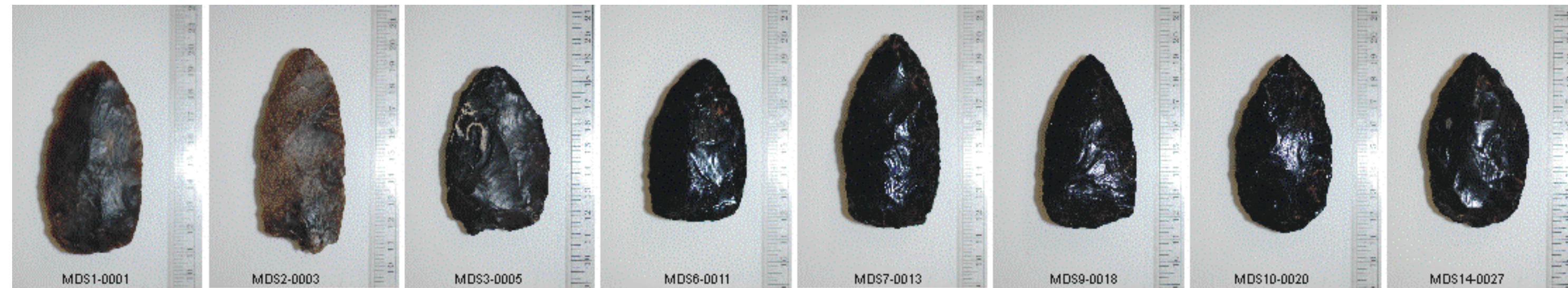
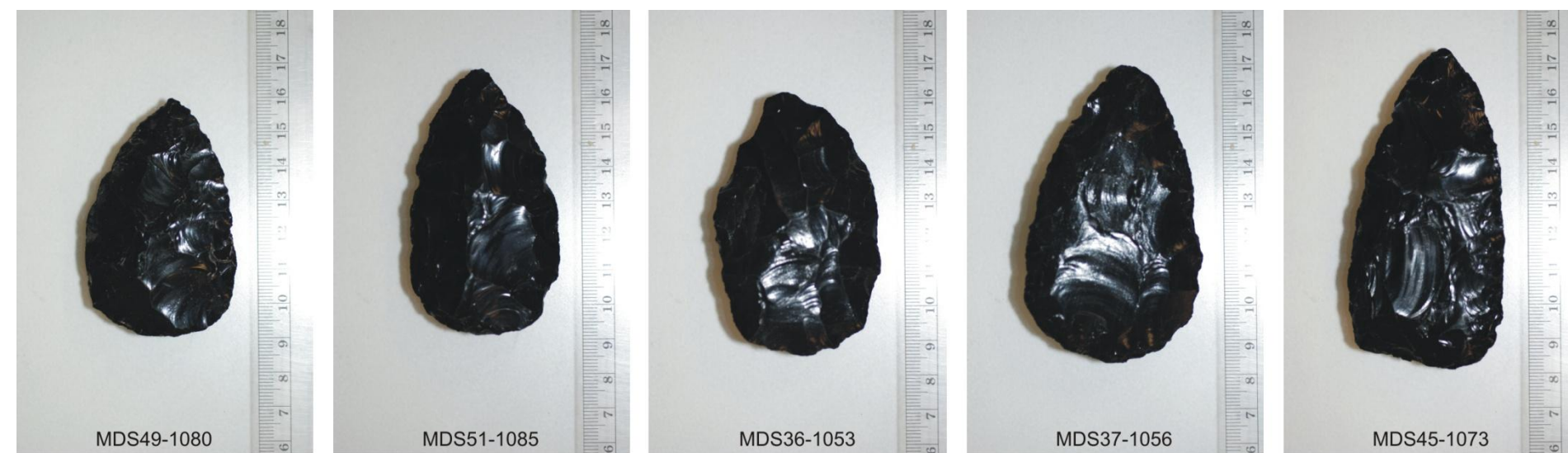


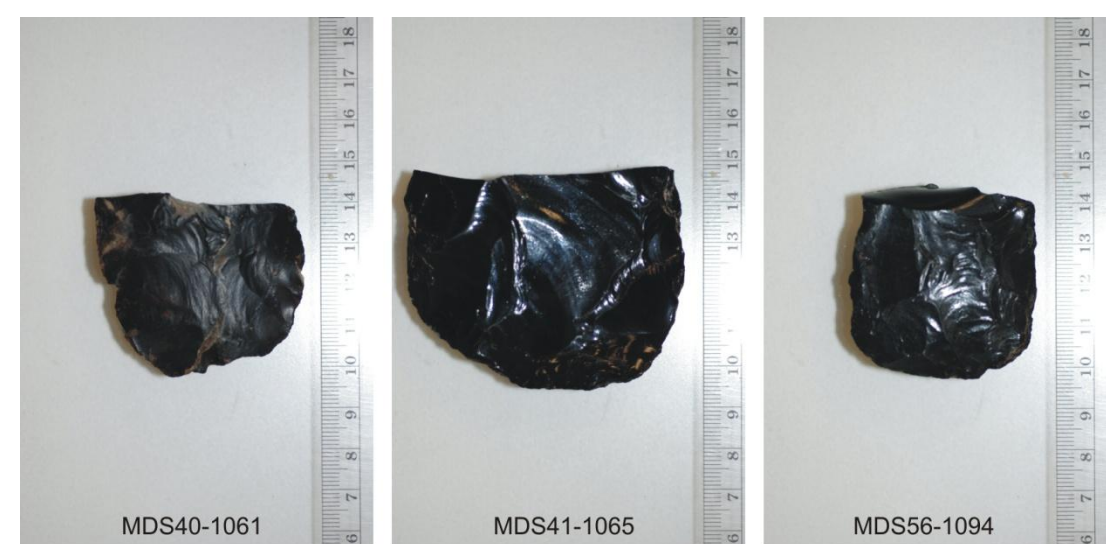
The Smith Cache: A Look into a Knapper's bag c. 1200 B.P.



PREFORMS



BIFACES STAGE 3



SNAPPED BIFACES



PARTIALLY REDUCED FLAKES



OTHER TOOLS

The Smith Cache was found north of Ashton, near Little Butte, Ashton National Forest, by a catskiner in the early 1970s as part of logging operations. This find was preserved and donated to the Idaho Museum of Natural History by the finder, Mr. Max Smith.

The recovered assemblage consists of stage 3 bifaces and triangular and lanceolate preforms. All were reduced by billet or soft hammer reduction. All specimens were subjected to x-ray fluorescence examination, and were found to have come from the nearby Bear Gulch obsidian source.

The Smith cache consists of 80 stone artifacts probably representing the knapping of a single individual. All were products of careful reduction of medium-sized obsidian nodules. Flakes removed from these cores were lanceolate in outline and thin, very comparable in proportion to the carefully reduced bifaces and preforms. Metrics indicate the knapper was most concerned with achieving thin cross-sections. Preforms basally thinned to facilitate hafting and could have been used as is, with little further modification.

"Cache" is a misnomer in the case of the Smith collection. This assemblage probably represents the efforts of one knapper to refit his hunting gear while visiting the Bear Gulch obsidian source. Nodules were reduced to lamellar conchoidal flakes of fairly standard size and proportion. The kit as recovered has partially reduced flakes, late stage bifaces and preforms. Emphasis other than on standard shape was on consistent thickness. When needed, the preforms would be finished by pressure flaking and hafted.

The Smith assemblage is interesting on several fronts: it is highly unusual to have a large collection made by a single knapper; diagnostic forms and reduction techniques might be attributed to Late Paleoindian or Early Archaic Periods; Two obsidian hydration dates were taken indicating a date of c. 1200 BP or Late Archaic.

The collection contains a potential projectile arsenal, with the tools necessary to cut and shape wood projectile shafts and process sinew or rawhide for hafting. Missing are the antler billets and antler tines required for finishing the points. These were probably consumed by animals soon after the container was laid down.

Biface stage	Name	W/T Ratio	Description
Stage 1	blank	NA	Cobble or spall with cortex
Stage 2	edged biface	2:4	Small chips removed from around edges with a few flake scars across faces
Stage 3	thinned biface	3:4	Flakes removed to center of bifaces, with most cortex removed
Stage 4	preform	4:6	Large flat flake scars and flat cross-section
Stage 5	finished	4:6	Refined trimming of edges, possibly hafted

Table adapted from Andrefsky 2005: Table 7.7.

Biface stage	Name	W/Tmin	W/Tmax	W/Tavg	W/Tsd	L/W/T
Stage 2	edged biface	1.145985	7.72	3.652143	1.701531	0.14433
Stage 3	thinned biface	1.40625	4.091743	3.091325	0.910416	0.170485
Stage 4	preform	1.368421	5.235955	3.669015	0.691899	0.149556

Summary of W/T and L/W/T ratios by reduction stage, Smith cache.

Spec Number	DSC-o	DSC-v	Description	Reduction Stage	Source	Length	Width	Thickness	Weight	Ratio W/T	Ratio L/T
MDS1	0001	0002	bifaces, complete	preform	ccs	66.2	43.2	10.6	44.6	1.69537	0.186242
MDS2	0003	0004	bifaces, complete	preform	ccs	66.8	38.2	11.2	42.1	1.424884	0.174628
MDS3	0005	0006	bifaces, complete	preform	ccs	73.5	46.8	8.9	38.8	1.577563	0.177219
MDS4	0007	0008	bifaces, complete	preform	ccs	72.2	42.8	11.2	42.1	1.688819	0.173959
MDS5	0009	0010	bifaces, complete	preform	ccs	74.4	43.3	9.9	37.7	1.448991	0.172975
MDS6	0011	0012	bifaces, complete	preform	Bear Gulch	72.6	42.3	12.4	39.3	1.716312	0.138412
MDS7	0013	0014	bifaces, complete	preform	Bear Gulch	85.4	43.2	14.1	50.5	1.978662	0.140202
MDS8	0015	0016	bifaces, complete	preform	Bear Gulch	78.1	40.6	11.8	38	1.923845	0.163021
MDS9	0017	0018	bifaces, complete	preform	Bear Gulch	77.2	40.8	13.3	41.1	1.862157	0.142057
MDS10	0019	0020	bifaces, complete	preform	Bear Gulch	77.1	43	12.6	43.1	1.793023	0.142003
MDS11	0021	0022	bifaces, complete	preform	Bear Gulch	84.1	43.9	14.8	42.1	2.066235	0.146328
MDS12	0023	0024	bifaces, complete	preform	Bear Gulch	76.1	45	10.9	48.7	1.668889	0.151109
MDS13	0025	0026	bifaces, complete	preform	Bear Gulch	67.8	39.9	8.6	26.3	1.699248	0.159787
MDS14	0027	0028	bifaces, complete	preform	Bear Gulch	77.4	46.4	13.7	47.7	1.704846	0.134441
MDS15	0029	0030	bifaces, complete	preform	Bear Gulch	86.5	47.8	15.8	56.7	1.889192	0.109721
MDS16	0031	0032	bifaces, complete	preform broken	Bear Gulch	60	46.4	10.9	29.2	1.395991	0.122977
MDS17	0033	0034	bifaces, complete	preform	Bear Gulch	76.2	38.6	13.5	38.3	2.051813	0.151866
MDS18	0035	0036	bifaces, complete	preform broken	Bear Gulch	100.8	56.3	9.1	31.1	1.786566	0.178919
MDS19	0037	0038	bifaces, complete	preform	Bear Gulch	85.7	42.6	13	43.9	2.011737	0.154749
MDS20	0039	0040	secondary flake, medial fracture	flake partial broken	Bear Gulch	100.8	56.3	9.1	31.1	1.786566	0.178919
MDS21	0041	0042	bifaces, possibly broken	flake partial	Bear Gulch	48.4	41.8	8	21.9	1.157596	0.144727
MDS22	0043	0044	bifaces, complete	flake partial	Bear Gulch	67.8	41.7	9.8	24.1	1.381599	0.146848
MDS23	0045	0046	bifaces, complete	preform	Bear Gulch	56.9	36.4	8.9	17.2	1.563187	0.176439
MDS24	0047	0048	bifaces, complete	preform	Bear Gulch	86.3	46.1	14.1	50.8	1.723566	0.127751
MDS25	0049	0050	bifaces, complete	flake partial	Bear Gulch	40.2	57.9	7.5	20.9	0.684201	0.062572
MDS26	0051	0052	secondary flake, medial fracture	flake	ccs	110	38.1	10	44.3	3.097113	0.309711
MDS27	0053	0054	bifaces, complete	preform	Bear Gulch	67.7	44	14.8	11.2	1.23962	0.103146
MDS28	1035	1036	bifaces, fragment	bifaces fragment	Bear Gulch	38.1	17.8	14.2	15.2	2.140440	0.196372
MDS29	1037	1038	bifaces, complete	bifaces, complete	Bear Gulch	40.7	17.7	14.1	34.4	2.299436	0.192036
MDS30	1039	1040	bifaces, complete	flake partial	Bear Gulch	45.3	18.6	12.4	34	2.448849	0.191472
MDS31	1042	1043	conchoidal secondary flake	flake partial	Bear Gulch	40.7	17.7	14.1	34.4	2.299436	0.192036
MDS32	1044	1045	bifaces, complete	preform	Bear Gulch	43.7	18.2	13.3	33.7	2.401596	0.192034
MDS33	1046	1047	bifaces, complete	preform	Bear Gulch	49	22.7	19.8	36.2	2.022179	0.164873
MDS34	1048	1049	bifaces, complete	flake partial	Bear Gulch	34.9	19.7	13.7	22	2.22293	0.162268
MDS35	1050	1051	bifaces, complete	flake partial	Bear Gulch	50.9	14.3	15.8	34.4	3.596441	0.20878
MDS36	1063	1064	bifaces, complete	preform	Bear Gulch	51.1	22.8	16	30.7	2.271111	0.141444
MDS37	1066	1068	bifaces, complete	preform	Bear Gulch	66.4	32.4	13	58.9	1.670913	0.120287
MDS38	1067	1068	bifaces, complete	preform	Bear Gulch	56.2	30	8.7	22.6	1.561111	0.179438
MDS39	1069	1069	uniface blade	preform fragment	ccs	46.8	30.2	9.9	12.8	1.549699	0.160532
MDS40	1091	1092	bifaces, complete	preform broken	ccs	49.8	37.8	8.7	28.9	1.670913	0.120287
MDS41	1093	1094	bifaces, proximal fragment	bifaces fragment	Bear Gulch	67.3	10.5	50.5	34.1	1.89292	0.134803
MDS42	1095	1096	bifaces, complete	preform	Bear Gulch	72	46.2	11.9	27.3	1.66942	0.130003
MDS43	1096	1099	bifaces, complete	preform	Bear Gulch	76.8	45.9	10.3	38.9	1.668846	0.162024
MDS44	1010	1011	bifaces, complete	preform	Bear Gulch	75	42.3	11.1	38.1	1.777781	0.146165
MDS45	1072	1073	bifaces, complete	preform	Bear Gulch	61.2	42.1	14.3	36.1	2.166271	0.151487
MDS46	1074	1075	bifaces, complete	flake partial	Bear Gulch	60.7	40.9	12.9	23.9	1.532027	0.158665
MDS47	1076	1077	bifaces, complete	preform	Bear Gulch	43.1	41.9	11.6	41.9	1.648665	0.156475
MDS48	1078	1079	bifaces, complete	preform	Bear Gulch	67.8	42.3	12.9	35.1	1.602827	0.124251
MDS49	1080	1081	bifaces, complete	preform	Bear Gulch	66.2	44.1	10.9	31.1	1.569181	0.134966
MDS50	1082	1083	bifaces, complete	preform	Bear Gulch	77.2	43.1	11.6	37.1	1.670534	0.144912
MDS51	1084	1085	bifaces, complete	preform	Bear Gulch	76.6	43.3	12.9	40.1	1.709653	0.137136
MDS52	1086	1087	bifaces, complete	flake partial	Bear Gulch	66.2	38.1	9.3	23.3	1.737833	0.188831
MDS53	1088	1089	bifaces, complete	bifaces fragment	Bear Gulch	56.3	40.4	8.3	21.4	1.303564	0.167596
MDS54	1090	1091	bifaces, complete	preform	Bear Gulch	68.4	45.5	11.3	31.1	1.49045	0.139194
MDS55	1092	1093	bifaces, complete	preform	Bear Gulch	68.4	45.5	11.3	31.1	1.49045	0.139194
MDS56	1094	1095	bifaces, complete	preform	Bear Gulch	68.4	45.5	11.3	31.1	1.49045	0.139194
MDS57	1096	1097	bifaces, complete	flake partial	Bear Gulch	79.9	39.9	10.5	30.2	1.894727	0.188451
MDS58	1098	1099	bifaces, complete	preform	Bear Gulch	72.1	41.6	10.9	37.9	1.616962	0.146511
MDS59	1100	1101	bifaces, complete	preform	Bear Gulch	69.4	47.7	12.8	42.5	1.484827	0.137698
MDS60	1103	1104	bifaces, complete	preform	Bear Gulch	66.8	40.3	8.6	28.2	1.637542	0.170079
MDS61	1105	1106	bifaces, complete	preform	Bear Gulch	67.6	38.9	12.8	32.8	1.79219	0.137716
MDS62	1107	1108	bifaces, complete	preform	Bear Gulch	71.6	42.2	10.6	36.3	1.898462	0.134857
MDS63	1109	1110	bifaces, complete	preform	Bear Gulch	66.1	38.2	9.3	23	1.730386	0.186061
MDS64	1111	1112	bifaces, complete	preform	Bear Gulch	71.6	42.2	10.6	36.3	1.898462	0.134857
MDS65	1113	1116	bifaces, complete	preform	Bear Gulch	84.5	47.9	14.9	56.2	1.764692	0.118396
MDS66	1117	1118	bifaces, complete	preform	Bear Gulch	67.7	44.1	9.7	39.8	1.529147	0.186203
MDS67	1120	1121	bifaces, complete	preform	Bear Gulch	64.1	40.3	10.3	35.1	0.971631	0.084333
MDS68	1123	1124	bifaces, partial	flake partial	Bear Gulch	64.1	39.8	10.7	25.1	1.010263	0.09519
MDS69	1125	1126	bifaces, complete	preform	Bear Gulch	70.3	44.2	11.8	46	1.207448	0.109669
MDS70	1127	1128	bifaces, complete	flake partial	Bear Gulch	67.1	41.8	11.7	33.9	1.612881	0.137962
MDS71	1129	1130	bifaces, complete	flake partial	Bear Gulch	64.2	38.5	8.8	28.2	1.671632	0.173791
MDS72	1131	1132	bifaces, complete	preform	Bear Gulch	77.6	40.4	10.4	41.6	1.618317	0.184454
MDS73	1133	1134	bifaces, complete	preform	Bear Gulch	71.9	42.9	12.6	39.1	1.678941	0.144678
MDS74	1135	1136	bifaces, complete	preform	Bear Gulch	61.4	42.4	11.8	29.3	1.448113	0.124837
MDS75	1137	1138	bifaces, complete	preform	Bear Gulch	70.3	38.9	11.8	33.2	1.701895	0.146174
MDS76	1139	1140	bifaces, complete	preform	Bear Gulch						