

## Supporting Information for

# Early Paleoindian use of canids, felids, and hares for bone needle production at the La Prele site, Wyoming, USA

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Figures S1 to S3

Table S1

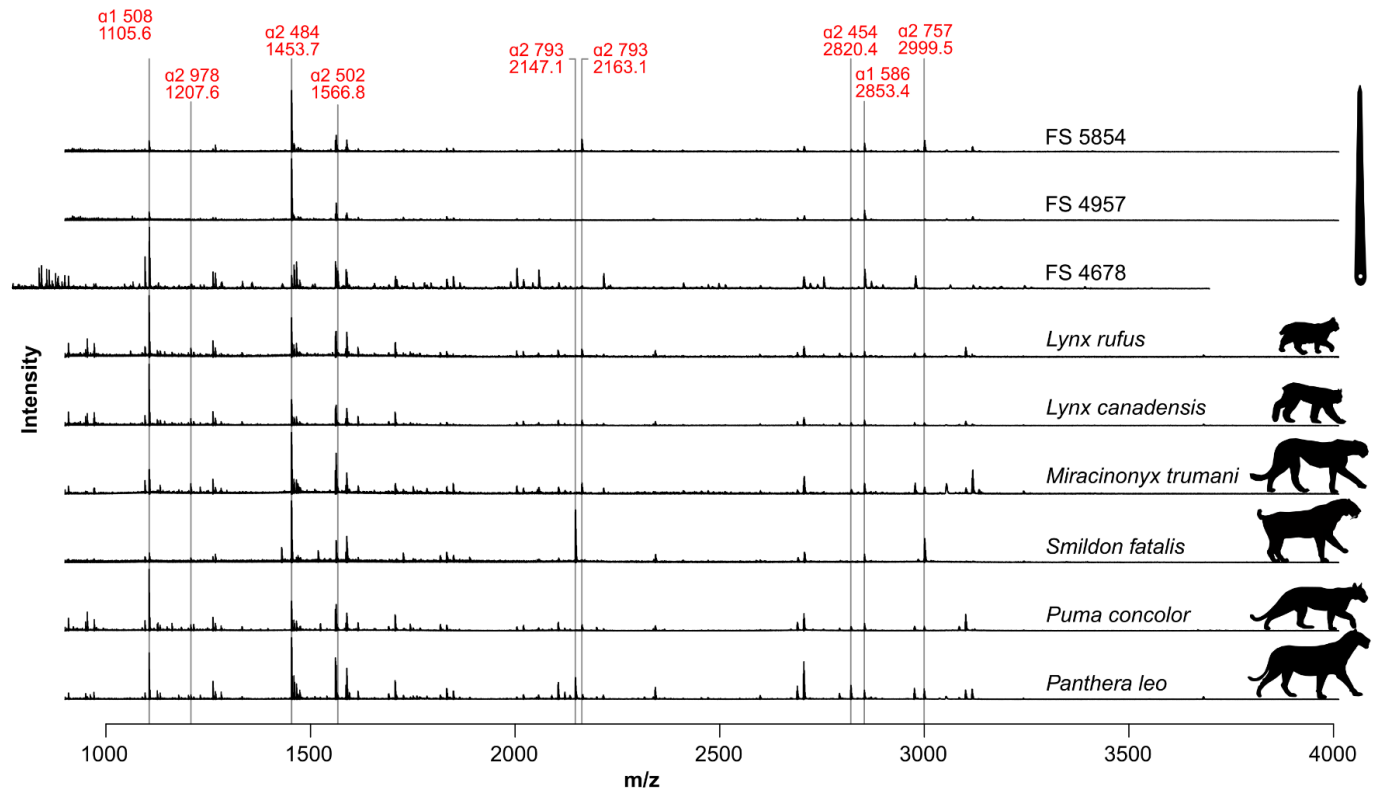


Fig. S1. MALDI-TOF spectra of needles identified as having been manufactured with felid bone in comparison to extant and extinct candidate felid taxa.

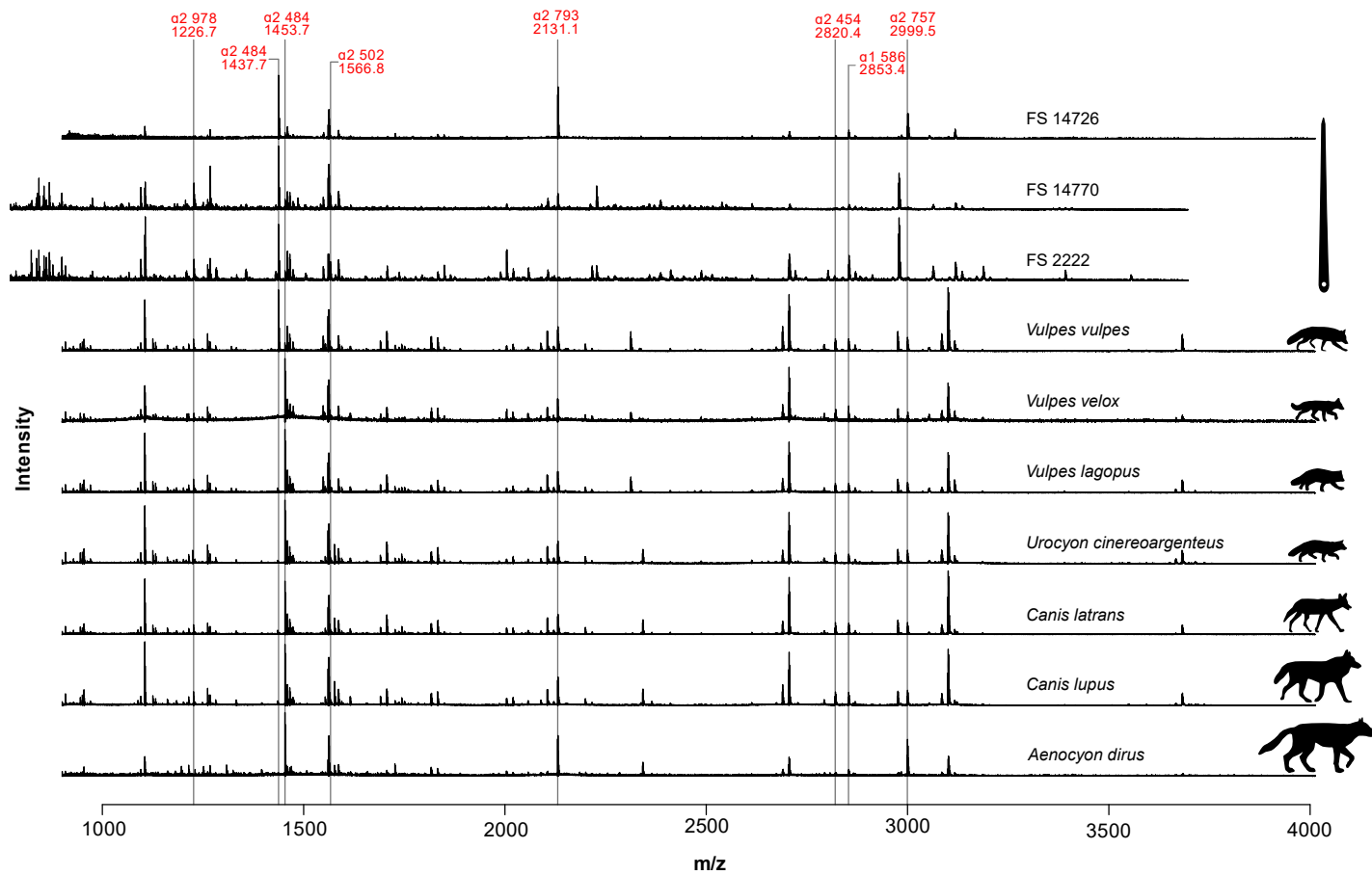


Fig S2. MALDI-TOF spectra of needles identified as having been manufactured with canid bone in comparison to extant and extinct candidate canid taxa.

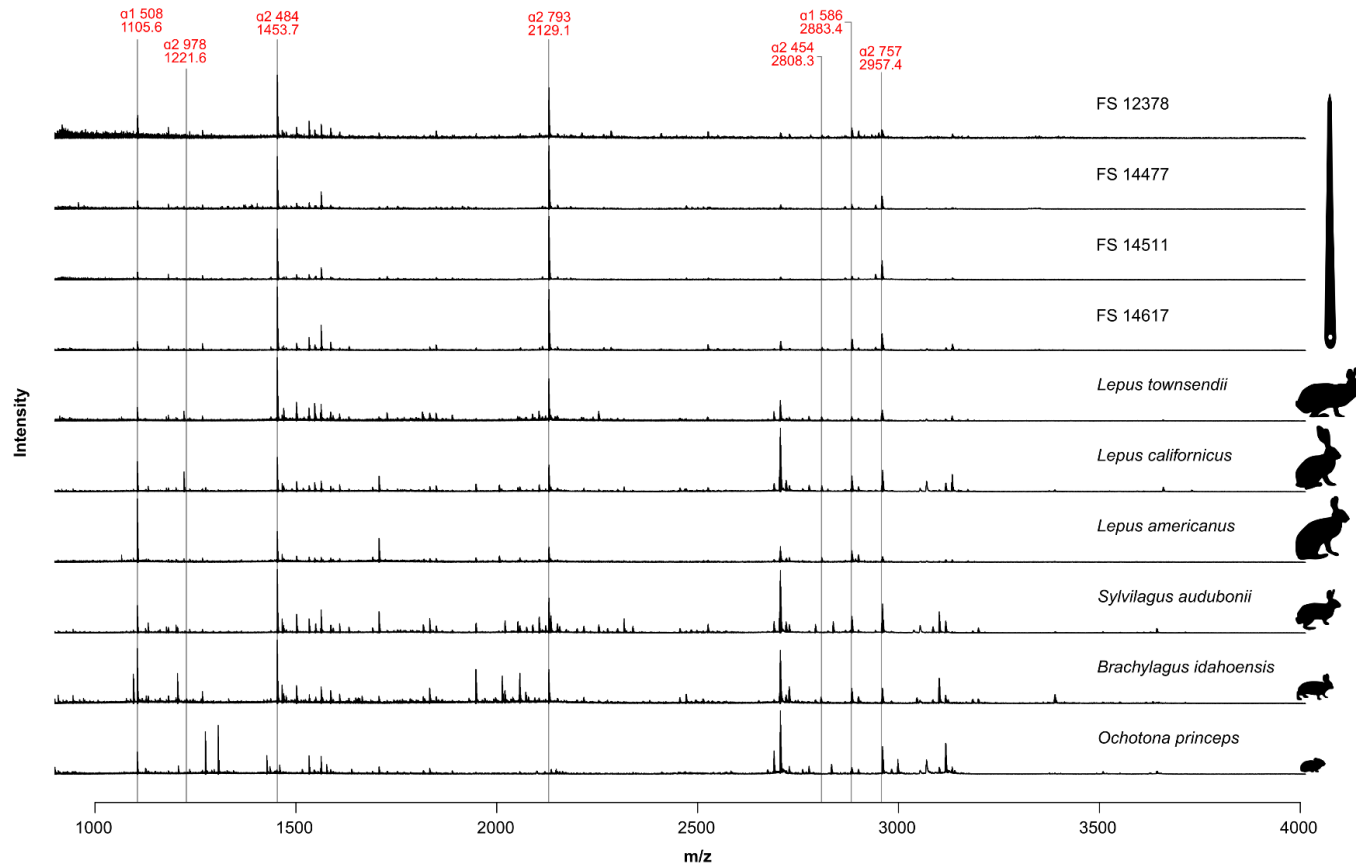


Fig S3. MALDI-TOF spectra of needles identified as having been manufactured with leporid bone in comparison to extant and extinct candidate lagomorph taxa.

Artifact or Species	α2 978			α2 484		α2 502	α2 793				α2 454			α1 586		α2 757		Source	Ident-ification
	1207.6/ 1223.6	1210.7/ 1226.7	1221.6/ 1235.6	1437.7	1453.7	1566.8	2129.1	2131.1	2147.1	2163.1	2808.3	2820.4	2836.3	2853.4/ 2869.4	2883.4/ 2899.4	2957.4/ 2973.5	2983.5/ 2999.5		
FS 4957					X	X				X		X	X	X		X			Family: <i>Felidae</i>
FS 5854					X	X						X	X	X			X		Family: <i>Felidae</i>
FS 12378		X	X		X	X	X				X				X	X			Genus: <i>Lepus</i>
FS 14477			X	X	X	X	X				X				X	X			Genus: <i>Lepus</i>
FS 14511			X	X	X	X	X				X				X	X			Genus: <i>Lepus</i>
FS 14617			X	X	X	X	X				X				X	X			Genus: <i>Lepus</i>
FS 14726		?		X	X	X		X				X					X		<i>Vulpes vulpes</i>
FS 14770	?	X		X	X	X		X				?		X					<i>Vulpes vulpes</i>
FS 2222	X	X		X	X	X		X				X		X	X				<i>Vulpes vulpes</i>
FS 4678	X				X	X								X	X				Family: <i>Felidae</i>
<i>Lynx Rufus</i>	X				X	X				X		X		X			X	2	
<i>Lynx Canadensis</i>	X				X	X				X		X		X			X	2	
<i>Miracinonyx trumani</i>	X				X	X				X		X	X	X			X	this study	
<i>Puma concolor</i>	X				X	X				?	X		X	X			X	this study	
<i>Smilodon fatalis</i>	X				X	X				X	?			X			X	this study	
<i>Panthera leo</i>	X				X	X				X			X	X			X	1	
<i>Vulpes lagopus</i>		X			X	X		X				X	X	X			X	2	
<i>Vulpes vulpes</i>		X		X	X	X		X				X	X	X			X	2	
<i>Vulpes velox</i>		X			X	X		X				X		X			X	this study	
<i>Urocyon cinereoargenteus</i>					X	X		X				X	X	X			X	this study	
<i>Canis latrans</i>		X			X	X		X				X	X	X			X	2	
<i>Canis lupus</i>		X			X	X		X				X	X	X			X	2	
<i>Aenocyon dirus</i>					X	X		X				X	?	X			X	this study	
<i>Lepus europaeus</i>			X		X		X					X			X	X		1	
<i>Lepus californicus</i>			X	X	X	X	X					X		X	X		X	this study	
<i>Lepus americanus</i>			X	X	X	X	X					X		X	X		X	this study	
<i>Lepus townsendii</i>			X	X	X	X	X							X	X		X	this study	
<i>Sylvilagus audubonii</i>			X	X	X	X	X						X		X	X		this study	
<i>Brachylagus idahoensis</i>			X	X	X	X	X							X	X		X	this study	
<i>Ochotona princeps</i>			X		X				X	X				X				this study	

Notes: 1. M. Buckley, M. Collins, J. Thomas-Oates, J. C. Wilson, Species identification by analysis of bone collagen using matrix-assisted laser desorption/ionisation time-of-flight mass spectrometry. *Rapid Communications in Mass Spectrometry: An International Journal Devoted to the Rapid Dissemination of Up-to-the-Minute Research in Mass Spectrometry* 23, 3843–3854 (2009). 2. F. Welker, M. Hajdinjak, S. Talamo, K. Jaouen, M. Dannemann, F. David, M. Julien, M. Meyer, J. Kelso, I. Barnes, S. Brace, P. Kamminga, R. Fischer, B. M. Kessler, J. R. Stewart, S. Pääbo, M. J. Collins, J.-J. Hublin, Palaeoproteomic evidence identifies archaic hominins associated with the Châtelperronian at the Grotte du Renne. *Proc. Natl. Acad. Sci. U.S.A.* 113, 11162–11167 (2016).

Table S1. Presence and absence of marker peptides for needles, needle preforms, and comparative canid, leporid, and felid taxa