce	6750	10 0	
42KA2546	Bechan Cave	plant remains; restes de plantes	6750	12 0	open-twined sandal assigned to cultural period 1
5GN212	Iola	charcoal; charbon de bois	6750	10 0	cultural feature
5ST85	Vail Pass Camp	charred wood; bois carbonisé	6750	12 0	feature 59, a hearth remnant assigned to Occupation I
41TV49	Levi	charcoal; charbon de bois	6750	15 0	bottom of zone IV
42EM-?	Joe's Valley Alcove	charcoal; charbon de bois	6760	18 0	Bed I, Level 2b
BhFn-1	Fort Côteau-du-Lac	collagène osseux humain; human bone collagen	6760	15 0	la sépulture fouillée en 1966
24LC151	Blacktail Cave	bone collagen; collagène osseux	6765	10 0	alcove locality, 1960 excavations by the Montana Archaeological Society
11PK-?	Joe Gay Mounds	freshwater mussel shell; coquille de mollusque d'eau douce	6765	16 0	clam shell deposit with some chipped stone points, slate ornaments, and short three-quarter grooved axes
35JE51	Johnson	charcoal; charbon de bois	6770	60	in bobcat jaw
DgRr-6	Glenrose Cannery	charcoal; charbon de bois	6780	13 5	Component III, XU 1, Level 73, 430 cm depth
35DO383	Susan Creek Campground	charcoal; charbon de bois	6790	60	pumice deposit
48BH657	Eagle Shelter	carbonized wood; bois carbonisé	6790	11 0	stratum 8, 4.8 g of charred wood, field collected
23MT2	Graham Cave	charcoal; charbon de bois	6800	12 0	Zone III
11PK500	Napoleon Hollow	charred plant remains; restes de plantes carbonisé	6800	80	square 36, levels 42A, 43A, Middle Archaic stratum of the colluvial fan, 2.1 m depth, block II, Napoleon component
46NI275	GAI No. 32	unknown; inconnu	6800	70	
AKPET190	El Capitan Cave	fish bone collagen; collagène osseux de poisson	6810	65	surface in a coastal bear den
24BW626	Indian Creek	charcoal?; charbon de bois	6810	70	unit 4, level 19a
EjBh-1	Lac Carré	charbon de bois; charcoal	6825	12 5	puits A, roches éclatées associées à une grande quantité de charbon de bois et à quelques os calcinés
48SW1455	Deadman Wash	charcoal; charbon de bois	6840	90	component 3
ME74.106	Gilman Falls	unknown; inconnu	6840	50	

AKFAI001	Campus	charcoal; charbon de bois	6850	70	J6SW, lower zone, undisturbed sediment, 15 cm depth, with microblades, a wedge-shaped microcore, and a core rejuvenation tablet
11GE-?	Helton	charred plant remains; restes de plantes carbonisé	6860	80	dispersed in Horizon 8A midden, 3.14-3.28 m below datum, square 254, levels 11-12
35DO130	Tahkenitch Landing	charcoal; charbon de bois	6880	80	stratum 4A
EiBg-7	Blanc-Sablon 7	charbon de bois; charcoal	7100	90	1er niveau d'occupation, 55 cm sous la litière, concentrations de charbon de bois associées au matériau lithique
35DO37	Tiller Ranger Station	charcoal?; charbon de bois?	7130	10 0	unit TP B
35KL749	Crescent Lake	charcoal; charbon de bois	7140	10 0	Mazama paleosol
20LE-VP	Bruggeman mastodon	mastodon bone; os de mastodonte	7150	12 0	beneath 2-4 ft of muck resting on a beaver-cut limb of aspen and blue-gray clay containing molluscs, inner part of the tusk
5LR318	Yelm's Lawn Lake Dam	charcoal; charbon de bois	7160	40	stratigraphic unit 3, upper part of the cultural deposit
5YM-?	Wetzel	bone collagen; collagène osseux	7160	13 5	cultural layer with Cody complex artifacts
23BE125	Rodgers Shelter	charcoal; charbon de bois	7170	16 0	horizon 6
32RI775	Rustad Quarry	charcoal; charbon de bois	7180	90	hearth feature in soil horizon Ab2
15LV156	Morrisroe	charcoal; charbon de bois	7180	13 0	Unit 2, level 3A, stratum 3 upper, 45-55 cm depth
24CB84	False Cougar Cave	charcoal; charbon de bois	7185	11 0	stratum ID1, 95 cm below datum, or near base of stratum ID2
DjRi-3	Milliken	charcoal; charbon de bois	7190	15 0	zone D, largely sterile gravel, traversed in some areas by Mazama tephra, 2.85 m depth
10IH483	Bernard Creek Rockshelter	charcoal; charbon de bois	7190	13 5	Layer 8, Cascade phase
32GF123	Smilden-Rostberg	bone collagen; collagène osseux	7195	11 5	small bone fragments
45CH302	Stemilt Creek Village	freshwater mollusc shell; coquille de mollusque d'eau douce	7200	90	
EhPv-8	Vermilion Lakes Loc. A (153R)	charred wood; bois carbonisé	7200	18 0	Locality A, occupation 9b, unit 153R2, lowest cultural layer in lower silt unit, suspect provenience
ME90.2D	Sharrow	charcoal; charbon de bois	7200	14 0	feature 21, stratum 3
AKPET407	Bumper Cave	bear bone collagen; collagène osseux d'ours	7205	65	subalpine den



NH	Smyth	charcoal; charbon de bois	7210	14 0	N4, 54-57" depth, stratum 4B/5A contact
42WN420	Cowboy Cave	charcoal; charbon de bois	7215	75	stratum 3d, within midden fill of ash, charcoal and matted fiber, with Northern side-notched point, open-twined and plain weave sandals
10FR4	Weston Canyon Rockshelter	charcoal; charbon de bois	7216	19 8	Layer 16
41LU1	Lubbock Lake	bone; os	7220	60	area 9, substratum 2s
46MR63	Wolf Run	unknown; inconnu	7220	85	
AKFAI091	Owl Ridge	organic soil; sol organique	7230	10 0	component II, unit 4
AKTLM128	Jay Creek Ridge	charcoal; charbon de bois	7240	11 0	
26PE3e	Fishbone Cave	plant remains; restes de plantes	7240	18 0	basketry
41VV218	Bonfire Shelter	charcoal; charbon de bois	7240	22 0	Intermediate horizon, Feature 26, a hearth
13JK21	Robert Battey Rockshelter	charcoal; charbon de bois	7240	80	squares G3 and H3, levels 11 and 12, 34-38" depth
42BO36	Hogup Cave	plant remains; restes de plantes	7250	10 0	stratum 5, square 110L100 (FS 578)
13ML62	Hill	charcoal; charbon de bois	7250	20 0	hearth, feature 2, square SW-1B, 17 ft below original surface
32LM401	Martin II	soil; sol	7270	11 0	organically enriched cultural zone with bone, charcoal and fired rock, 300-330 cm depth
EgPm-179	Hawkwood	bone apatite; apatite osseux	7275	21 5	occupation 2, second of three paleosols in clay-rich pond sediment below Mazama ash
AKFAI-VP	Goldstream	beaver-gnawed wood; bois rongé par des castors	7280	80	
GhQt-4	Saskatoon Mountain	charcoal; charbon de bois	7280	16 0	level 14, 90 cm depth
DjPo-47	Maple Leaf	bison bone collagen; collagène osseux de bison	7280	23 0	component 2, above marl in clay, just below Mazama tephra, Mapleleaf subphase
5WL269	Dent	mammoth bone; os de mammoth	7280	20 0	mammoth remains and fluted points in a redeposited context
BiFw-?	Caverne de la Mine	charcoal; charbon de bois	7280	60	Stratum IV, lower infill
HcQh-6	Pulp Mill	sediment; sédiment	7300	11 0	260 cm depth
DjOm-18	East Battle Creek	charcoal; charbon de bois	7300	15 0	lowest exposed culture-bearing level, 4.5 m depth
36AR188	Brown	charcoal; charbon de bois	7300	60	Unit C, 215-235 cm depth, with a fragment of a possible Kirk side-notched point
DbEi-?	Cap-de-Bon-Désir 109G	charbon de bois; charcoal	7310	15 0	fond d'une de ces fosses contenant moins d'une dizaine de fragments osseux blanchis
28WA2	Harry's Farm	charcoal; charbon de bois	7320	12 5	with Kirk-like points

24CB91	Shield Trap	bison bone collagen; collagène osseux de bison	7325	70	stratum III/IV, 1.53 m below datum
15TR33	Lawrence	charcoal; charbon de bois	7325	12 5	feature 27, a mortuary facility containing two males and associated grave goods
48SW6275	Cully's Dump	charcoal; charbon de bois	7330	14 0	feature T56, a possible house pit
10IH66	Weis Rockshelter	charcoal; charbon de bois	7340	14 0	charcoal and humus, substratum 5g, the earliest of the Old Cordilleran components at this site
FiPm-8	Duffield	wood; bois	7350	10 0	3 m above base of marl layer 6 m thick overlying floodplain sand and silt
5GN2192	Vandergift	charcoal; charbon de bois	7350	12 0	hearth
35JA100	Elk Creek Lake	charcoal; charbon de bois	7360	12 0	homestead terrace
W-316	Sorrento	marine shell; coquillage	7360	17 5	miscellaneous shells, 18-24" level, a phase of the La Jolla culture
21CE1	Itasca	wood; bois	7370	25 0	pollen zone 3a, marl, 2.55 m depth, with bison bones
10LH15	Jaguar Cave	bone collagen; collagène osseux	7380	10 0	unknown, but definitely a cut- marked bone
44WR1	Habron	charcoal; charbon de bois	7390	10 0	square 9-20, 173 cm depth, with LeCroy and Stanly type projectile points
DiRa-9	Stirling Creek Bridge	ungulate bone collagen; collagène osseux d'ongulé	7400	90	lower of two components, 40- 50 cm below the upper component, unit 3B1, level 9, 80-90 cm depth
CASBr4966	Henwood	organic matter; matière organique	7400	28 0	Component 2
ME74.19	Blackman Stream	charcoal; charbon de bois	7400	14 0	stratum 4, cultural feature
VTFR69	John's Bridge	charcoal; charbon de bois	7405	22 5	feature 1-2, 56-96 cm below datum
14LT351	Stigenwalt	charred plant remains; restes de plantes carbonisés	7410	70	
26WP-?	Sunshine Locality	sediment; sédiment	7420	60	stratum D, sandy channel fill
10LH23	Alpha Rockshelter	freshwater mollusc shell; coquille de mollusque d'eau douce	7425	23 5	Block D-1, Layer 6c
AKHEA137	Panguingue Creek	charcoal; charbon de bois	7430	27 0	component II, paleosol 3, in aeolian silt loam, about 25 cm depth
CAMod-?	King's Dog	soil; sol	7430	15 0	organic fraction of floor B soil, possibly contaminated by subsoil constituents
DjPm-36	Welsch	bison bone collagen; collagène osseux de bison	7450	10 0	bone bed, 150 cm depth
5GN42	Soap Creek or Ponderosa	charcoal; charbon de bois	7450	33 0	cultural feature

ME90.2C	Brigham	charcoal; charbon de bois	7450	44 0	N9/E0, feature 12, stratum 3
CASRI-?	Lobo Canyon	marine shell; coquillage	7460	30 0	red abalone shell associated with a large number of human skeletons in a cemetery covered by a layer of cemented dune sand
47GT156	Brogley Rock Shelter	charcoal; charbon de bois	7460	80	squares G and M, 3.25 m depth
41WM235	Wilson-Leonard	charcoal; charbon de bois	7470	23 0	hearth in Unit 3a
47WP26	Sanders 1	charcoal; charbon de bois	7470	90	House 3, feature 45, Effigy Mound culture
DcEd-1	Rimouski	charbon de bois; charcoal	7500	15 0	puits 12N-48E, niveau Bf, 23-28 cm de la surface
40MU261	Cheek Bend Cave	charcoal; charbon de bois	7505	44 0	Stratum 5
GhQt-4	Saskatoon Mountain	charcoal; charbon de bois	7510	40 0	associated with a sandstone abrader, level number not specified
28SX-?	Rockelein	charcoal; charbon de bois	7520	12 0	fire pit with Kirk-like points
42KA2546	Bechan Cave	charcoal; charbon de bois	7525	22 0	lower occupational surface near the central portion of the site, assigned to cultural period 1
EcRi-1	Drynoch Slide	charcoal; charbon de bois	7530	27 0	windblown sand resting on coarse gravel, overlain by Mazama ash
42TO-?	Sandwich Shelter	charcoal; charbon de bois	7530	50	hearth, top of stratum 3, minimum age for fauna
41RG13	Big Lake	bison bone apatite; apatite osseux de bison	7530	15 0	bone bed with projectile points similar to Scottsbluff or Milnesand
24CB91	Shield Trap	charcoal; charbon de bois	7540	21 5	stratum III/IV, 1.43-1.46 m below datum, three samples combined
32RI775	Rustad Quarry	charcoal; charbon de bois	7550	80	hearth feature in soil horizon Ab2
35CU75	Blacklock Point	charcoal; charbon de bois	7560	80	
42GA3411	Good Hope Alcove	plant remains; restes de plantes	7560	13 0	open-twined sandal fragment from buried cultural deposits exposed at front of alcove due to erosion, with a mano, grinding slabs, and flakes
24CB202	Sorenson	charcoal; charbon de bois	7560	25 0	component 2, feature 28
24CT30	Mill Iron	bone collagen; collagène osseux	7560	24 0	occupation layer
46KA229	Glasgow	unknown; inconnu	7560	70	Stanly
7S-F-68	Two Guys	charcoal; charbon de bois	7560	34 0	excavation unit 45, level 10
42SV6	Sudden Shelter	charcoal; charbon de bois	7565	11 5	surface of stratum 2, component 1, with a Pinto point

11CH-VP	Urbana mastodon	mastodon bone; os de mastodonte	7570	20 0	homogeneous, gray, slightly sandy clay apparently deposited in a pond on the Urbana moraine
11RA501	Modoc Rockshelter	charcoal; charbon de bois	7580	19 0	west shelter, stratum 6, 1980 unit C, feature 505, 120.81-120.66 m asl
14LT351	Stigenwalt	charcoal; charbon de bois	7590	10 0	
33LO-VP	Mt. Gilead beaver	wood; bois	7590	20 0	beaver-gnawed wood from a commercial peat excavation, 1.07 m depth, near Mt. Gilead
19ES80	Bull Brook I	charcoal; charbon de bois	7590	25 5	
NH38-6	Eddy	charcoal; charbon de bois	7595	12 0	N27/E9, basal stratum, level C, 156-162 cm depth
45KL219	Bob's Point	charcoal; charbon de bois	7600	11 0	
32DU955A	Bobtail Wolf	soil extract; extrait de sol	7600	80	west terrace, Block 2, 532N/460E, 40 cm depth, hearth, feature 13, origin uncertain but above Leonard paleosol
13CK405	Cherokee Sewer	charcoal; charbon de bois	7600	80	cultural horizon 2, A1 horizon of soil 10, subunit 2c, trench 2, square 1, associated with feature 2
11ST144	Campbell Hollow	charred plant remains; restes de plantes carbonisé	7600	11 0	levels 2A and 3, probably from a single depositional episode in the upper Archaic midden
BfGa-__11	Wyght	charcoal; charbon de bois	7600	27 0	Sq. H17, with dentate-stamped Woodland pottery
ME90.2C	Brigham	charcoal?; charbon de bois	7605	75	stratum 3
23MT2	Graham Cave	charcoal; charbon de bois	7610	14 0	Zone III
AKKIR102	Mesa	charcoal; charbon de bois	7620	95	three hearth "smear" samples combined, with lanceolate and ob lanceolate points and knife bifaces
EISx-1	Namu	charcoal; charbon de bois	7620	80	Period 1
CASDi149	C.W. Harris	charcoal; charbon de bois	7620	36 0	fine-grained charcoal, brown sand alluvium, 20 cm above the erosional contact, post-dating San Dieguito artifacts
ME22.10	Oxford	organic sediment; sédiment organique	7629	90	muck, east side of Little Androscoggin River, in terrace below site
42SA-?	Dust Devil Cave (NA7613)	human feces; fèces humaine	7630	12 0	square B7, top of stratum 4b, Desha complex
LA-9300-AT	Armijo Tank Shelter	charcoal; charbon de bois	7630	14 0	test trench 5, lowest San Jose level, pollen zone IV, on top of yellow silt
45WH224	Desolation Quarry	charred wood; bois carbonisé	7640	15 0	
ME90.2D	Sharrow	wood; bois	7640	11	stratum 2

				0	
EgPr-2	Sibbald Creek	charcoal; charbon de bois	7645	26 0	column 2, sample 7, 35-45 cm depth
5BL70	Mt. Albion	charcoal; charbon de bois	7650	19 0	3N/1W, 35-43 cm depth, base of Feature C, a hearth-like concentration of charcoal with no artifacts, possibly a natural fire
24CB84	False Cougar Cave	charcoal; charbon de bois	7655	17 0	base of stratum ID3, 1.10 m below datum
AKFAI091	Owl Ridge	organic soil; sol organique	7660	10 0	component II, unit 4
5GN191	Kezar Basin	charcoal; charbon de bois	7660	24 0	cultural feature
28MO305	Turkey Swamp	charcoal; charbon de bois	7660	32 5	with Hunterbrook Triangle points
14JN309	Sutter	charcoal; charbon de bois	7668	23 7	charcoal concentration in square M2, gray clay zone, with bison bone, flakes, and a chipped stone scraper
EdRi-11	Landels	deer bone collagen; collagène osseux de cerf	7670	80	Stratum V, bottom of Mazama tephra layer
42EM-?	Joe's Valley Alcove	charcoal; charbon de bois	7670	21 0	Bed I, Level 1, 165 cm above datum, 580 cm south of datum, 196 cm east of base line
48SW6275	Cully's Dump	charcoal; charbon de bois	7670	11 0	feature T57, a possible house pit
CdHk-__3	Foxie Otter	charcoal; charbon de bois	7670	12 0	pit feature containing charcoal and flakes
19PL-?	Oak Island	charcoal; charbon de bois	7670	29 0	
BiCu-1	Debert	spruce charcoal; charbon d'épinette	7671	92	hearth, feature 3
DjPm-36	Welsch	bison bone collagen; collagène osseux de bison	7680	14 0	bone bed, 150 cm depth
42SA21153	Turkey Pen	human feces; féces humaine	7680	90	one of several human feces recovered from a large crack in massive roof spall used as a living surface, unit 3a
13SR153	Buchanan	wood; bois	7680	12 0	
1Lu496	Dust Cave	charred material; matière carbonisé	7680	17 0	zone P1, N60.2/W62.2, Level 17, 285-295 cm depth, burial fill; from top[ depth of 246 cm, with Kirk Stemmed points
29RV2	Blackwater Draw 1	bison bone collagen; collagène osseux de bison	7690	16 0	Unit E1, bone bed in highly organic silt deposit with collateral-flaked points, in Sellards and Evans carbonaceous silt
46KA104	Hansford	unknown; inconnu	7695	10 0	with Stanly projectile points
45CH433	Swiftwater Rockshelter	unknown; inconnu	7730	14 0	

45DO387	Plew	freshwater mollusc shell; coquille de mollusque d'eau douce	7730	12 0	
48BH18	Deer Creek	charcoal; charbon de bois	7730	20 0	
11GE-?	Helton	charcoal?; charbon de bois	7730	19 0	horizon 8
VTFR140	Bessette 2	charcoal; charbon de bois	7730	70	alluvium above the Early Archaic occupation layer
DjOw-1	Fletcher	bison bone collagen; collagène osseux de bison	7735	11 0	test 5, level 12, grey pond clay with snail shells, 178-183 cm depth
5CF358	Runberg	unknown; inconnu	7740	14 0	
34CI134	Nall	soil extract; extrait de sol	7740	80	organics from the lower portion of the "Baker paleosol," 30-35 cm thick, with a parallel-oblique flaked projectile point base
35LA647	Hannavan Creek	charred plant remains; restes de plantes carbonisés	7750	90	feature 3E
FdPe-4	Boss Hill	charcoal; charbon de bois	7750	10 5	Locality 2, occupation 8, Feature 1, a hearth in pond sediments below Mazama ash
10BV30	Wasden, Owl Cave	charcoal; charbon de bois	7750	21 0	about 20 cm above the bone bed in Layer 16, with stemmed points
AKFAI035	Chugwater	charcoal; charbon de bois	7760	13 0	southwest area, Feature 7, a possible hearth in the southwest corner of square S19/W9, 55 cm BD
24MA565	Steel's Pass	sediment; sédiment	7760	15 0	bulk sample, excavation unit 32S/0E, level 9
ME74.19	Blackman Stream	charcoal; charbon de bois	7760	13 0	stratum 4, cultural feature
20VA-VP	Powers	wood; bois	7770	11 0	chopped twigs found in 10 cm concentrations near the rib cage of a mastodon, possibly gastrointestinal contents
CT	Bliss	unknown; inconnu	7790	10 0	
48JO303	Grey-Taylor	charcoal; charbon de bois	7800	11 0	hearth in middle Layer III
48CR3815	WHD Sage Creek	unknown; inconnu	7800	10 0	
44BA-VP	Back Creek Cave 2	bone collagen; collagène osseux	7805	50	
CASMI261	Daisy Cave	charred wood; bois carbonisé	7810	60	column E6, stratum E-1, with basketry and cordage
FfNk-7	St. Louis	bison bone collagen; collagène osseux de bison	7810	70	Layer VII, 129-141 cm depth, with faunal remains, fire-cracked rock, and debitage associated with a small hearth and the base of a lanceolate point
24MA171	Barton Gulch	charcoal; charbon de	7824	11	Area B, 62W/34S, feature 39,

		bois		8	an oven
FhQI-?	Roche Miette (1340R)	charcoal; charbon de bois	7840	70	upper part of the culture-bearing zone
21OT3	Pelican Rapids	human bone collagen; collagène osseux humain	7840	70	female skeleton with a perforated wapiti antler and a marine shell pendant
DcEd-1	Rimouski	charbon de bois; charcoal	7840	10 0	puits 12N-48E, niveau Bf, 29-35 cm de la surface
45CA218	Manis	charcoal; charbon de bois	7845	12 5	
19WR-?	Cedar Swamp 3	charcoal; charbon de bois	7850	90	
45GR306	Wahluke	freshwater mollusc shell; coquille de mollusque d'eau douce	7880	11 0	
5HN55	Black Mountain	charcoal; charbon de bois	7888	72	fleck of charcoal split into two samples, apparently associated with Folsom artifacts
41LU1	Lubbock Lake	sediment extract; extrait de sédiment	7890	10 0	area 3, substratum 2B, upper, humic acid from bottom of buried A horizon
AKXBD020	Village (RaEc-2)	soil; sol	7920	60	Level 6
AKDEL360	Tuluq	charcoal; charbon de bois	7950	40	charcoal-stained or oxidized soil directly associated with chipping debris
19ES-?	Wheeler	charcoal; charbon de bois	8070	55	feature N25E13-50/62C, near feature 101-70, extracted from an ochre sample
5GN817	Chance Gulch	charcoal; charbon de bois	8090	50	possible storage pit feature, 50 x 60 cm, containing a groundstone fragment and charcoal
5GA1513	Upper Twin Mountain	bison bone collagen; collagène osseux de bison	8090	60	bison bone bed with Goshen projectile points
45GR-?	Stick Man	human bone gelatin; gélatine osseux humain	8110	50	undocumented origin, but inferred from analysis of adhering sediments, phytoliths and tephra to be from the northeast Quincy Basin
SDM-W-49	Rancho Park North	marine shell; coquillage	8110	80	one of five levels between 50 and 120 cm depth, Palaeo-Coastal tradition
26WP-?	Sunshine Locality	sediment; sédiment	8120	70	stratum B, eolian sand
FhNa-10	Bushfield West	paleosol carbonate; carbonate de paléosol	8120	11 0	paleosol, 2.75 m depth, Stratum #16
10BT46	Jackknife Cave	charcoal; charbon de bois	8130	10 5	feature K-6, feature 1, a fireplace in Level VIII
AKLIM002	Lime Hills 1	charred wood; bois carbonisé	8150	80	Cave 1, N4/E2, 64 cm depth
FiPm-8	Duffield	wood; bois	8150	10 0	base of marl layer 6 m thick overlying floodplain sand and silt
35JE49		charcoal; charbon de bois	8160	60	hearth
EcJs-___1	Allen	charcoal; charbon de bois	8160	80	Trench A, unit 2, 1st buried organic layer, 80-90 cm depth

46KA27	St. Albans	charcoal; charbon de bois	8160	10 0	profile, area B, feature 8, 3.6 ft depth
AKHEA137	Panguingue Creek	carbonized sediment; sédiment carbonisé	8170	12 0	component I, paleosol 2, in colluvial loam, about 40 cm depth
24LN1046	LAURD project	charcoal; charbon de bois	8170	10 0	occupation layer
AKCRG462	Nautilus Cave	deer bone collagen; collagène osseux de cerf	8180	70	coastal bear den
CASBr5250	Rogers Ridge	charcoal; charbon de bois	8180	15 0	Spring component
41VV456	Hinds Cave	charcoal; charbon de bois	8180	11 0	analysis unit 7, Area D, unit D-1, level 7, one of the deepest occupation lenses in the cave, with coprolites and early sandal form
10MA143	Scaredy Cat Cave	charcoal; charbon de bois	8190	10 0	test unit 2, 50 cm depth
15BL35	Main	unknown; inconnu	8190	90	feature 149A, Bifurcate
35CU67C	Indian Sands	marine shell; coquillage	8200	70	burned shells, deflated site surface
24SW264	Cremer	bone collagen; collagène osseux	8200	80	trench B, soil horizon 5Bkb3, 185 cm depth, possible redeposited
35DS34	Paulina Lake	charcoal?; charbon de bois?	8210	60	paleosol below Mazama ash
FhQl-4	Swan Landing	plant remains; restes de plantes	8220	90	Level 21
32DU336	Alkali Creek	soil; sol	8220	12 0	trench F profile
15LV156	Morrisroe	charcoal; charbon de bois	8220	10 0	Unit 2, level 8, stratum 4, 165-185 cm depth
24BE84	Mammoth Meadow I	charcoal; charbon de bois	8226	84	stratum III, paleosol in very dark grey clay, within Unit 8Ab2, about 190 cm depth
24JF292	Sheep Rock Spring	charcoal; charbon de bois	8230	60	
BiFw-?	Caverne de la Mine	charcoal; charbon de bois	8230	60	Stratum VII, lower infill
EeOi-11	Heron Eden	bison bone collagen; collagène osseux de bison	8240	20 0	cultural layer, unit 100N110E, 27 cm depth
1JA181	Russell Cave	charcoal; charbon de bois	8240	20 0	charcoal appearing in small pockets with lithic tools, flint chips and animal bones, 8.0-8.5 ft depth
NY	Engelbert	charcoal; charbon de bois	8250	14 0	with Kirk Stemmed, Kanahwa, and LeCroy points
26HU102	Last Supper Cave	charcoal; charbon de bois	8260	90	stratum 6, shell stratum below Mazama ash, with Parman series and Cougar Mountain projectile points
K:6:19ASM	Hastqin	charcoal; charbon de bois	8260	10 0	hearth at multicomponent site with no positively associated artifacts
28HU530	Derewal	sediment; sédiment	8260	19 0	area 1/2, stratum 2, 2Ab horizon
NH	Smyth	charcoal; charbon de	8260	70	



		bois			
NH26-32	Weirs Beach	charcoal; charbon de bois	8270	21 0	pit feature containing a tan quartzite biface fragment
42WN420	Cowboy Cave	charcoal; charbon de bois	8275	80	stratum 2b, first thin cultural layer, feature 41, on surface of windblown sand, with open-twined sandals
29.0	Honest Injun Cave (GS3)	sediment extract; extrait de sédiment	8275	65	humates, Area II, top 10 cm of stratum 2si
AKXMH246	Gerstle River	charcoal; charbon de bois	8280	60	upper locus
24JF4	MacHaffie	bison bone gelatin; gélatine osseux de bison	8280	12 0	stratum IV, layer 12
42WN1779	Rock Bar Alcove	plant remains; restes de plantes	8280	16 0	open-twined sandal fragments from buried cultural deposit exposed in from of the alcove due to erosion
DkSf-2	Millard Creek	charcoal; charbon de bois	8300	20 0	Area A, square 2, 45 cm depth, in the lower 30 cm of habitation-stained coniferous forest soil
26WA196	Kramer Cave	feces; fèces	8300	20 0	packrat midden 1
46FA190	Headquarters	unknown; inconnu	8300	14 0	
5LR13	Lindenmeier	charcoal; charbon de bois	8310	70	stratum Z6
45DO176	Avey's Orchard	freshwater mollusc shell; coquille de mollusque d'eau douce	8320	70	306.8.9, 193.0 m asl
DhRp-7	Fort Langley	charcoal; charbon de bois	8330	60	Feature 192
EeQw-48	Gore Creek	human bone collagen; collagène osseux humain	8340	11 5	mudslide covering a human skeleton below Mazama tephra, with no associated artifacts or features
11ST123	Smiling Dan	charcoal; charbon de bois	8340	13 0	base of Campbell Hollow Creek paleochannel fill, Unit IIa, beneath a very light scatter of aceramic cultural materials
20BE-VP	Prillwitz mammoth	mammoth bone; os de mammoth	8340	30 0	muck overlain by sand, 4-10 ft depth
VTFR69	John's Bridge	charcoal; charbon de bois	8340	24 5	feature 1-2, 64-88 cm below datum
42BO36	Hogup Cave	charcoal; charbon de bois	8350	16 0	stratum 1, square 95L100, on bedrock (FS 215, bag 3)
45FR46H	Seed Cave	charcoal; charbon de bois	8370	23 0	
26WA198	Shinners site A	plant remains; restes de plantes	8380	12 0	Z-twined matting, Section I, 54-60" depth
ME36.57	Varney Farm	charcoal; charbon de bois	8380	10 0	feature 3, presumably associated with late Palaeoindian parallel-flaked projectile points
CAKer-?	Charlie Range Basalt Ridge	unknown; inconnu	8390	13 0	artifact-bearing paleosol

EiBj-27	Baie au Saumon	charbon de bois?; charcoal?	8395	65	inconnu
CALak380	Mostin	charcoal; charbon de bois	8400	19 0	hearth exposed in the lowest layer
45BN495	Kennewick Man	human bone collagen; collagène osseux humain	8410	40	slumped from floodplain deposits, recovered from the surface
FgQm-59	Site 243R	charcoal; charbon de bois	8410	80	component I
10IH73	Cooper's Ferry	charcoal; charbon de bois	8410	70	associated with stemmed points
24BW626	Indian Creek	bison bone collagen; collagène osseux de bison	8410	13 0	upstream locality, Locus A
3BE174	Albertson	unknown; inconnu	8410	24 5	stratum 5
15JF243	Longworth-Gick	charcoal; charbon de bois	8420	11 0	zone III, feature 19, ca. 50 cm depth, with LeCroy and Kanawha bifurcate-base projectile points
5GA22	Caribou Lake	charcoal; charbon de bois	8460	14 0	hearth, square 7S/2E, 15-20 cm depth, on upper of two till units separated by proglacial lake or beach sand
CASBr4966	Henwood	organic matter; matière organique	8470	37 0	Component 1
ME7.7	Limington	charcoal; charbon de bois	8470	11 0	buried A horizon with a quartz scraper
CAKer116	Buena Vista Lake	freshwater mollusc shell; coquille de mollusque d'eau douce	8475	40 0	unburned shell sorted from soil sample taken 425-455 cm depth, 92.4 m asl, below ca. 275 cm of sterile sandy soil permeated with caliche
5AL91	Linger	bone collagen; collagène osseux	8480	85	disturbed bone bed with Folsom points
DeJi-__1	Cummins	calcined human bone; os humain calciné	8480	39 0	cremation burial in sand, with no associated artifacts; sample used all recovered bone
AKFAI-VP	Goldstream	bone collagen; collagène osseux	8490	60	Pit 1-G, bone projectile point recovered from muck, possibly from a thin gravel lens ca. 12-14 m depth
40SW228	Puckett	charcoal; charbon de bois	8490	18 0	undisturbed midden, 69-74 cm thick, 1.67 m depth, with Kirk Corner-notched points
41WM133	Loeve	charcoal; charbon de bois	8500	13 0	hearth exposed in stream bank, ca. 4 m depth, in left bank of San Gabriel River
23MN732	Pigeon Roost Creek	charcoal; charbon de bois	8500	22 0	horizon 9
15LY48	Whalen	charcoal; charbon de bois	8500	46 0	earliest occupation, lowest of three organic midden zones, ca. 300 cm depth
32DU955C	Big Black	soil extract; extrait de sol	8505	48	Block 3, 822N/E334, 17-29 cm depth, Leonard paleosol, with Folsom artifacts
24MA171	Barton Gulch	charcoal; charbon de bois	8510	80	Area B

24PA407	Anzick	human bone amino acid; aminoacide osseux humain	8510	12 0	bleached white calvarium
15RO34	Deep Shelter	charred wood; bois carbonisé	8520	47 0	upper level of a remnant living floor of the shelter, containing 4 separate superimposed layers of ashy sandy soil, bone and chert debitage
8SO19	Warm Mineral Spring	charcoal; charbon de bois	8520	40 0	13 m ledge
46KA27	St. Albans	charcoal; charbon de bois	8520	30 0	zone 20, feature 80, 10 ft depth, with small Kirk projectile points
48FR308	Lookingbill	charcoal; charbon de bois	8525	10 0	later Palaeoindian level
24MA1144	Cherry Creek	sediment; sédiment	8530	12 0	zone 21, a buried humic A horizon marking the transition from an alluvial floodplain to encroachment of a lateral alluvial fan
AKPET190	El Capitan Cave	fish bone collagen; collagène osseux de poisson	8535	70	deep in a coastal den
45KI25		charcoal; charbon de bois	8540	11 0	
35DS34	Paulina Lake	charcoal; charbon de bois	8540	90	feature 8 post
24PA504	Myers-Hindman	charcoal; charbon de bois	8540	19 0	Level 1, an unlined hearth
5GN42	Soap Creek or Ponderosa	charcoal; charbon de bois	8540	14 0	cultural feature
41VV167	Eagle Cave	charcoal; charbon de bois	8540	12 0	Stratum V, square N85/W70
EgPm-3	Mona Lisa	bison bone apatite; apatite osseux de bison	8545	28 0	Locality C, lower of two paleosols below Mazama ash, the bones probably redeposited
CACal629	Skyrocket	charcoal; charbon de bois	8550	15 0	hearth in middle level of large stone platform feature
5GN191	Kezar Basin	charcoal; charbon de bois	8550	10 0	cultural feature
32DU336	Alkali Creek	soil; sol	8550	50	humates from soil in excavation unit 4, lower part of stratigraphic unit III, 29-35 cm below datum
19PL-?	Oak Island	charcoal; charbon de bois	8555	20 0	small Early Archaic camp, with bifurcate base points
35CU67C	Indian Sands	marine shell; coquillage	8560	12 0	deflated site surface
26WP-?	Sunshine Locality	sediment; sédiment	8560	10 0	stratum C, charcoal lens at the top of a cienega overlying alluvium, directly associated with a stemmed point
1JA181	Russell Cave	charcoal; charbon de bois	8560	20 0	stratum of unctuous clay, 12-13 ft depth, marking the Palaeoindian to Archaic
19ES-?	Wheeler	charcoal; charbon de bois	8565	28 4	scattered over a considerable vertical and horizontal

					distance
EISx-1	Namu	charcoal; charbon de bois	8570	90	rivermouth trench, stratum 2a, 340-350 cm depth, Period 1
14ST401	Winger	soil; sol	8570	60	decalcified organic carbon from a buried soil overlying a bison bone bed
13CK405	Cherokee Sewer	charcoal; charbon de bois	8570	20 0	cultural horizon 3a, test trench 3, unit B, square 8, with bison bones and a projectile point
32DU452	Benz	soil; sol	8575	70	humates from a paleosol containing Cody complex artifacts, excavation unit 3, 81-88 cm depth
35DS67	Pictograph Cave	sheep bone collagen; collagène osseux de mouflon	8580	80	
DjPm-16	J-Crossing	bison bone collagen; collagène osseux de bison	8580	16 0	260-290 cm depth, with an Alberta point
21CE1	Itasca	wood; bois	8580	30 0	base of pollen zone 2a, sand under sandy marl, 2.61 m depth, with bison bone
ME90.2C	Brigham	charcoal?; charbon de bois	8580	45	stratum 3
NY	Engelbert	charcoal; charbon de bois	8585	19 0	occupation zone D, feature 19, with Kirk stemmed points
48GO305	Hell Gap	charcoal; charbon de bois	8590	35 0	Locality 1, Alberta cultural level
AKHEA137	Panguingue Creek	charcoal; charbon de bois	8600	20 0	component II, paleosol 3, in aeolian silt loam, about 25 cm depth
24CB221	Mangus	charcoal; charbon de bois	8600	10 0	component 1, feature 15, a shallow, oval firepit in brown sand, the top of it 0.1-0.2 ft below the upper contact of the brown sand
19MM147	Wapanucket 8	charcoal; charbon de bois	8610	80	feature 206, an ochre-stained fragment recovered from a previously saved ochre sample
24JF4	MacHaffie	charcoal; charbon de bois	8620	20 0	stratum III, layer 8
ME36.57	Varney Farm	charcoal; charbon de bois	8620	60	feature 3, presumably associated with late Palaeoindian parallel-flaked projectile points
FhQl-4	Swan Landing	charcoal; charbon de bois	8630	10 0	Level 32
DjPo-47	Maple Leaf	bison bone collagen; collagène osseux de bison	8630	27 0	component 1, at interface of clay and underlying boulder pavement, Ptolemy subphase
NH39-1	Wadleigh Falls	charcoal; charbon de bois	8630	15 0	single piece of charcoal within a dense concentration of artifacts in the lower component
29.0	Honest Injun Cave (GS3)	sediment extract; extrait de sédiment	8640	65	humates, Area II, bottom 10 cm of stratum 2si

29RV2	Blackwater Draw 1	charred bone; os carbonisé	8640	35 0	fireplace at eroded contact of carbonaceous silt (unit E) and jointed sand (unit F), with notched point 10 ft away, and Scottsbluff stem elsewhere
5CF358	Runberg	unknown; inconnu	8650	11 0	
26PE14	Leonard Rockshelter	bat feces; fèces de chauve-souris	8660	30 0	layer containing wooden artifacts
42KA2661	Rock Creek Alcove	charcoal; charbon de bois	8660	80	loose charcoal scattered in fill of tested area in alcove, with no clear associations but likely cultural
11RA501	Modoc Rockshelter	charcoal; charbon de bois	8680	15 0	west shelter, stratum 13A, 1980 unit C, 118.95-118.85 m asl
42WN420	Cowboy Cave	plant remains; restes de plantes	8690	75	stratum 2a, a sterile layer of pink windblow sand, precultural
NH	Smyth	charcoal; charbon de bois	8690	60	
CAOra-?	Buck Gully 1	marine shell; coquillage	8710	10 5	layer of broken mussel shells ca. 6-7 ft below the present surface
35LK1	Fort Rock Cave	plant remains; restes de plantes	8715	10 5	sandal removed from the cave before 1940 by an artifact collector, donated to the Lake County Museum in 1991
AKHEA130	Walker Road	charcoal; charbon de bois	8720	25 0	palaeosol 1, ca. 50 cm depth
JcRw-3	Klondike	charcoal; charbon de bois	8720	19 0	Area B, Component 4, square 118, 9.98S/2.5W, hearth extending to clay and silt horizon
19ES80	Bull Brook I	charcoal; charbon de bois	8720	20 0	crumbs scattered through reddened area with Palaeoindian artifacts, not associated with any particular hearth feature
42SA-?	Dust Devil Cave (NA7613)	charcoal; charbon de bois	8730	11 0	square F8, Hearth 32, bottom of stratum 4, Desha complex
11GE-?	Helton	charred plant remains; restes de plantes carbonisé	8730	90	feature 2062a, b, Horizon 12, 7.55-7.65 m below datum
ME90.2D	Sharrow	charcoal; charbon de bois	8730	70	feature 40, stratum 2
28MO305	Turkey Swamp	charcoal; charbon de bois	8739	16 5	with Hunterbrook Triangle points
15PE50	Enoch Fork Rockshelter	unknown; inconnu	8740	13 0	
EdPk-39	Callahan Sand Pit	bison bone collagen; collagène osseux de bison	8750	23 0	Level 2, 10-20 cm depth
AKPET408	On Your Knees Cave	charcoal; charbon de bois	8760	50	stratigraphic unit with obsidian microblades, bifaces, and other tools
10IH1160	McCulley Creek	unknown; inconnu	8760	70	above a cultural occupation with stemmed points
EE:8:25	Murray Springs	charcoal; charbon de	8770	70	Unit F1, Loc 1, Square C4

		bois			
AKFAI-VP	Goldstream	beaver-gnawed wood; bois rongé par des castors	8780	10 0	
29CX1	Folsom	bison bone apatite; apatite osseux de bison	8780	18 0	first apatite extraction
Z:12:5	Ventana Cave	charcoal; charbon de bois	8785	80	Volcanic Debris layer
21TR5	Browns Valley	human bone amino acid; aminoacide humain	8790	11 0	adult male skeleton, stained with red ochre, associated with six bifaces and two abraders
AKPSM027B	Putu	charcoal; charbon de bois	8810	60	Zone II, feature 9 hearth
42TO-?	Sandwich Shelter	ungulate feces; fèces d'ongulé	8810	70	middle of stratum 2a
44PY152	Smith Mountain	charcoal; charbon de bois	8810	13 0	stratum V, east end of the site, a buried 3AB cumulic cultural horizon underlying a fragipan at ca. 140-200 cm depth
41WM235	Wilson-Leonard	charcoal; charbon de bois	8820	12 0	hearth in upper portion of Unit 2
1Lu496	Dust Cave	charred material; matière carbonisé	8830	50	zone P18, N61.52/W61.28, Level 50, 320-325 cm depth, with Kirk Stemmed points
FgQm-59	Site 243R	charcoal; charbon de bois	8840	40	component I
ME	Hunneman	unknown; inconnu	8850	14 0	
AKXMH246	Gerstle River	charcoal; charbon de bois	8860	70	lower locus, component 3, hearth with microblades, microblade cores, burins and burin spalls, scrapers, and a mammoth ivory point
41LU1	Lubbock Lake	bison bone apatite; apatite osseux de bison	8860	90	area 7, stratum 1
45KT1362	Sentinel Gap	organic sediment; sédiment organique	8880	70	
24JF292	Sheep Rock Spring	charcoal; charbon de bois	8880	60	
12ST-?	Brems	plant remains; restes des plantes	8900	90	
24MA1376	Elk Creek	sediment; sédiment	8910	80	stratum Vb, massive mud, fluvial overbank sediment, 318 cm depth
AKHEA005	Dry Creek	charcoal; charbon de bois	8915	70	paleosol 1, lower member, component II
5GA22	Caribou Lake	charcoal; charbon de bois	9080	75	basin-shaped hearth, 7 m north of the hearth dated by I- 5449, in the same stratigraphic position
14SC6	Norton	bison bone collagen; collagène osseux de bison	9080	60	bison bone bed with lanceolate points
AKXMH149	Sparks Point	charcoal; charbon de bois	9110	80	upper B horizon of buried soil on which hearthstones rested

26WA-?	Wizard Beach	human bone amino acid; aminoacide osseux humaine	9110	60	
41BI42	Rex Rodgers	bone apatite; apatite osseux	9118	83	winter season (Jan-Mar) bison kill
26PE3a	Crypt Cave	plant remains; restes de plantes	9120	60	diamond-plaited matting fragment
41VV456	Hinds Cave	charcoal; charbon de bois	9120	90	analysis unit 8, North wall, A-C trench, deepest occupation lens
FfNk-7	St. Louis	bison bone collagen; collagène osseux de bison	9150	40	Layer IX, 185-190 cm depth, with bison bone
EeOi-11	Heron Eden	bison bone collagen; collagène osseux de bison	9168	50	cultural layer
CACaLS342	Clarks Flat	soil; sol	9170	14 0	stratum IV, the lowest cultural stratum
33WY252	Sheriden Cave	charcoal; charbon de bois	9170	60	sterile Holocene ponded sediments
CASMI261	Daisy Cave	charcoal; charbon de bois	9180	60	middle chamber of Cave A, base of shell midden at top of sequence, ca. 50 cm depth
5RB726	Brady	unknown; inconnu	9190	13 0	
GgQq-7	Wood Bog	organic matter; matière organique	9200	13 0	ca. 270-275 m depth
21ML42	Bradbury Brook	charcoal; charbon de bois	9220	75	Area A, pit feature, several small pieces of charcoal recovered by hand
15MF36	Cloudsplitter Rockshelter	charcoal; charbon de bois	9228	10 0	hearth
RcHw-VP-1	Cape Storm	whale bone collagen; collagène osseux de baleine	9230	14 0	upper limit of a series of raised beaches, 118 m asl, embedded and frozen in place
33ME274	Paleo Crossing	soil extract; extrait de sol	9230	10 0	cylindrical pit
24MA565	Steel's Pass	unknown; inconnu	9250	70	excavation unit 6S/4E, stratum OA
36BD-?	New Paris No. 4	unknown; inconnu	9250	12 0	
11CH-VP	Urbana mastodon	mastodon bone; os de mastodonte	9270	20 0	homogeneous, gray, slightly sandy clay apparently deposited in a pond on the Urbana moraine
10NP143	Hatwai	charcoal; charbon de bois	9280	11 0	overbank channel, 13-15N/89-90E, mid-point bar location, unconformably overlying Tx-3081, underlying Tx-3082
26WP46	Smith Creek Cave	charcoal; charbon de bois	9280	16 0	bottom of large hearth in white ash zone, test pit 8, with burned bone and charcoal over burned dung, Mt. Moriah layer
36BR-?	Newton mammoth	sediment extract; extrait de sédiment	9280	10 0	humates from silt containing pollen, plant macrofossils, and fossil beetles surrounding mammoth bones
24BW626	Indian Creek	sediment; sédiment	9290	12	downstream locality, Unit 3,

				0	Layer 12a
41.0	San Pedro Springs	charcoal; charbon de bois	9290	80	Stratum III, one of four dates recovered within features and from an apparent living surface
32DU955A	Bobtail Wolf	bone amino acid; aminoacide osseux	9300	60	Block 1, 534N/507E, 38 cm depth, BC horizon, Leonard paleosol, with Folsom (or Cody?) artifacts
41TV49	Levi	charcoal; charbon de bois	9300	16 0	middle of zone IV
24CB91	Shield Trap	bison bone collagen; collagène osseux de bison	9310	95	stratum IV, 1.97 m below datum, the lowest depth at which a bison bone was recovered
5GA639	Jerry Craig	charcoal; charbon de bois	9310	50	bison bone bed with Cody Complex points
AKPET410	Kushtaka Cave	bear bone collagen; collagène osseux d'ours	9330	15 5	coastal den
24DW272	OTL Ridge	sediment extract; extrait de sédiment	9330	80	buried A-horizon associated with Palaeoindian artifacts
15LY48	Whalen	unknown; inconnu	9340	10 0	
FF:10:1	Double Adobe	charred wood; bois carbonisé	9350	16 0	Locality 2, trench 2, east end, in river sand
41BI70	Lake Theo	bone collagen; collagène osseux	9360	17 0	Folsom occupation, below the A12b3 horizon
33MR-VP	Stucke Farm	wapiti bone collagen; collagène osseux de wapiti	9370	70	contact of marl and peat, the scapula damaged by a possible weapon impact
CASMI-?	Seal Cave	marine shell; coquillage	9380	14 0	shell midden
GhQt-4	Saskatoon Mountain	charcoal; charbon de bois	9380	36 0	hearth, level 11, 101 cm depth
DjOw-1	Fletcher	plant remains; restes de plantes	9380	11 0	1988 test unit, 286 cm depth, in silty clay with plant macrofossils, about 36 cm below the base of the bison bone bed
25SX115	Hudson-Meng	charcoal; charbon de bois	9380	70	stratum B, bison bone bed, 962.913N, 1003.135E, 86.8 cm above datum
39FA65	Ray Long	charcoal; charbon de bois	9380	25 0	composite sample of hundreds of minute pieces of charcoal from weather clay matrix containing unlined hearths and Angostura points
39CU779	Beaver Creek Shelter	charcoal; charbon de bois	9380	30 0	unit 22, 97.6-96.9 m, micaceous sandstone with little evidence of human occupation but many gastropods and small vertebrates
13FN-VP	Dows	wood; bois	9380	13 0	horizon 3, sandy silt
41RB1	Miami or Cowan Ranch	sediment extract; extrait de sédiment	9385	70	organic residue, playa fill overlying the Clovis bone bed



41UV2	Kincaid Shelter	mollusc shell; coquille de mollusque	9385	16 5	unit D-E:8-9, 84-90" below unit datum, Zone 5, with a bifacial chopper, an ovate knife, two scrapers, and modern fauna
24BE84	Mammoth Meadow I	charcoal; charbon de bois	9390	90	stratum III, paleosol in very dark grey clay, within Unit 8Ab2, about 190 cm depth
34CD50	Domebo	soil; sol	9400	30 0	near a mammoth skull in an area probably contaminated by recent humic slump deposits which intruded the bone bed
12PR-VP	Elkhart mastodon	mastodon bone; os de mastodonte	9400	20 0	marl below 16 ft of muck and peat
47JA21	Silver Mound Rockshelter	charcoal; charbon de bois	9405	90	Levels 11 and 13, 1.1 and 1.3 m depth, with large amounts of crude debitage suggestive of quarrying activity
CASBr4562	Awl	charcoal; charbon de bois	9410	11 5	Locus A
40DV40	First American Bank	bone collagen; collagène osseux	9410	15 5	feature 1
47JE-VP	Stiles	mammoth bone collagen; collagène osseux de mammoth	9415	90	clay of an old lake bed, 1.73-2.01 m depth, a nearly complete skeleton
34MY66	Packard	soil; sol	9416	19 3	charcoal stained soil, hearth in gleyed silt loam
CASLO2	Diablo Canyon	human bone collagen; collagène osseux humaine	9420	14 0	burial 20, site D-1, with flakes, a core, a pitted stone, and a hammerstone
5GA195	Barger Gulch	organic matter; matière organique	9420	50	Locality B, paleosol containing a Folsom component
CT75-?	Cedar Lake	unknown; inconnu	9420	18 0	
26CH1f	Spirit Cave	human bone amino acid; aminoacide osseux humaine	9430	60	male mummy, burial 2, semi-flexed on right side, under burial 1, 2'3"-3'8" depth
5LR13	Lindenmeier	charcoal; charbon de bois	9440	18 0	stratum F, dispersed lumps in brown sand, ca. 3 ft above floor of arroyo, approximate location of C-451
1CT125	Stanfield-Worley Shelter	charcoal; charbon de bois	9440	40 0	Dalton zone, Block 2, Level 10, 10" below top of lowest natural zone at the site
8JE591	Page-Ladson	charcoal; charbon de bois	9450	10 0	Zone C, unit 9, associated with an Aucilla adze
EhPv-?	Banff	charcoal; charbon de bois	9455	45 0	natural layer 22, a weak regosol associated with occupation 8
AKFAI035	Chugwater	charcoal; charbon de bois	9460	13 0	north area, square N11/W26, 59 cm BD, with microblades and flakes
26NY301	Gatecliff Shelter	plant remains; restes de plantes	9460	25 0	packrat midden 81-C
33CO-VP	Cole mastodon	wood; bois	9460	30 5	blue clay containing mastodon remains and pollen of spruce,

					fir, pine, and birch
26CH-?	Grimes Burial Shelter	plant remains; restes de plantes	9470	60	diamond plaited mat (CM-13-G-8)
23MT2	Graham Cave	charcoal; charbon de bois	9470	40 0	natural level on original cave floor, 66.5-69" depth, with fluted blades, eyed bone needles and other tools
33CU34	Squaw Rockshelter	charcoal; charbon de bois	9480	16 0	stratum 2, with the midsection and tip of a lanceolate projectile point
EhPv-8	Vermilion Lakes Loc. A (153R)	charred wood; bois carbonisé	9490	39 0	Locality A, occupation 7, unit 153R7, uppermost cultural layer in lower silt unit
15JF243	Longworth-Gick	charcoal; charbon de bois	9490	23 0	feature 194, zone XIII, with one Kirk variant? projectile point
20OK394	Shelton mastodon	plant remains; restes de plantes	9490	29 5	square V10, bottom of Unit III
41BQ46	Horn Rock Shelter 2	charcoal; charbon de bois	9500	20 0	Square 46, 381-406 cm depth, in upper gray cave spall unit, with Brazos fishtail points and crude patinated scrapers, double burial nearby
8SO18	Little Salt Spring	wood; bois	9500	12 0	pointed split pine stake, spring basin at drop-off, 12.4 m below spring surface, 7.3 m below sea level
AKXMH246	Gerstle River	charcoal; charbon de bois	9510	50	lower locus, component 2, hearth with microblades, a core tablet, and flaking debris
24BH-VP	Tongue River bison	bison bone collagen; collagène osseux de bison	9510	60	
3.0	Banks	snail shell; coquille d'escargot	9510	14 0	Trench 15, Unit C, Level 1, lowest fossiliferous stratum
28CM42	Steel	plant remains; restes de plantes	9510	60	unit 140S/10E, level 3, with three hammerstones
26WA-?	Wizard Beach	human bone collagen; collagène osseux humaine	9515	15 5	
25FT41	Lime Creek	charcoal; charbon de bois	9524	45 0	basal clay, sedimentary unit 13, ca. 14.2 m below the terrace surface, below the Zone 1 occupation layer, mostly below the water table
23CE426	Big Eddy	charcoal; charbon de bois	9525	65	basal middle Rodgers alluvium, with Graham Cave points
AKLIM002	Lime Hills 1	charcoal; charbon de bois	9530	60	Cave 1, N4/E2, 48 cm depth, associated with a microblade fragment
26WA198	Shinners site A	plant remains; restes de plantes	9540	12 0	Z-twined basketry, Section II, 84-90" depth, may be an open-work burden basket
EgPn-480	Stonepine	bone collagen; collagène osseux	9540	70	occupation 2

24MA171	Barton Gulch	charcoal; charbon de bois	9540	14 0	Area B, a carbonaceous stratum underlying the Alder Complex occupation, 340 cm depth
24DW272	OTL Ridge	sediment extract; extrait de sédiment	9540	90	buried A-horizon associated with Palaeoindian artifacts
32DU452	Benz	charcoal; charbon de bois	9540	50	small basin-shaped hearth at the bottom of a paleosol containing Cody complex artifacts
5WL268	Frazier	sediment extract; extrait de sédiment	9550	13 0	humates from gray organic soil horizon immediately overlying the gray sandy clay that contained the cultural remains
41VV99	Arenosa Shelter	charcoal; charbon de bois	9550	19 0	all levels of Stratum 38, the oldest definite culture-bearing deposit recognized at the site, with unifacial flake tools, nothing diagnostic
NH	Smyth	charcoal; charbon de bois	9550	32 0	Area C
ObRw-1	Qugyuk	bison bone collagen; collagène osseux de bison	9560	60	surface
42TO-?	Sandwich Shelter	coyote feces; fèces de coyote	9560	40	top of stratum 1, providing a minimum age for the fauna overlying Lake Bonneville gravels
45CA218	Manis	wood; bois	9565	75	
CACalS342	Clarks Flat	unknown; inconnu	9570	15 0	oldest of three cultural phases
EgPr-2	Sibbald Creek	charcoal; charbon de bois	9570	32 0	column 1, sample 8, 35-40 cm depth
24DW501	Lindsay mammoth	mammoth bone collagen; collagène osseux de mammoth	9570	13 5	undisturbed surface in lower member of 1.2 m loess unit overlying a Paleocene formation
42TO13	Danger Cave	plant remains; restes de plantes	9590	16 0	pickleweed chaff, cultural level 2
RcHw-VP-1	Cape Storm	whale bone collagen; collagène osseux de baleine	9590	12 0	upper limit of a series of raised beaches, 118 m asl, embedded and frozen in place
20WA-VP	Kuhl mastodon	wood; bois	9590	16 0	peat, 130 cm depth, to provide a minimum age for underlying mastodon remains
AKXMH072	Whitmore Ridge	charcoal; charbon de bois	9600	14 0	buried soil horizon Bb
DIPo-20	Gap	charred bison bone collagen; collagène osseux de bison	9600	24 0	Floor 4, Ah horizon of buried soil under volcanic ash, 2.7 m depth
DjPm-16	J-Crossing	bison bone collagen; collagène osseux de bison	9600	21 0	Level 24, 225-245 cm depth
42SA-?	Dust Devil Cave (NA7613)	plant remains; restes de plantes	9600	15 0	stratum 3
48JO314	Sister's Hill	plant remains; restes de plantes	9600	23 0	in silt of channel fill, post-dating Agate Basin and Hell Gap artifacts

33HU-VP	Willard mastodon	mastodon bone collagen; collagène osseux de mastodonte	9600	20 5	possibly associated with non-diagnostic stone tools
35LK1529	Dietz or Tucker	charcoal; charbon de bois	9610	10 0	cultural deposits of a buried lakeside paleosol
NH26-32	Weirs Beach	charcoal; charbon de bois	9615	22 5	pit feature containing a flint blade, adjacent to a large chert biface
24PW340	Avon = Hidden Valley	sediment; sédiment	9620	33 0	Feature 4, lowest of three humic levels with cultural material throughout deposit to almost 2 m depth, below Lusk-like projectile points
36BD-?	New Paris No. 4	bone; os	9620	25 0	small mammal bones, 5.2-6.4 m below the mouth of a sinkhole with an associated fauna of 53 vertebrates and 12 invertebrates
34MY66	Packard	charcoal; charbon de bois	9630	10 0	lower part of Dalton component, square 0-Left 1, 259 cm depth
14WY-VP	Bonner Springs	bear bone collagen; collagène osseux d'ours	9630	60	sand bar on the Kansas River
34CI134	Nall	soil extract; extrait de sol	9640	11 0	organics from the upper portion of dark olive-gray clay underlying the "Baker paleosol" and 10 cm of reddish brown medium sand
20OK394	Shelton mastodon	wood; bois	9640	12 0	Unit III, black muck, base of peat with a Kessell side-notched point, overlying bone-bearing lacustrine unit containing extinct fauna
20LP-?	Rappuhn mastodon	peat; tourbe	9640	35 0	just below the plow zone, 12-13.5" depth, above mastodon remains
8SO18	Little Salt Spring	wood; bois	9645	16 0	pointed peeled sapling stake, spring basin at drop-off, 12.0 m below spring surface, 6.9 m below sea level
41WM235	Wilson-Leonard	sediment; sédiment	9650	12 4	Unit 1, pit fill containing a human skeleton
13FN-VP	Dows	wood; bois	9650	13 0	horizon 4, pond or marsh sediment, below the fossil fauna of horizon 3
35LA658	Stamp	charcoal; charbon de bois	9660	14 0	just below the stratum IV/V contact, with no diagnostic artifacts
41LU1	Lubbock Lake	bone; os	9660	80	area 9, substratum 2s
26EK25	Deer Creek Cave	charcoal; charbon de bois	9670	30 0	hearth 7, 213-224 cm depth, with large side-notched, corner-notched, and stemless lanceolate points
AKHEA005	Dry Creek	charcoal; charbon de bois	9690	75	paleosol 2, middle
5LR13	Lindenmeier	charcoal; charbon de bois	9690	60	basal stratum D, the Folsom level

21CE1	Itasca	wood; bois	9690	17 0	base of pollen zone 2a, sand under sandy marl, 2.61 m depth, with bison bone
23MT2	Graham Cave	charcoal and bone; charbon de bois et os	9700	25 0	Level 6, fireplace on original cave floor, square 10L3, 6-7 ft below datum
EISx-1	Namu	charcoal; charbon de bois	9720	14 0	rivermouth trench, base of stratum 2a, 390-395 cm depth, Period 1
1Lu496	Dust Cave	charred material; matière carbonisé	9720	70	zone R1?, N63/W63, Level 43, 380-385 cm depth, possibly associated with an intrusive pit, with Early Side-Notched points
AKKIR102	Mesa	charcoal; charbon de bois	9730	80	soil
GgQq-7	Wood Bog	beaver-gnawed wood; bois rongé par des castors	9730	11 0	
8JE591	Page-Ladson	peat; tourbe	9730	12 0	Zone C, unit 10b, test B, with a Bolen Bevelled projectile point
10BV30	Wasden, Owl Cave	bison bone collagen; collagène osseux de bison	9735	11 5	5.10 m depth, with fluted points
32DU955C	Big Black	soil extract; extrait de sol	9735	10 3	Block 2, 813N/E345, 55-65 cm depth, lower Leonard paleosol, with Folsom artifacts
EkPu-8	James Pass Meadow	bison bone collagen; collagène osseux de bison	9750	80	cultural layer III, sandstone rubble with lithic artifacts and a few bone fragments, about 47 cm depth
32SN-VP	Seibold	beaver-gnawed wood; bois rongé par des castors	9750	14 0	lake sediment, gyttja, coincident with a decline in spruce pollen
AKPET190	El Capitan Cave	bear bone collagen; collagène osseux d'ours	9760	75	giant individual in a coastal den
33WY252	Sheriden Cave	charcoal; charbon de bois	9775	70	sterile Holocene ponded sediments
41BX831	Richard Beene	soil; sol	9780	12 0	base of the Elm Creek paleosol on the Applewhite Terrace of the Medina River
EaOp-100	Lindoe	bone collagen; collagène osseux	9790	19 0	peaty organic muck layer
40SW228	Puckett	charcoal; charbon de bois	9790	16 0	flecks in cultural midden, 8-16 cm thick, 2.55 m depth, within the floodplain of the Cumberland River, Dalton
26WP46	Smith Creek Cave	charcoal; charbon de bois	9800	19 0	small hearth in white ash zone, test pit 8, with grey ash, hair, bark, twigs over compact dung, Mt. Moriah layer
25SX115	Hudson-Meng	charcoal; charbon de bois	9820	16 0	charcoal flecks hand picked from the bone bed over a period of four years to give a datable sample
SBC1.11.13	Kokoweef Cave	charcoal; charbon de bois	9830	15 0	level 16-22, in a natural trap for rodents

45DO176	Avey's Orchard	freshwater mollusc shell; coquille de mollusque d'eau douce	9840	11 0	central section, trench 1, east of DIC-2805, 193.26 m asl
24BW626	Indian Creek	charcoal; charbon de bois	9860	70	upstream locality, Locus C
24MA1376	Elk Creek	sediment; sédiment	9860	70	black mud, stratum III, containing plant macrofossils, 392-400 cm depth
EE:12:1	Lehner	charcoal; charbon de bois	9860	80	Clovis occupation level, square 4S/6W, immediately under Clanton clay, unit F2
32ML4	Flaming Arrow	soil; sol	9860	10 0	humates from the Leonard paleosol, bank profile 2, 378-406 cm depth
CAKer-?	Charlie Range Basalt Ridge	peat; tourbe	9870	50	spring-related peat
AKPET408	On Your Knees Cave	human bone collagen; collagène osseux humain	9880	50	
10NP143	Hatwai	charcoal; charbon de bois	9880	11 0	with stemmed points
26WP-?	Sunshine Locality	charcoal; charbon de bois	9880	50	stratum D, sandy channel fill
33CS-?	Eppley Rockshelter	charcoal; charbon de bois	9890	10 0	upper half of a hearth, 100 cm depth, lined with sandstone slabs
24JF292	Sheep Rock Spring	charcoal; charbon de bois	1007 0	60	
26EK-?	Bonneville Estates Rockshelter	charcoal; charbon de bois	1008 0	50	stratum A18, hearth, 80 cm diameter, 15 cm thick, with stemmed point fragments, lithic debitage, and faunal remains
24MA565	Steel's Pass	unknown; inconnu	1010 0	80	excavation unit 6S/4E
39CU1142	Jim Pitts	charcoal; charbon de bois	1011 0	70	lower part of stratum 2, directly associated with a Goshen bone bed
ME86.12	Caratunk	charcoal; charbon de bois	1011 0	70	associated with artifacts
45KT1362	Sentinel Gap	charcoal; charbon de bois	1013 0	60	feature 99.3, a burned area
44PY152	Smith Mountain	charcoal; charbon de bois	1015 0	70	stratum 3 m below the levee surface, west end of the site, ca. 50 cm from a lanceolate projectile point
AKHEA137	Panguingue Creek	charcoal; charbon de bois	1018 0	13 0	component I, paleosol 2, in colluvial loam, about 40 cm depth
41GD30	Berger Bluff	charcoal; charbon de bois	1019 0	16 0	lower deposits of the site
33LI-VP	Johnstown Mastodon	wood; bois	1019 0	16 0	blue clay containing the nearly complete skeleton of a mastodon, associated with pollen of spruce, grass, and Ambrosia-type
19NF70	Neponset	charcoal; charbon de bois	1019 0	60	Locus D, tentatively associated with Palaeoindian artifacts

AKXMH111	Phipps	charcoal; charbon de bois	1023 0	70	upper Bb horizon of paleosol, 2-3 cm below Denali complex artifacts that occur at this horizon elsewhere in the excavation
AKXBD156	Swan Point	charcoal; charbon de bois	1023 0	80	component 6, cultural zone III
10JE6	Wilson Butte Cave	charcoal; charbon de bois	1023 0	90	stratum C, gray/brown sand, 23 cm above stratum E
41VV218	Bonfire Shelter	charcoal; charbon de bois	1023 0	16 0	Hearth 1, Feature 27, in Bone Bed 2, with extinct bison, Plainview and Plainview-like points, and one Folsom point
13SR153	Buchanan	wood; bois	1023 0	15 0	
33DA-VP	Carter 1	wood; bois	1023 0	15 0	peat layer associated with a mastodon rib and adjacent to moose-elk bones, ca. 1.5 m below datum
24PA407	Anzick	human bone amino acid; aminoacide osseux humain	1024 0	12 0	hematite-stained calvarium
5GA1513	Upper Twin Mountain	bison bone collagen; collagène osseux de bison	1024 0	70	bison bone bed with Goshen projectile points
33CT476	Manning	soil extract; extrait de sol	1024 0	11 0	occupation 2, Trench A9, feature 1, a large hearth near a dense concentration of pebbles of unknown function
ME23.25	Poland	charcoal; charbon de bois	1024 0	90	associated with artifacts
36BR-?	Newton mammoth	sediment extract; extrait de sédiment	1025 0	11 0	humates from silt containing pollen, plant microfossils, and fossil beetles surrounding mammoth bones
29CX1	Folsom	bison bone collagen; collagène osseux de bison	1026 0	11 0	
48GO305	Hell Gap	charcoal?; charbon de bois	1026 0	95	Locality 1?
10NP336	Wewukiyephuh	charcoal; charbon de bois	1027 0	50	unit 4, feature 1, with Windust points
CASBr-?	Bench Mark Bay	freshwater mollusc shell; coquille de mollusque d'eau douce	1027 0	16 0	with four man-made flakes and one possible artifact, the first date for cultural remains associated with Pleistocene Lake Mohave
24LC151	Blacktail Cave	ungulate bone collagen; collagène osseux d'ongulé	1027 0	11 5	away from the old entrance in fine clastics covered by travertine
AKXBD131	Broken Mammoth	charcoal; charbon de bois	1029 0	70	cultural zone 3, east hearth, middle palaeosol complex
AKXBD020	Village (RaEc-2)	charcoal; charbon de bois	1029 0	60	Level 7
EeOi-11	Heron Eden	bison bone collagen; collagène osseux de bison	1029 0	10 0	cultural layer, unit 100n112e, 22-30 cm depth
48BH329	Hanson	charcoal; charbon de bois	1030 0	15 0	Area 2, the northern part of the site, Folsom level

41UV2	Kincaid Shelter	mollusc shell; coquille de mollusque	1030 0	19 0	unit E-F:8-9, 84-90" below unit datum, Zone 5, just above the base of a Refugio? point and a scraper-graver, with modern fauna
ME81.1	Vail	charcoal; charbon de bois	1030 0	90	feature 1, a split from a sample also dated by AA-114 and Beta-1833
41BQ46	Horn Rock Shelter 2	freshwater mollusc shell; coquille de mollusque d'eau douce	1030 5	14 0	Square 41, 381-406 cm depth, in upper gray cave spall unit, with Brazos fishtail points and crude patinated scrapers
EhPv-8	Vermilion Lakes Loc. A (153R)	charred plant remains; restes de plantes carbonisés	1031 0	19 0	Locality A, occupation 6b, unit 153R12
12ST-?	Brems	mastodon bone collagen; collagène osseux de mastodonte	1032 5	16 0	
33MN-VP	Marion mammoth	wood; bois	1034 0	12 5	shallow water lacustrine silty sand with wood, twigs, shells, and spruce cones
41RB1	Miami or Cowan Ranch	sediment extract; extrait de sédiment	1034 5	33 0	humates, playa fill overlying the Clovis bone bed
AKPET-VP	Lawyers Cave	bear bone collagen; collagène osseux d'ours	1035 0	10 0	surface near the entrance to Hole 52
42GR-?	Professor Valley	mammoth bone collagen; collagène osseux de mammoth	1035 0	11 0	alluvium
AKPSM017	Hilltop	charcoal; charbon de bois	1036 0	60	test pit, with edge-ground lanceolate projectile points
41DN479	Aubrey	charcoal; charbon de bois	1036 0	15 0	fill from a paleochannel
NY	Engelbert	peat; tourbe	1037 5	11 0	possible forest floor overlying the Palaeoindian occupation
CASMI261	Daisy Cave	charcoal; charbon de bois	1039 0	13 0	stratum G, a thin paleosol below the open shell midden containing a low-density scatter of shell, bone, charcoal, and chipped stone artifacts
24JF4	MacHaffie	bison? bone collagen; collagène osseux de bison?	1039 0	40	stratum I
20WA-?	Ellsworth Road	wood; bois	1039 5	10 0	peaty silt and clay stratified within the pulp cavities of both mastodon tusks
AKXBD071	Mead	charcoal; charbon de bois	1041 0	80	cultural zone 3, middle paleosol
FF:10:1	Double Adobe	organic matter; matière organique	1042 0	10 0	trench G, nodules in rusty sand 4 m depth, with rolled mammoth bones but no cultural material
Z:12:5	Ventana Cave	charcoal; charbon de bois	1043 0	70	Volcanic Debris layer
14LO2	12 Mile Creek	bison bone apatite; apatite osseux de bison	1043 5	26 0	bone kept in the museum collection since the 1895 excavation



32DU955A	Bobtail Wolf	soil extract; extrait de sol	1045 0	19 0	west terrace, 533N/413E, 71-76 cm depth, upper Leonard paleosol (Ab) with Folsom artifacts
26CL-?		sloth feces; fèces de paresseux	1045 5	34 0	room 1, human occupation(?) level, 6'4" (1.93 m) depth
11ST123	Smiling Dan	plant remains; restes de plantes	1046 0	22 0	Unit Ia, the lower portion of a silty, valley-filling, slackwater deposits that grades to the Keach School terrace
BiCu-1	Debert	charcoal; charbon de bois	1047 7	90	hearth no. 1, feature 11
AKPSM027 A	Bedwell	charcoal; charbon de bois	1049 0	70	unit 10-15N/0-5E, a unit that also contained a lanceolate point
35LK535	Lake Abert	freshwater mollusc shell; coquille de mollusque d'eau douce	1049 0	12 0	on beach in pit, unit 24N/20W, basal level below willow leaf points
29RV2	Blackwater Draw 1	sediment extract; extrait de sédiment	1049 0	20 0	unit D2, diatomaceous earth, above unit D1b (Agate Basin) and D1a (Folsom)
AKFAI206	Moose Creek	charcoal; charbon de bois	1050 0	60	unit 2, hearth in paleosol within fine loess, part of the deepest Denali complex occupation level
10CR201	Redfish Lake Overhang	charcoal; charbon de bois	1050 0	18 0	possible fireplace, 80-105 cm depth, at extreme rear of cave, in coarse sandy loam mixed with cobbles and boulders redeposited from glacial moraine
DkPb-2	Bayrock	willow wood; bois de saule	1050 0	20 0	sandy alluvium containing sticks and erect willow stumps, 8.2 m depth, to provide a maximum age for bison skull and artifacts
ME4.10	Hedden	charcoal; charbon de bois	1050 0	60	contact of dune sand on pebbly outwash sand



Table S3.2. Models with their fit to the training data (Training AUC) and fit to the testing data (Test AUC).

<b>Model Year</b>	<b># of Training samples</b>	<b>Training AUC</b>	<b># of Test samples</b>	<b>Test AUC</b>	<b>AUC s.d.</b>
1000	1306	0.82	435	0.82	0.01
2000	747	0.83	249	0.82	0.01
3000	414	0.85	137	0.82	0.02
4000	306	0.88	102	0.84	0.02
5000	161	0.89	53	0.86	0.02
6000	105	0.91	34	0.85	0.03
7000	81	0.92	26	0.85	0.03
8000	81	0.91	26	0.80	0.04
9000	63	0.84	21	0.73	0.05
10000	51	0.85	16	0.78	0.05

Table S3.3. Variable contributions to each preliminary model. The variables shown contributed 50% to the model. SUM = summer, SPR = spring, WIN = winter. Values for the subsampled 01kyr model are given for the 300, 100, and 50 point datasets.

	<b>band_2</b> SUM Precip mean	<b>band_6</b> SUM Precip sd	<b>band_14</b> SUM Temp sd	<b>band_26</b> SUM TempMax mean	<b>band_22</b> SUM TempMin sd
1 ka					
1_300					
1_100					
1_50	4.2				
2 ka					
3 ka					
4 ka					
5 ka					
6 ka	3.3				
7 ka					
8 ka		4.5	6.1	3.6	5.5
9 ka					
10 ka					

	<b>band_3</b> FALL Precip mean	<b>band_11</b> FALL Temp mean	<b>band_15</b> FALL Temp sd	<b>band_27</b> FALL TempMax mean	<b>band_31</b> FALL TempMax sd	<b>band_23</b> FALL TempMin sd
1 ka				22.3		
1_300		18.7		13.6		
1_100						
1_50						
2 ka				31.7		
3 ka				26.5		
4 ka				11.3		
5 ka				18.5		
6 ka				8.6		
7 ka			7.1	3.5	4.1	
8 ka						
9 ka			4.5		5.4	5.8
10 ka	4.3	5.5				

	<b>band_1</b> WIN Precip mean	<b>band_5</b> WIN Precip sd	<b>band_9</b> WIN Temp mean	<b>band_13</b> WIN Temp sd	<b>band_25</b> WIN TempMax mean	<b>band_29</b> WIN TempMax sd	<b>band_21</b> WIN TempMin sd	<b>band_17</b> WIN TempMin mean
1 ka			19.5		12.5			
1_300			11.1					7.5
1_100			15.4		15.5			
1_50	6.8		4.8		19.2			5.1
2 ka					22			

3 ka			7.4		13.5			
4 ka			14.97		10.6			
5 ka			9.8		17.4			
6 ka					17			
7 ka					5.3			
8 ka				4.6	3.96			
9 ka				5.9		4.6	4.03	
10 ka		4.7						

	<b>band_16 SPR Temp sd</b>	<b>band_32 SPR TempMax sd</b>	<b>band_28 SPR TempMax mean</b>	<b>band_4 SPR Precip mean</b>
1 ka				
1_300				
1_100			5.7	17.7
1_50		5.2		
2 ka				
3 ka				
4 ka				
5 ka				
6 ka	14.8			
7 ka	18.4			
8 ka	20.2			
9 ka				
10 ka	12.6			

	<b>band_35 YEAR Precip seasonalit y</b>	<b>band_34 YEAR Temp range</b>	<b>band_33 YEAR Temp seasonalit y</b>
1 ka			
1_300			
1_100			
1_50	4.3		3.8
2 ka			
3 ka			4.7
4 ka	4.2	7.6	5.3
5 ka			6.3
6 ka			7.1
7 ka	5.1		9.9
8 ka	5.2		
9 ka	7.6	6.96	8.96
10 ka	4.8	18.2	

Table S3.4. Chi-squared analysis of the percent contribution of each variable the models between the full 1,000 yr B.P. dataset and the sub-sampled datasets. The bold number at the bottom of the table is the chi-squared statistic. Sub-sampled datasets are significantly different.

	With ALL	Sub 300	O-E	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E	Sub 100	O-E	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E	Sub 50	O-E	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E
band_01	0.27	0.91	0.64	0.41	1.54	0.64	0.37	0.14	0.52	6.83	6.56	43.08	161.76
band_02	1.14	1.50	0.36	0.13	0.11	1.24	0.10	0.01	0.01	4.17	3.03	9.21	8.07
band_03	0.23	0.37	0.14	0.02	0.09	0.53	0.30	0.09	0.39	2.11	1.88	3.54	15.30
band_04	1.77	1.59	-0.18	0.03	0.02	17.67	15.90	252.74	142.85	1.89	0.12	0.02	0.01
band_05	0.62	0.47	-0.16	0.02	0.04	1.89	1.27	1.61	2.58	3.42	2.79	7.80	12.51
band_06	0.33	1.06	0.73	0.53	1.59	1.83	1.50	2.24	6.69	3.12	2.79	7.78	23.27
band_07	0.48	0.62	0.14	0.02	0.04	1.14	0.66	0.43	0.90	2.84	2.36	5.57	11.53
band_08	0.38	0.85	0.47	0.22	0.57	1.98	1.61	2.58	6.79	1.78	1.40	1.96	5.17
band_09	19.51	11.08	-8.43	71.08	3.64	15.41	-4.11	16.87	0.86	4.77	-14.75	217.47	11.14
band_10	0.53	1.05	0.52	0.27	0.51	0.45	-0.08	0.01	0.01	0.04	-0.49	0.24	0.45
band_11	12.43	18.72	6.28	39.49	3.18	0.23	-12.20	148.95	11.98	0.07	-12.36	152.76	12.29
band_12	0.63	1.51	0.89	0.78	1.25	0.31	-0.32	0.10	0.17	0.35	-0.28	0.08	0.13
band_13	0.53	1.94	1.41	1.98	3.75	0.89	0.36	0.13	0.25	1.27	0.75	0.56	1.05
band_14	0.90	1.07	0.17	0.03	0.03	2.57	1.67	2.77	3.06	2.17	1.27	1.61	1.77
band_15	0.70	1.37	0.67	0.45	0.65	0.53	-0.16	0.03	0.04	0.65	-0.04	0.00	0.00
band_16	0.49	0.94	0.45	0.21	0.42	1.38	0.89	0.79	1.62	0.97	0.48	0.23	0.47
band_17	6.88	7.53	0.65	0.42	0.06	1.53	-5.34	28.54	4.15	5.07	-1.81	3.27	0.48
band_18	0.21	0.66	0.46	0.21	0.99	5.04	4.83	23.30	111.52	0.81	0.60	0.37	1.75
band_19	1.45	2.66	1.21	1.47	1.01	1.30	-0.15	0.02	0.02	1.65	0.20	0.04	0.03
band_20	1.73	2.10	0.37	0.14	0.08	1.40	-0.33	0.11	0.06	0.36	-1.38	1.90	1.10
band_21	0.92	1.28	0.36	0.13	0.14	0.88	-0.04	0.00	0.00	3.47	2.55	6.52	7.08
band_22	0.48	0.86	0.38	0.15	0.31	0.87	0.39	0.15	0.32	0.55	0.07	0.00	0.01
band_23	1.41	2.07	0.66	0.43	0.30	0.81	-0.60	0.36	0.25	3.56	2.14	4.60	3.26
band_24	1.15	2.36	1.21	1.48	1.28	2.78	1.63	2.65	2.30	3.62	2.47	6.11	5.32
band_25	12.47	7.24	-5.23	27.39	2.20	15.52	3.05	9.29	0.74	19.16	6.69	44.75	3.59
band_26	0.81	1.51	0.69	0.48	0.59	4.45	3.64	13.24	16.25	3.28	2.46	6.06	7.44
band_27	22.30	13.59	-8.70	75.77	3.40	2.53	-19.76	390.56	17.52	0.44	-21.85	477.61	21.42
band_28	2.16	3.93	1.77	3.13	1.45	5.71	3.55	12.60	5.83	1.22	-0.94	0.88	0.41
band_29	0.39	1.23	0.84	0.70	1.80	0.53	0.14	0.02	0.05	2.32	1.93	3.71	9.52
band_30	1.02	0.90	-0.12	0.02	0.01	1.41	0.39	0.15	0.15	0.82	-0.20	0.04	0.04
band_31	1.59	1.42	-0.17	0.03	0.02	2.11	0.52	0.27	0.17	2.92	1.34	1.79	1.13
band_32	1.28	2.02	0.73	0.54	0.42	2.38	1.10	1.20	0.94	5.22	3.93	15.48	12.05
band_33	1.53	1.88	0.35	0.12	0.08	0.89	-0.64	0.40	0.26	3.83	2.30	5.30	3.48
band_34	0.71	1.18	0.47	0.22	0.32	0.58	-0.12	0.02	0.02	0.91	0.20	0.04	0.06
band_35	0.57	0.54	-0.03	0.00	0.00	0.59	0.02	0.00	0.00	4.33	3.76	14.15	25.00
					<b>31.90</b>				<b>339.27</b>				<b>368.07</b>

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