

Supplemental Information

Data in Supplemental Tables 1–5 were taken from published literature. In some cases, metric data were published; in others, the size (length, diameter) of a needle was estimated from a published photograph and associated scale; these cases are indicated in the Supplemental Tables. Blanks in a cell of a table signify that no data are available and that an estimate of size was not possible. In a few cases, especially with Lindenmeier (Wilmsen and Roberts 1978) and Lind Coulee (Irwin and Moody 1978), photographs of needles and tables of metric data did not correspond consistently. These cases, too, are indicated in the Supplemental Tables.

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Supplemental Table 1. Inventory of Marmes Site, Harrison Horizon Bone Needle Specimens (11,500 cal B.P.).

WSU-MA	Description	Provenience	Length	Width	Thickness
Inventory ^a					
3454 ^{b, c}	Eye, complete	10N/10W	51.9	1.3	1.3
3511 ^b	Preform, proximal	25N/15W	25.6	1.7	1.5
3545 ^b	Preform, midsection	10N/45W	11.7	2.0	1.2
3543 ^b	Preform, proximal	15N/0W	7.1	1.9	.7
3543 ^b	Preform, distal	15N/0W	13.4	1.3	.7
3452 ^b	Distal	20N/10E	15.75	1.3	1.2
3451 ^b	Eye, proximal	15N/45W	29.0	1.5	1.0
123 ^d	Midsection	N20/E5	7.06	1.56	1.30
525 ^d	Midsection	N5/W25	17.04	1.70	1.42
1731 ^d	Midsection	N5/E10	10.76	1.96	

Note: All dimensions are in millimeters; blank indicates no metric data is available.

^aWashington State University Museum of Anthropology.

^bDescription, provenience, and dimensions from Root and Gustafson (2004:239).

^cOriginal find (Fryxell et al. 1968).

^dSpecimens not previously described in the literature.

Supplemental Table 2. Inventory of Lind Coulee Bone Needle Specimens (11,750 cal B.P.).

Inventory number	Description	Provenience	Length	Width	Thickness
5	Preform	4E/16N	17.9	1.1	1.1
15	Eye, proximal fragment	4E/14N	15.9	2.9	
19	Midsection (possible needle)	8E/14N	5.8		
27	Distal point	10E/10N	7.3	1.6	.8
59	Distal point (possible needle)	8E/14N	19.0	2.1	1.7
59a ^a	Eye, proximal (2 pieces refit)	4E/12N	13.2	2.0	1.5
59b ^a	Midsection	4E/12N	6.9	1.5	1.6
59c ^a	(Refits with 59d)	4E/12N	6.5	1.4	1.7
59d ^a	(Refits with 59c)	4E/12N	4.2	1.7	1.5
60	Midsection	8E/14N	8.1	1.9	1.5
65 ^b	Preform, proximal fragment	8E/14N	9.0	2.5	1.6
70	Preform (possible needle)	0E/12N	16.2	3.2	1.5
109	Preform (possible needle)	6E/14N	12.7	2.6	3.6
109a ^c	Eye, proximal	10E/14N	15	2.2	1.5
109b ^c	Midsection	10E/14N	10.9	2.0	1.0
109c ^c	Distal tip	10E/14N	3.8	1.4	
110	Midsection	10E/14N	15.4	2.3	1.4
115	preform, midsection, 2 fragments refit	8E/14N	46.7	3.3	1.9
120	preform, midsection, 2 fragments refit	8E/14N	60.9	2.6	2.0
125	distal point	6E/14N	7.3	1.6	.8

Note: All dimensions are in millimeters; blanks indicate no metric data is available. Data from Irwin and Moody (1978).

^aThese may all be the same needle, but only 59c and 59d refit one another (Irwin and Moody 1978). Plotted as three specimens in Figure 5.

^bProximal end flattened but not perforated.

^cNone of these fragments refit with one another. Specimens 109a and 109b appear to be the same needle whereas 109c appears to represent a different needle than 109a and 109b (Irwin and Moody 1978). Plotted as three specimens in Figure 5.

Supplemental Table 3. Inventory of Lindenmeier Bone Needle Specimens (12,700 cal B.P.).

Inventory number	Description (after fig. 126)	Square	Unit	Length	Diameter
G278a	Eye (distal), proximal fragment (d)	11D	Y	26.3	1.3
G278b		11D	Y	27.3	1.3
G579	Eye (complete), proximal fragment (a)	13D	Y	17.9	.8
G621		10H	H	17.2	2.2
G621		10H	H	11.9	1.8
G671		11C	Y	12.8	2.1
G671		11C	Y	13.9	2.3
G735		11H	H	11.7	2.0
G735		11H	H	11.8	1.9
G1081	Midsection (b)	90C	G	36.6	2.0
G1086		80C	G	73.7	1.8
443669		9C	Y	30.0	2.5
443670	Midsection (e)	10C	Y	19.2	1.5
443696		9E	H	31.8	1.4
443707	Midsection (l)	12E	Y	22.0	2.0
443707	Midsection (m)	12D	Y	19.5	2.0
443719a	Eye (distal eye), proximal fragment (g)	11F	Y	35.3	2.0
443719b	Midsection, 2 pieces(q, r)	11F	Y	35.4	1.7
443722	Midsection (k)	12F	Y	30.0	1.9
443740		9G	H	20.3	1.9
443781		90B	G	22.1	2.1
443783	Midsection (h)	0B	G	22.3	1.9
443839	Midsection (f)	11F	H	21.6	1.7
443839	Midsection (o)	11F	H	12.8	1.2
442961		9B	G	27.1	1.7
G120 ^a	Eye (distal eye), proximal fragment (c)				
443511 ^a	Midsection (i)				
443786 ^a	Midsection (j)				

443809^a Midsection (n)

443494^a Midsection (p)

Note: All dimensions are in millimeters. Metric data from Wilmsen and Roberts (1978:128, Table 55). Letter in parentheses at end of description refers to a specimen in Figure 126 (Wilmsen and Roberts 1978:131).

^aSpecimen not described in Wilmsen and Roberts (1978:128, Table 55) but a photograph presented of a specimen with this inventory number is shown in Figure 126 (Wilmsen and Roberts 1978:131). Only 25 needles were recovered from Lindenmeier; these five specimens are likely mislabeled as to inventory number in Figure 126 and are likely described in Table 55 with a different inventory number.

Supplemental Table 4. Inventory of Agate Basin Site, Folsom Bone Needle Specimens (12,750 cal B.P.).

Catalog number	Description (from Figure 2.111)	Length ^a	Width	Thickness
OA004	Eye (complete), missing distal tip (Figure 2.111a)	~70	2.5	1.7
C3480	Not illustrated		1.9	1.85
96552	Not illustrated		1.5	1.15
96610	Not illustrated		1.45	1.3
C3478	Eye (distal), proximal fragment (Figure 2.111b)	~30	1.7	1.3
C3482	Not illustrated		2.1	1.9
96608	Not illustrated		1.7	1.35
96612	Not illustrated		1.6	1.2
96609	Not illustrated		2.3	2.1
C3479	Not illustrated		1.85	1.1
C3481	Not illustrated		2.6	1.25
C3485	Not illustrated		1.8	1.25
C3483	Not illustrated		2.8	1.15
C3484	Not illustrated		2.1	1.5
OA440	Not illustrated		1.6	1.4
F1024 ^b	Mid fragment (Figure 2.109g)		4.8	1.9

Note: All dimensions are in millimeters; blanks indicate no metric data is available. Data from Frison and Craig (1982:168, Table 2.1).

^aLength is estimated from Figure 2.111 in Frison and Craig (1982).

^bThickness of this specimen is listed as 2.0 in Frison and Stanford (1982: Appendix).

Supplemental Table 5. Inventory of Other Paleoindian Bone Needle Specimens.

Site	Description; age	Length	Width	Thickness	Reference
Allen, NE	12,250–11,980 cal B.P.		3		Bamforth 2007; Schultz and Frankforter 1948;
Allen, NE	12,250–11,980 cal B.P.		3		Bamforth 2007
Allen, NE	12,250–11,980 cal B.P.		5		Bamforth 2007
Allen, NE	12,250–11,980 cal B.P.		6		Bamforth 2007
Hell Gap, WY ^a	Eye, complete; 13,100 cal B.P.	~50	~2.5		Irwin et al. 1973; Kornfeld and Larson 2009
Winkler-1, TX	Eye, proximal fragment; 11,000 cal B.P.	13.34	1.72	1.07	Blaine and Wendorf 1972; see also Hofman et al. 2000
Hanson, WY	Midsection; 11,700 cal B.P.	~8	~1		Frison and Bradley 1980
Horn Shelter 2, TX	“Bone needle fragments”; “small, eyed bone needle” with burial; 11,150 cal B.P.	43	2.5		Redder 1985; Redder and Fox 1988; Young et al. 1987
Barton Gulch, MT	“Eyed bone needles”; 10,650 cal B.P.				Davis 1993: 272; Davis et al. 2009
Broken Mammoth, AK	Eye, complete; 11,800–11,000 cal B.P.				Holmes 1996, 2001; Yesner 1994, 1996, 2001, 2007;
Buhl Burial, ID ^b	Eye, proximal fragment; 12,660 cal B.P.	~34	~2		Green et al. 1998
Sentinel Gap, WA	Midsection; 11,700 cal B.P.	12.7	1.5		Galm and Gough 2000; Gough and Galm 2002
Medicine Lodge Creek, WY	Eye, proximal fragment; 10,700 cal B.P.	6	1.6	.9	Frison and Walker 2007

O. V. Clary, NE	“Two bone needles”; component 2; 10,100 cal B.P.			Hill et al. 2008, 2011
Bonneville Estates Rockshelter, NV ^c	Eyed, complete; 12,200 cal B.P.	~30	~1.9	Goebel et al. 2011

Note: Specimens are listed in chronological order of reporting and discovery; all dimensions are in millimeters; blanks indicate no metric data is available. Dimensions with “~” are estimated from photographs.

^aLength and width measurements estimated based on photograph in Kornfeld and Larson (2009:6, Figure 1.4).

^bLength and width measurements estimated based on photograph in Green et al. (1998:450, Figure 11).

^cLength and width measurements estimated based on photograph in Goebel et al. (2011:488, Figure 10).