

Buur Meadow 1, a L.S.A. Site in the Middle Juba Valley (Southern Somalia)

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Introduction

The town of Luuq, in the Middle Juba Valley, lies in a flat area at c. 150 m. above sea level. The river meanders widely (Fig. 1), and has deposited alluviums of Quaternary age over most of this part of the valley. In the surroundings of the modern town, large extensions of gypsum in thick beds, of Lower Cretaceous age, are also found.

South-East of Luuq, on the left bank of the river, gravels, sands and finer materials, which are presumably the older continental Pleistocene units, are capped by basalts possibly 2 MY old. The area underwent a marked down-cutting, and the whole continental sequence is now found as residual hills (Coltorti, personal communication).

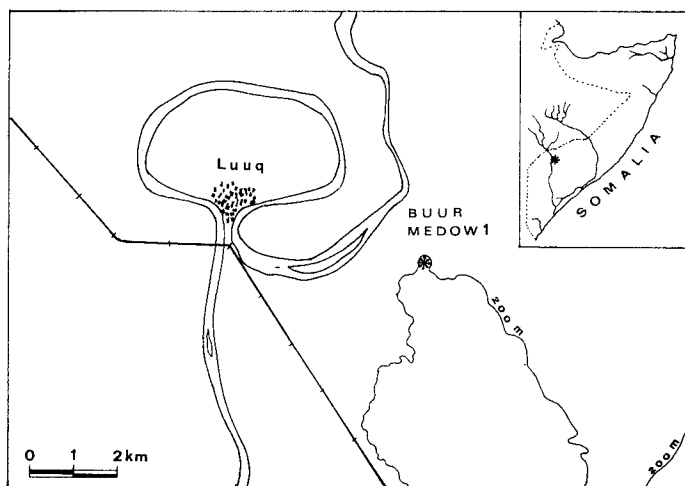


Fig. 1 - Location of Buur Meadow 1.

L.S.A. industries have been collected and excavated in several sites on the residual hills: Buur Meadow, Buur Ad, Buur Heelo Shiid, Buur Matacno North. The stone tools were almost always laying directly on the bed-rock: a surface weathered layer was rarely found. Small hills, with a flat top, a few hundred meters wide, were apparently the preferred ones. Stone implements are also found on the basaltic plateaux. However, concentrations were never noticed.

Apparently, the area close to the river was preferred by Late Stone Age groups. A brief survey of the hills further away from the Juba gave no result. This point shall be tested by further research.

Buur Meadow 1 Industry

Buur Meadow 1 is a site less than two Km. away from present-day river-bed. From the top of the small hill where the site is located, there is a magnificent view of the surroundings, for miles and miles. On the flanks of the small mound, eroding pebbles of flint and chert can easily be collected. On the top of Buur Meadow, grasses and scattered bushes are sometimes looked for by modern shepherds and woodcutters.

A grid of 5×5 m. was laid down, and subsequently enlarged to the West and the North, up to an area of 36 m^2 . The stones which littered the surface were first stripped out. Then, all the stone implements were collected, square meter by square meter. As the site was very windy, most of the area underwent a second collection, in a subsequent day, after the wind had cleaned out the dust.

At Buur Meadow, the basalt which caps the hill is covered by a thin weathered layer. Five square meters were therefore excavated to the bed-rock. The maximum depth was of about 20 cm., but it was evident that stone tools were found mostly in the first 5 to 10 cm.

In squares C2 and C3, with a particularly high density of implements, a large blackish patch was noticed, 1 to 2 cm. below the surface: the evidence was very quickly wiped out by the wind, and it was therefore not possible to take any picture. Samples were taken for laboratory analysis. It could have been an hearth.

Before leaving the site, further surface collections were done, without stripping out the stones, in areas labelled as α , β , γ , δ , and in the surroundings of the grid, mainly to the south.

In the grid area, 3358 lithic products were collected. They include fragments, chips, tools, *débitage*, as well as a few unmodified or scarcely modified pebbles: 3220 were made out of flint and chert, 117 out of quartz elements, and 21 out of other raw material.

Cores were 115: 57 flake cores (25 with a single striking platform, 4 with two platforms, 13 subcircular, 15 globular), 19 bladelet cores (7 with a single striking platform, and 12 with two opposed platforms), and 39 unidentified residual cores.

Rejuvenation flakes and blades were 148: 76 core flanks, 11 core platforms, 37 *lames à crête* (including edges of core platforms), 21 *fonds de nucléus*. It means that each core generally underwent a rejuvenation process two to three times. Apparently, the knapping was therefore at least partially done on the spot, and re-fitting flakes were actually found.

Plain flakes (i.e. more than 10 mm. long) were 780. Plain bladelets (i.e. less than 50 mm. long) 293, while no true unretouched blade was found. There is

a ratio of 2.7 flakes for each bladelet, which is similar to the ratio of 3 flake cores for each bladelet core. It should be stressed, however, that some cores were re-used to make end-scrapers or other tools, and cores are therefore under-represented.

The typological study was done following Tixier's « Typologie de l'Épipaléolithique du Maghreb », as translated into English by Newcomer (Tixier 1974). Several types were redundant: our industry is scarcely laminar, microburin technique was never used, composite tools are rarely if ever found, burins are totally lacking (a single burin spall might imply the use of some burins, which were not actually found). On the other hand, we had to include under the heading « Miscellaneous tools » well-defined types which are probably typical of these kinds of industries. We also preferred to split in two types such as « Single end-scraper on a flake » and « Thumb-nail scraper », which in the Maghreb are lumped together: we still do not know much about L.S.A. typology in Somalia, but thumb-nail scrapers are possibly important. However, Tixier's list gave a useful base of well-defined types, which easily fitted most of our finds (Table 1).

The surface collection outside the grid was taken into account only for typological study, while frequencies were calculated separately for the collection made by excavation and by controlled surface collection. The former included 150 tools, the latter 122 tools. The frequencies of the general typological classes, however, were found to be similar (Table 2).

Fauna

Animal remains are very scanty. A few ostrich eggshell fragments were found both during surface collection and during excavation. In the excavated area, a fragment of a tooth of an undetermined ruminant Artiodactyl should be recorded. It belongs to a small to medium sized individual. Some fossilized land-snails (*Cyclostoma sulcatus*) were also found.

Conclusions

We tentatively attribute Buur Medow 1, as well as the other L.S.A. sites surrounding Luuq, to the wet phase which is known to have occurred in the Horn, as in other parts of Africa, at the beginning of the Holocene: there were some climatic fluctuations but, roughly speaking, the period from 10.000 BP to 4.000 or 3.000 BP was more humid than today.

This can be seen in the fluctuations of water level in Kenya Rift Valley lakes (Tiercelin *et al.* 1981), in Ethiopian Rift Valley lakes (Lezine 1982; Street 1975-77), in Djibouti Rift Valley lakes (Fontes *et al.* 1973), as well as in some evidence coming from Somalia itself (Brandt and Brook 1984, Mussi 1974-1975).

The present average rainfall at Luuq is around 300 mm. per year, and the vegetation, consequently, is a thin xerophilous open woodland (Pichi-Sermolli 1957). Close to the river, there was once a forest-gallery, probably dominated by *Hyphaene benadirensis*, which is a palm-tree. It has now almost completely disappeared, due to human activity.

It should be stressed that an increase of 50%, or even 100% in average annual rainfall (which sounds quite unrealistic) would just mean a shift from « thin xerophilous open woodland » to plain « xerophilous open woodland » in Pichi-

Table 1
Buur Meadow 1

	A	%	B	%	C
1 Single end-scraper on a flake	4	2.7	4	3.3	6
1 Thumb-nail scraper	3	2	1	0.8	1
2 End-scraper on a retouched flake	—	—	1	0.8	1
4 Core-like end-scraper	7	4.7	3	2.6	—
5 Denticulated end-scraper	2	1.3	4	3.3	2
6 Shouldered end-scraper	1	0.7	3	2.6	3
6 Nosed end-scraper	1	0.7	3	2.6	1
7 End-scraper on a notched piece	3	2	2	1.6	—
8 Single end-scraper on a blade or bladelet	—	—	1	0.8	—
11 Double end-scraper	2	1.3	—	—	—
12 Single piercer	9	6	6	4.9	5
12 Double piercer	2	1.3	—	—	—
15 Large « Capsian » piercer	—	—	3	2.6	2
34 Backed flake	2	1.3	5	4.1	6
37 Curved backed blade	—	—	—	—	1
40 Obtuse ended backed blade	2	1.3	—	—	—
42 Fragment of a backed blade	7	4.7	4	3.3	1
— Miscellaneous backed tools	1	0.7	—	—	3
47 Pointed straight b.bl. with truncated base	—	—	1	0.8	—
55 Bladelet with curved backed end	—	—	3	2.6	1
56 Curved backed bladelet	2	1.3	1	0.8	1
63 Partially backed bladelet	—	—	1	0.8	—
64 Shouldered bladelet	—	—	1	0.8	—
66 Fragment of a backed bladelet	11	7.3	7	5.7	2
72 Fragment of bl. with Ouchtata retouch	—	—	2	1.6	—
73 Large notched or strangulated piece	—	—	1	0.8	1
74 Notched flake	11	7.3	11	9	9
75 Denticulated flake	29	19.3	23	18.9	25
76 Notched blade or bladelet	4	2.7	4	3.3	1
77 Denticulated blade or bladelet	8	5.3	3	2.6	—
78 Saw	1	0.7	1	0.8	—
80 Truncated piece	21	14	11	9	9
82 Segment	1	0.7	—	—	2
93 Triangle with one side convex	2	1.3	—	—	—
104 Splintered piece	4	2.7	2	1.6	1
105 Piece with continuous retouch	7	4.7	6	4.9	2
106 Side-scraper	1	0.7	—	—	7
112 Miscellaneous	—	—	2	1.6	1
112 Miscellaneous bifacial tools	2	1.3	2	1.6	5
Tot.	150	100	122	99.5	99

A: Excavated tools

B: Controlled surface collection

C: Uncontrolled surface collection

Sermolli's classification of the vegetation of the Horn (Pichi-Sermolli 1957). The difference lies in higher tree density in the latter, as well as in slightly different botanical species, but the overall similarities are great.

We do not think, therefore, that the apparently high frequency of L.S.A. groups in the Middle Juba Valley can be simply connected with a more favourable climate:

Table 2

Buur Medow 1

	A	B
End-scrapers	15.4%	18.4%
Piercers	7.3%	6.5%
Backed flakes and blades	8 %	7.4%
Backed bladelets	8.6%	13.1%
Geometric microliths	2 %	—
Notches and denticulates	35.3%	35.4%
Truncations	14 %	9 %
Various tools	9.4%	9.7%

A: Excavated tools

B: Controlled surface collection

overall resources were probably not very different from today. However, the forest close to the river was more developed than now, and we tentatively connect the fine bifacial tools, small picks, large notched pieces, and possibly smaller notched and denticulated flakes, which are so characteristic of Buur Medow 1 industry, with woodworking (Fig. 2).

On the other hand, there is no clue to a possibly food-producing economy in the preserved archaeological remains: no pot-herd, no grinding stone, no sickle gloss on stone tools, no stable dwelling. The location itself of the L.S.A. sites on the top of small hills looks definitely more likely for hunter-gatherer than for farmers sites. Backed bladelets and geometric microliths should have been hafted as the points or barbs of spears, harpoons, arrows, and used for hunting or fishing.

The apparently preferred location of sites close to the river, and the typological peculiarities of the industry, suggest that the human group who lived at Buur Medow 1 was mainly interested in the resources available close to the river bed: we suggest plant resources, including wood as a raw material, as well as animal resources.

This hypothesis should be tested by more comprehensive surveys, as well as by wear trace study. If confirmed, it would connect L.S.A. occupation of the valley with the knowledge of a rather sophisticated technology, which made possible to take advantage of a peculiar ecological niche.

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Drawings by Patrizia Gioia and Dario Terzi.

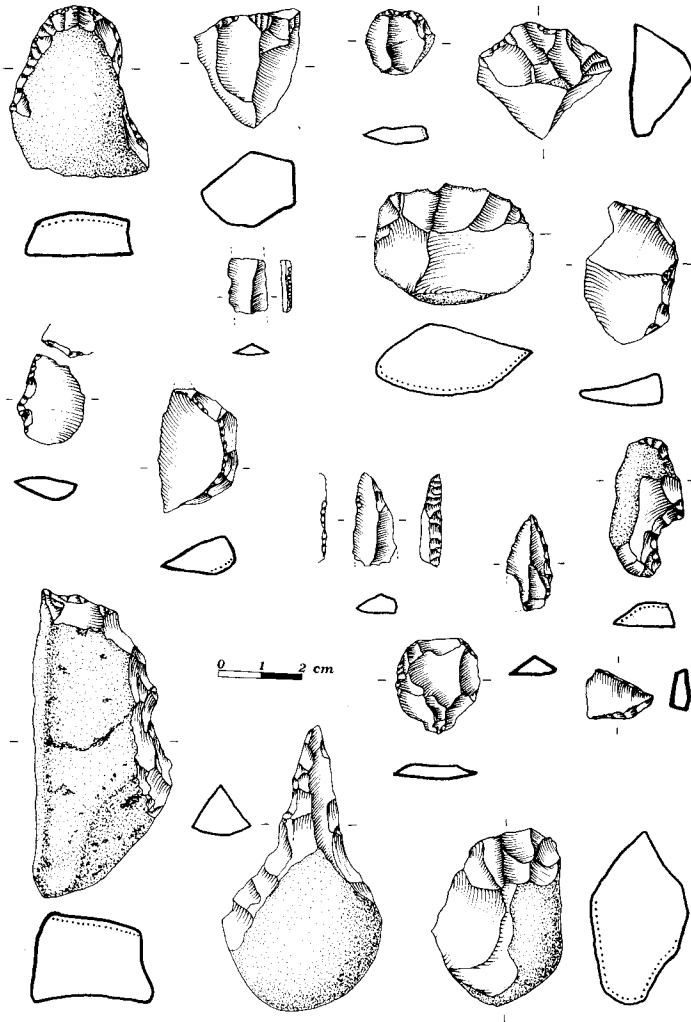


Fig. 2 - Buur Medow 1 lithic industry

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