

APPENDIX 5: DUNASBROC 2005: STONE ARTEFACTS REPORT *by Chris Barrowman*

5.1 Discussion

A total of 28 stones were recovered from the excavation at Dunasbroc, and all are pebbles from local stone types (Lewisian gneiss, sandstone, quartz and quartzite; [table 10](#)). These types are all available from the immediate vicinity.

Although the majority of the stones show no alteration or damage, there are four stones which show signs of edge damage (SFs 039, 081, 140 and 155). This consists of small peck marks, the result of using the stones for light hammering, such as knapping

lithics. This damage varies from slight pecking along the edges of an oval-shaped stone (SF155), through to light pecking on one end of an elongated stone (SF039), and pecking on both ends of a similar elongated stone (SF081). Stone SF140 shows the most alteration, with both ends heavily pecked and worn through longer term use. This quartzite stone is unlike the other three in that it has an irregular morphology (shaped like an hourglass), and the waist shows signs of polish, possibly through handling rather than rubbing.

Polished surfaces are present on two examples

Table 10 Dunasbroc 2005 stone artefacts catalogue

Trench	Context	Find No.	L × W × B (mm)	Stone type	Description
1	004	117	70 × 43 × 33	Gneiss	Heat-cracked pebble
1	012	155	102 × 79 × 54	Sandstone	Pebble, slight edge damage
1	008	161	32 × 25 × 18	Sandstone	Pebble, no damage
1	008	163	110 × 79 × 49	Sandstone	Pebble, no damage
1	004	039	94 × 59 × 27	Sandstone	Pebble, slight pecking on one end
1	004	040	97 × 82 × 36	Sandstone	Pebble, no damage
1	004	120	73 × 55 × 25	Quartz	Pebble, no damage
2	006	140	45 × 36 × 32	Quartzite	Irregular shaped pebble with uniform pecked damage at both ends. Smooth waist possibly through handling.
2	006	136	67 × 63 × 24	Gneiss	Pebble, no damage
2	006	136b	34 × 20 × 11	Gneiss	Pebble with flake removal, no damage
2	006	065	42 × 37 × 16	Gneiss	Pebble, polished on one surface
1	004	123	55 × 40 × 28	Quartz	Pebble, no damage
2	006	064	46 × 34 × 20	Quartz	Pebble, no damage
2	006	124	54 × 52 × 53	Gneiss	Heat cracked pebble
2	006	063	35 × 35 × 15	Gneiss	Pebble, polished one surface
2	006	077	59 × 36 × 20	Gneiss	Pebble, no damage
2	006	153	41 × 29 × 18	Gneiss	Pebble, no damage
1	004	159	34 × 32 × 19	Quartz	Pebble, no damage
2	006	081	37 × 32 × 28	Quartzite	Pebble, pecked damage on both ends
2	006	105	19 × 19 × 3	Sandstone	Flake, no edge damage
2	006	085	32 × 30 × 16	Gneiss	Pebble, water worn, no damage
1	004	118	37 × 34 × 30	Gneiss	Heat cracked stone
1	004	118b	26 × 21 × 20	Quartz	Heat cracked stone
1	004	116	51 × 50 × 43	Gneiss	Heat cracked stone
1	002	041	56 × 37 × 24	Sandstone	Pebble, no damage
2	006	062	30 × 22 × 14	Gneiss	Pebble, water worn, no damage
2	006	076	45 × 40 × 17	Quartzite	Pebble, no damage
1	002	031	29 × 21 × 12	Gneiss	Heat cracked stone

Table 11 Stone from STAC 2003/ 2004, surface finds

Site	Find No.	L × W × B (mm)	Stone type	Description
Dun Arnistean 2004	10	113 × 52 × 37	Gneiss, high feldspar content	Elongated hammer stone with uniform pecked damage at both ends
Dun Arnistean 2004	12	97 × 50 × 29	Gneiss	Smooth beach pebble, no obvious damage
Dun Arnistean 2004	15	41 × 31 × 27	Gneiss	Small round beach pebble with possible polish on one end
Dun Arnistean 2004	20	28 × 24 × 20	Sandstone, coarse grained	Natural pebble, no damage visible
Dun Arnistean 2004	55	88 × 73 × 32	Gneiss	Heart-shaped beach pebble. No obvious damage or polish.
Dun Arnistean 2004	57	125 × 49 × 32	Gneiss, mostly feldspar with white bands running lengthways	Elongated hammer stone, with uniform pecking both ends. Flake scar on widest end.
Dun Arnistean 2004	59	44 × 35 × 18	Sandstone, fine grained	Natural pebble
Dun Arnistean 2004	62	179 × 120 × 24	Sandstone	Large flaked pebble, with edge damage distal end and a third of either side at same end
Dun Arnistean 2004	63	137 × 88 × 48	Gneiss	Natural irregular shaped pebble, no damage
Dun Arnistean 2004	67	101 × 80 × 29	Gneiss	Natural pebble, no damage
Dun Arnistean	70	142 × 91 × 20	Gneiss	Natural pebble, large break at one end, probably natural damage
Dun Arnistean 2004	75	111 × 80 × 58	Gneiss	Natural pebble, no damage
Dun Arnistean 2004	78	46 × 25 × 11	Gneiss	Small fragment, natural
Dun Arnistean 2004	81	49 × 39 × 24	Gneiss	Small pebble, high polish on one face
Dun Arnistean 2004	82	77 × 32 × 17	Gneiss	Elongated pebble, slight abrasion on one end
Luchruban 2003	WE1068/ SMR 457	99 × 73 × 68	Gneiss	Coarse rubbing stone. Irregular shaped pebble, heavy abrasion from rubbing/pecking on both ends and around whole circumference.
Stac a Chasteil 2004	1	114 × 85 × 53	Gneiss	Irregular shaped pebble, heavy abrasion on both ends. Faces flaking off through onion-skin weathering
Dunasbroc 2004	11	113 × 48 × 36	Sandstone	Elongated pebble with slight abrasion on either end
Dunasbroc 2004	13	282 × 222 × 50	Gneiss, green	Large oval beach stone, with one perfectly flat surface which has been ground flat. Opposite face has slight depression through grinding and polish. Natural abrasion present along edges, flakes have been split off one end from flat surface.

(SF063 and SF065), this is visible on only one surface of both stones, and may be the result of bur-nishing unfired pottery, leather or wood. The stones were recovered from the same context (006).

There are six fragments of stone which have undergone fire-cracking (SFs 117, 124, 118, 118b, 116 and 031). Four of these are from Context 004, one from 002 and the other from 006.

5.2 Contextual analysis

The natural, undamaged pebbles were recovered from Context 004 in Trench 1 and Context 006

in Trench 2. Three of the used pebbles were also recovered from these contexts, SF081 and SF140 which show damage on both ends were from Context 006 in Trench 2, and SF039 which has damage on one end was from Context 004 in Trench 1. The pebble with slight edge damage along its sides (SF155) was recovered from Context 012 in Trench 1. It is interesting to note that the two pebbles showing signs of most wear come from Context 006, where the majority of the other artefacts were recovered. The two stones which have evidence of polish (SF063 and SF065) were also found in this context.

Four of the fire-cracked stones came from Context 004 in Trench 1, supporting the hypothesis that this

context is the result of 'indirect or secondary consequences of burning' (McHardy 2005b), 17). The remaining two were recovered from Contexts 002 and 006.

Two coarse stone tool surface finds were recovered in 2004; these are discussed below.

5.3 Stone from STAC 2003/2004

The stone surface finds from the STAC sites surveyed in 2003 and 2004 are similar in nature and form to the assemblage from the Dunasbroc 2005 excavations (table 11). They are all based on either Lewisian gneiss or sandstone, and are mainly natural beach pebbles.

The utilised stones consist of a small range of types. The examples from Dun Arnistean consist of three elongated hammer stones, two of which (SF10 and SF57) have been used for end-on hammering of a hard material, possibly quartz. The pecking and resultant damage on either end of both stones has left an almost flat end. The third stone has slight abrasion but has not been used to the same extent (SF82).

There are two smaller, round pebbles (SF15 and SF81), both of which have one surface polished, the result of burnishing leather-hard pottery, leather or similar material. Finally, a large flake of sandstone, akin to a crude knife or simple chopping tool, has heavy edge damage along its end and lateral edges.

A heavily abraded, irregularly shaped pebble of

Table 12

Coarse mineral material (<10µm)																
Context	Slide	Thin section zone	Quartz	Feldspar	Biotite	Gamet	Hornblende	Olivine	Compound	Sandstone	Siltstone	Phytoliths	Diatoms	Bone	Rubified material	Fine mineral material
'Natural'	3		***	**	***		t	t	*	*		t				Light brown, dominantly mineral, heterogeneous.
5	2	2/a	***	*	*		t		t	**		t				* Light brown, organo- mineral, heterogeneous. Heated.
		2/b	***	***	***		*	t		*	*	t				** Mid to dark brown, dominantly mineral, heterogeneous. Heated.
		2/c	***	***	**	t	*	*	t	*		t				* Light brown, organo-mineral, heterogeneous.
		2/d	****	***	***		t		**	*						t Light to dark brown, organo-mineral, heterogeneous.
	3	3/a	**	**	*											* Light brown, organo-mineral, heterogeneous. Strongly heated.
		3/b	***	***	*		*	t	*	*	t					* Mid to dark brown, organo-mineral, heterogeneous. Strongly heated.
		Lens 3/c	**	*	**											t Light brown, organo-mineral, heterogeneous. Strongly heated.

Frequency class refers to the appropriate area of section (Bullock et al 1985): t Trace; * Very few; ** Few; *** Frequent/common; **** Dominant/Very dominant

Frequency class for textural pedofeatures (Bullock et al 1985): t Trace; * Rare; ** Occasional; *** Many

Lewisian gneiss was recovered from Luchruban (WE1068/SMR457). This has been subject to rubbing and pounding, the resultant wear and abrasion forms a band approximately 20mm wide along its entire circumference. A similar stone tool was recovered from Stac a' Chaisteal, although the heavy abrasion is restricted to either end in this case.

Two coarse stone tool surface finds were recovered from Dunasbroc in 2004. The first is an elongated pebble (SF11) with slight edge damage on either end, although this has not been utilised for heavy work. The second find is very unusual and no known parallel has been found in the archaeological record. It is a very large beach pebble of gneiss with one

completely flat surface. The degree of working and grinding involved to form such an even and flat surface would have been comparable to that shown through stone axe-polishing. It is difficult to imagine the function of this piece, some form of working platform for the preparation of skins or leather, or wood-working may be a possibility. A baking stone cannot be ruled out, although there are no signs of burning. It may be that the end function of the piece is irrelevant, and it is the working and forming of the stone itself which was significant. The amount of work involved to shape it would certainly give it a high value, and imbue the artefact with strong symbolic references.

Micromorphology of Slide 2 from Dunasbroc

Coarse organic material		Fine organic material						Pedofeatures						Microstructure	Coarse material arrangement	Groundmass b-fabric	Related distribution	
Fungal spores	Lignified tissue	Parenchymatic tissue	Charcoal	Cell residue	Amorphous (black)	Amorphous (brown)	Amorphous (yellow-orange)	Amorphous (inclusions)	Organic costings	Clay costings	Clay infills	Silt infills	Amorphous					Depletion
		t		t	t										Intergrain microaggregate to compact grain	Random basic. Poorly sorted	Weakly stipple-speckled. Occasional granostriation.	Close to single-spaced porphyric
t	*		t	*		t					t	*			Intergrain microaggregate	Random basic. Poorly sorted.	Weakly stipple-speckled	Close to single-spaced porphyric
t	*		t	t							t				Intergrain microaggregate	Random basic. Poorly sorted.	Mosaic to cross-striated	Monic to close porphyric
t	*			t	t										Intergrain microaggregate	Random basic. Poorly sorted.	Cross-striated	Close to single-spaced porphyric
t	*				t	t	t	t	t	t				t	Intergrain microaggregate to compact grain	Random basic. Poorly sorted.	Cross-striated	Monic to close porphyric
*	**		*	t										**	Intergrain microaggregate	Random basic. Poorly sorted.	Stipple-speckled	Porphyric
*	*				t	t					t			*	Intergrain microaggregate	Random basic. Poorly sorted.	Weakly stipple-speckled. Occasional granostriation	Porphyric
		t			t										Intergrain microaggregate	Random basic. Sorted.	Mosaic to cross-striated. Occasional granostriation	Open porphyric