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The Lithic Traditions of Late-Pleistocene settlement at Affad, Sudan

Introduction

The results of preliminary excavations at palaeolithic site Affad 23 have been presented at the symposium Archaeology of the Earliest Northeastern Africa, Poznan in 2003 and later on during some other occasions. It was published in the final form in 2011 (Osypiński, Osypińska, Gautier 2011). One of the works impact was initiating a new research project[1] focused on a possibly completed description of the late-pleistocene settlement near Affad and its contexts. Survey done in February 2012 let to complete data from previous research in the area – Southern Dongola Reach Survey (Żurawski 2003). One of the main aims of the new project is to determine the relative and absolute chronology of Affad sites occurring on the same stratigraphic level (surface of riverine late-pleistocene terrace) and containing lithics with very similar technological and stylistic features.

Lithic production in Affad 23

Analysis of the lithic artefacts collected in 2003, point to the workshop character of the assemblage. Refittings of numerous cortical flakes and their dispertion marked relics of the initial knapping activities using chert pebbles as a raw material, collected in the nearest vicinity. Technological attributes of

1 Project „Levallois Tradition Epigons in the Middle Nile Valley" financed by the Polish National Center for Science, research grant DEC-2011/01/D/HS3/04125. www.archeosudan.org

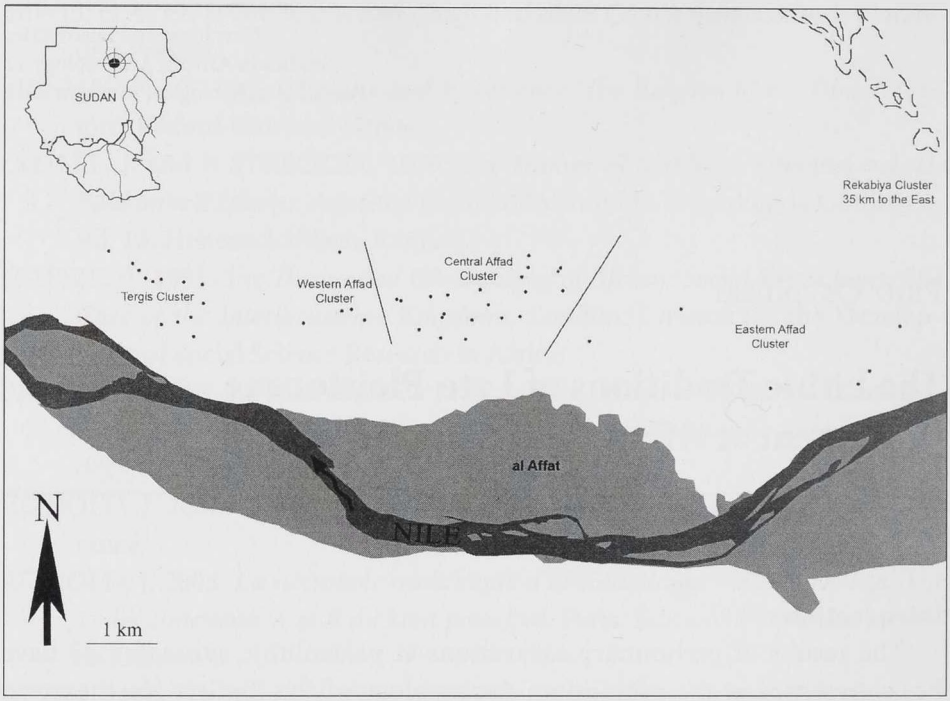

Fig. 1. Late-Pleistocene sites at Affad. Location of sites visited in 2012.

the assemblage were related with discoidal – flake oriented methods. Levallois flakes were used as a blank for burins production, but most of recorded flakes wasn't retouched at all. However, refitted pieces didn't mark the stage of predestined flake or point production. Presence of such a gap let to consider the assemblage to be remnants of few visits in short time span with different motives. Initial raw material working was not related directly to using (and abandoning) the tools.

What is more the absolute age of Affad 23 was problematic. Technological analysis excluded link to blade traditions typical for late-pleistocene inventories of Old World. However, presence of few burins and lack of bifacial items had been the elements recalling the latest flake-oriented industries of Nubian Nile Valley (Khormusan). Moreover the occurrence in the upper parts of silt terrace pointed to the relation with one of the youngest Nile aggradation stage (Late-Middle Palaeolithic Aggradation – according to Schild and Wendorf 2010 dated to early MIS4, but maybe even younger one – dated to MIS3?). Such a long term surviving of levallois tradition in the area between 3rd and 4th Cataracts should be taken under consideration.

Palaeolithic sites revisited in 2012

The main aim of the survey in February 2012 was the recognition of the lithic traditions present at sites surrounding Affad. Artifacts collected during SDRS usually didn't represent typical tools or technologically distinctive elements. Only the next prospection of these sites surfaces made the ability to complete valuable set of artifacts. Also contextual data needed completing especially in term of description of primary/secondary artifacts deposition sediment.

In total 52 locations were revisited (Fig. 1). All produced some palaeolithic artifacts during SDRS. The sites were located in 5 clusters reflecting different states of deposition levels preservation. Although most of them presented much worse state of preservation than Affad 23, usually allowing collecting representative lithics. Identification of lithic traditions known from Nubian Nile Valley and in general – northeastern Africa was possible basing on these collections.

Single elements – Mousterian and bifacial pieces, originate from early stage of Middle Palaeolithic (Nubian Middle Stone Age) among artifacts collected during 2012 survey. All these represented technological traditions basing on big flakes production (often elongated) of ferruginous sandstone. Tool set didn't include endscrapers, burins or perforators restricting to denticulate and notched forms. There was also no evidence of levallois points production using Nubian Methods. Those inventories reflects presence of Nubian Mousterian tradition noticed in Nubia (down the 2 Cataract – Wendorf, 1968), on Sai Island (Van Peer 1991) and at another parts of Nile Valley, however known from surface finds mostly (Osypiński in print; Wąs 2006, Paner and Pudło 2010). Similarly Affad finds of that type came from secondary context.

The core-tools found near Affad didn't fit to the definition of bifacial works too (shaped at two faces simultanously and symetrical in crossection). Beside published artifact from Affad 23 (Osypiński *et al*, 2011, Fig.6a), in 2012 were recorded one more atypical point (Fig. 2:a). It was performed on big discoidal core with crude work on two opposite side edges never modifying old flaking surface. It resulted with shaping elongated tool, triangular in crossection. The size of blank (discoidal core of ferruginous sandstone) point to the origin related to earlier tradition than most of another Affad lithics, however reutilization can not to be excluded (both blank or finished form). The artifact was found within silt deposit rich in quartz pebbles, toghether with hippo bones and most probably it wasn't redeposited.

Next bifacial piece (Fig. 2:b) was found some 35km to the east of Affad and was much smaller and regular in shape (leaf point). Unfortunately its production schema is not clear – also reusing the older tool could not be excluded. The find came from sandy surface cover so it's hard to define its primary context.

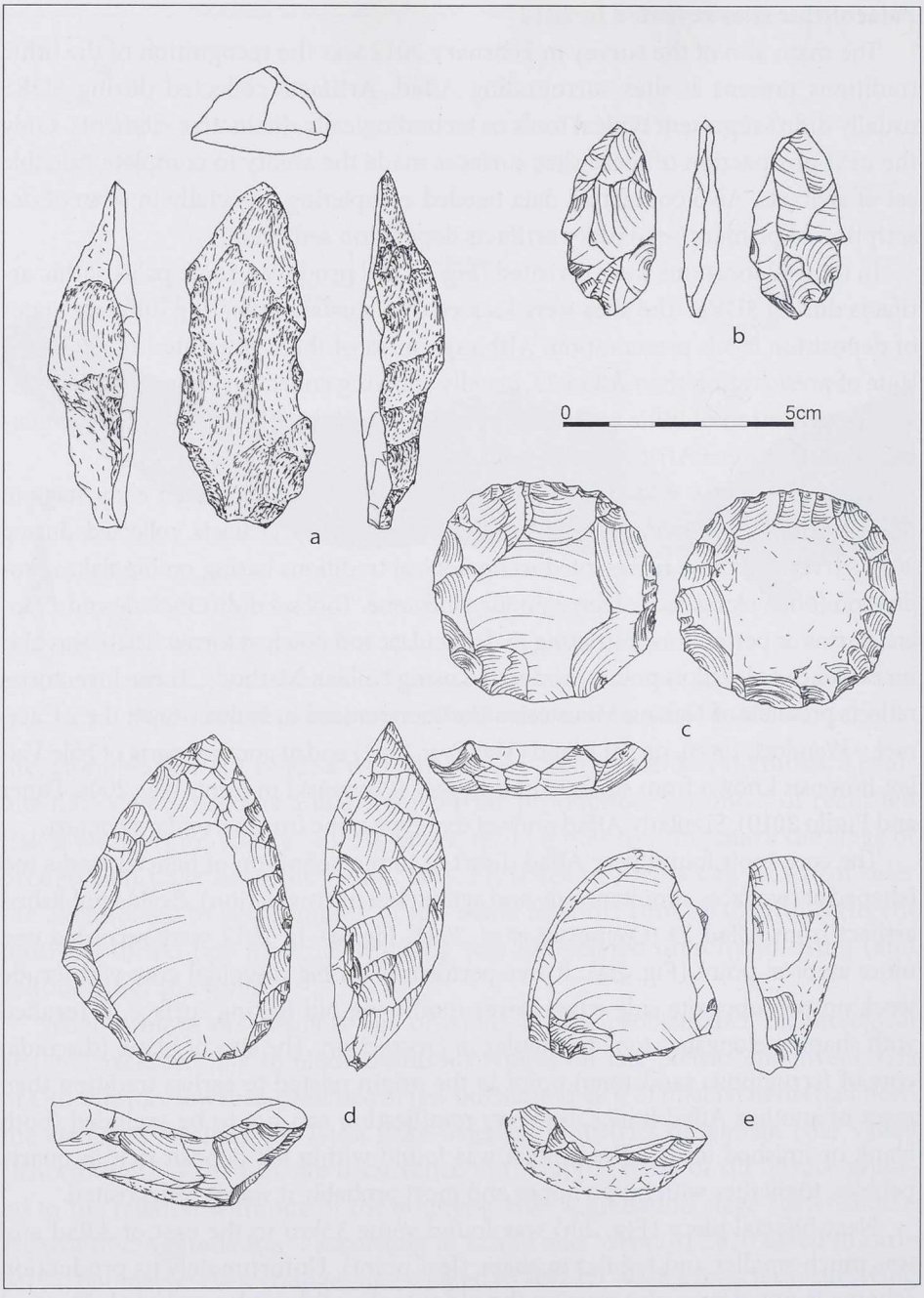

Fig.2. Middle Palaeolithic core-forms (a-point made of discoidal core; b-leaf point; c-levallois flake core; d-levallois Nubian II point core; e-levallois classic point core).

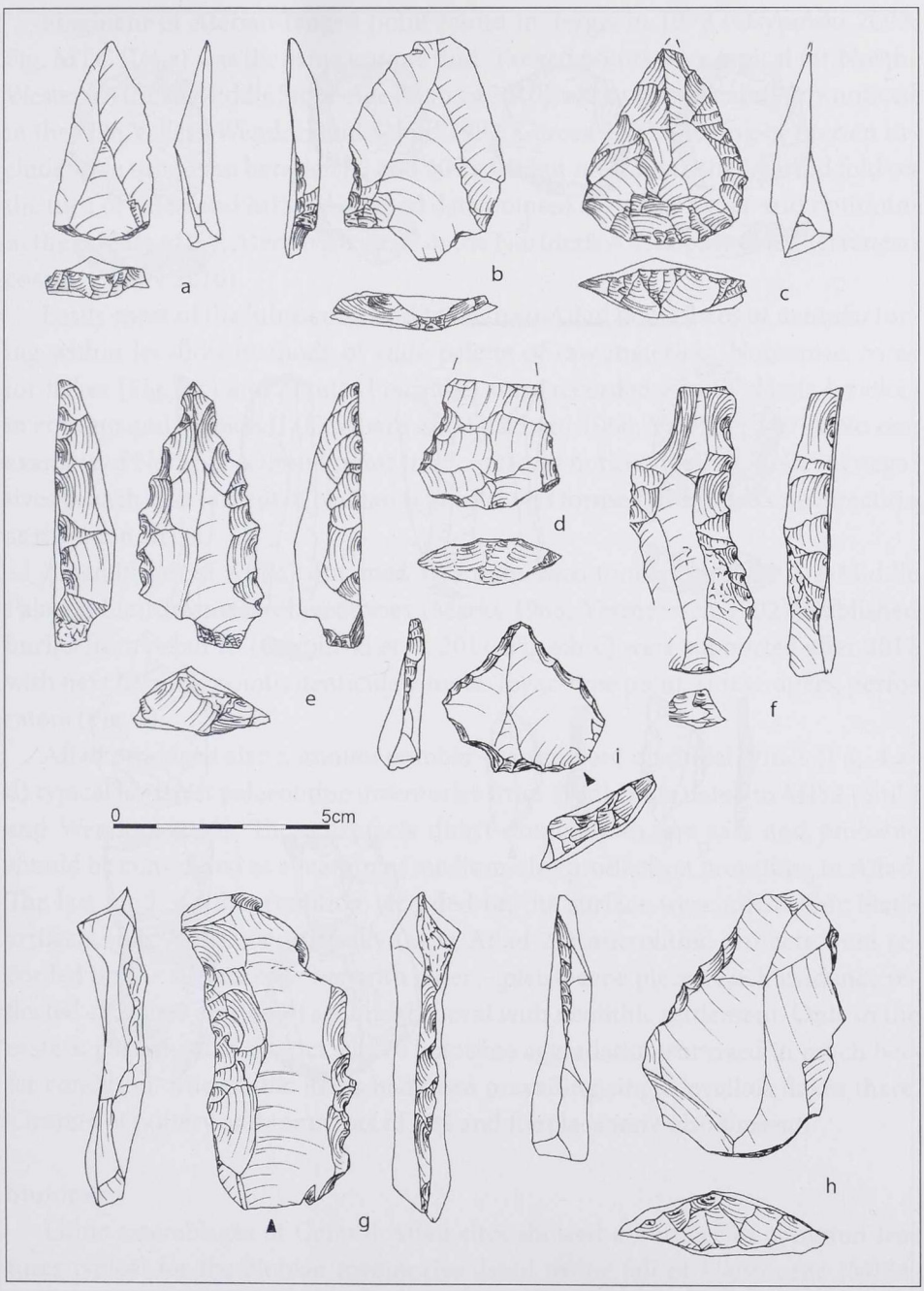

Fig.3. Middle Palaeolithic tools (a,b-levallois classic points; c,d-levallois Nubian II points; e-Tayac point; f,g-denticulate tools; h-side scraper; I-perforator)

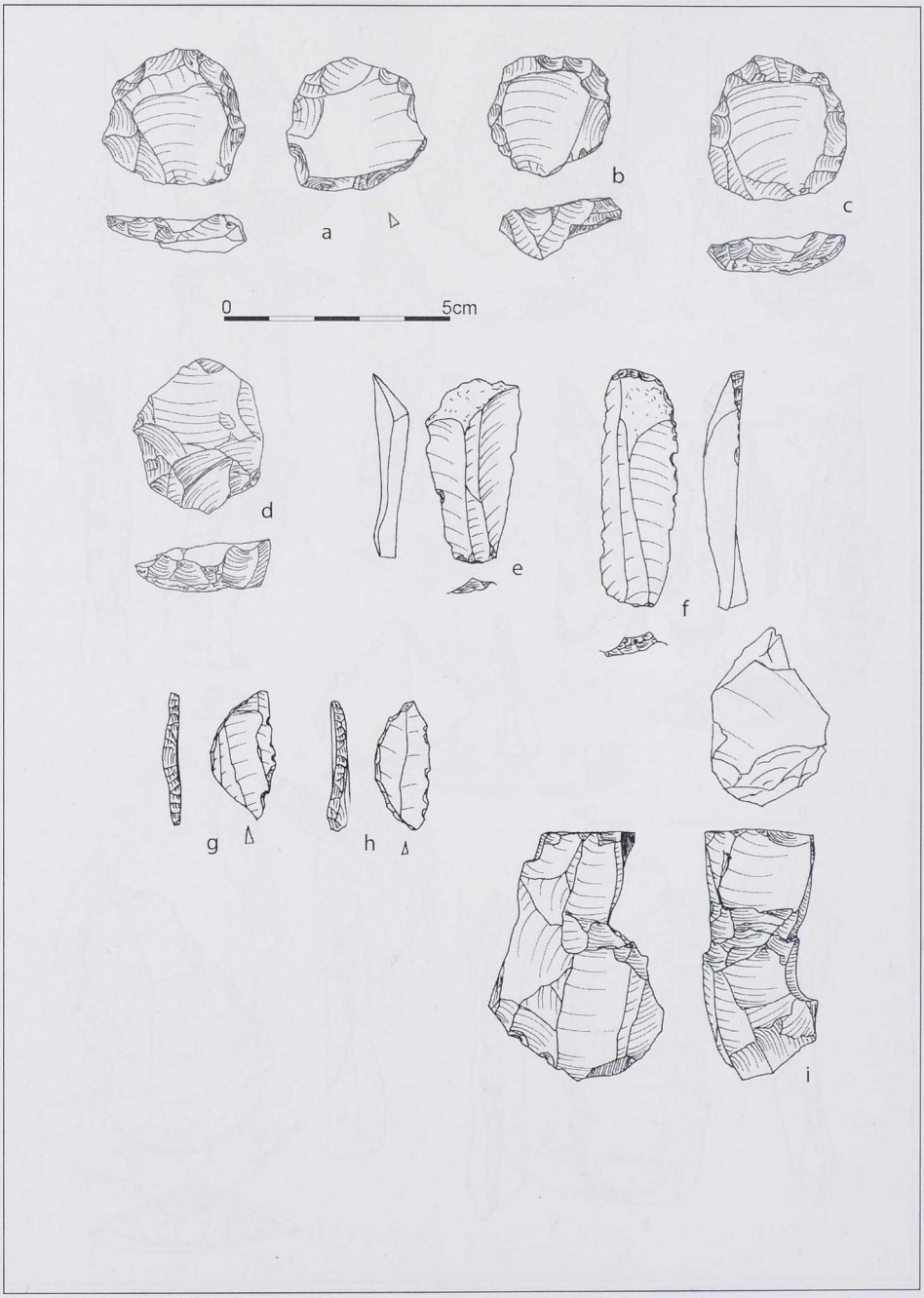

Fig.4. Microlithic finds (a,b,c,d-discoidal cores; e-microlithic blade; f-endscraper made of blade; g,h-crescents made of blades; i-blade core).

Fragment of Aterian tanged point found in Tergis in 1999 (Osypiński 2003: Fig. MTC II/4:e) was the same unique find. Tanged points were typical for North-Western African Middle Stone Age (Garcea 2010), although were similarly noticed in the Nile Valley (Wendorf and Schild 1992; Garcea 2003). Dating of Aterien include wide time span between 80 and 40 ka BP, but most flourished period fold on the turn of MIS5 and MIS4. Accepted data pointed that after hyper arid optimum in the middle MIS4, Aterien survived in the Northern Africa only (Mediterranean coast) (Garcea 2010).

Easily most of the lithic cores and tools from Affad bore traces of manufacturing within levallois methods of wide palette of raw materials. Numerous cores for flakes (Fig. 2:c) and points (Fig. 2:d,e) were recorded – both classic levallois in concept and Nubian II (Guichard and Guichard 1968; Van Peer 1991). No one example of Nubian Method I point (nor core) was noticed instead. Relief of negatives in each case (except of Nubian II points) was formed from the same direction as the main strike.

Assemblages of Affad contained also numerous tools present in late-Middle Palaeolithic Khormusan inventories (Marks 1968; Vermeersch 1992). Published burins from Affad 23 (Osypiński et al. 2011: Fig 6:b-c) were supported after 2012 with next levallois points, denticulate tools, Tayac-type point, sidescrapers, perforators (Fig. 3).

Affad produced also a minute number of miniature discoidal lithics (Fig. 4:a-d) typical for latest palaeolithic inventories from Wadi Halfa dated to MIS2 (Shild and Wendorf 2010). Those artifacts didn't dominate in any case and probably should be considered as a margin of medium-size production prevailing in Affad. The last kind of lithic tradition recorded on the surface were microlithic blade artifacts (Fig. 4:e-i). Occasionally (as at Affad 23) microlithic artifacts were recorded on the surface together with older – pleistocene pieces. Such evidence reflected complete erosion of sediment coeval with neolithic settlement. Only in the eastern part of Affad district silts of holocene aggradation survived in much better condition. Microlithic items had been prevailing single levallois flakes there. Clusters of pottery and remnants of pits and fireplacs were also present.

Summary

Lithic assemblages of Central Affad sites showed a number of common features typical for the Nubian inventories dated to the fall of Pleistocene (MIS4-MIS2). Lithic technology was based on tertiary Hudi cherts procured from natural outcrops or intentionally mined. Raw materials palette was fulfilled with other

fine grained rocks most probably available in the same geological sediment as cherts – sandstone, mudstone, petrified wood. The main debitage methods were variations of levallois schemas with exception of Nubian I variant of point production. It seems specially interesting as in Nubia that method occurred both in early inventories dated to late MIS5 (Late Nubian Complex – Van Peer 1992) as well as in latest ones (Gemaian – Schild and Wendorf 2010) of MIS2.

On limited scale also older finds could be reused both as a blank for new forms (eg. big core-forms or bifacial pieces) and as simple pieces.

Studying lithic assemblages from Affad region one should also notice absolute absence of blade tradition older than Holocene production. At the other parts of northeastern Africa blade methods appeared at the turn of MIS5 and MIS4 evolving from local levallois traditions (eg. Taramsan in middle Egypt – Van Peer *et al.* 2010). Southern Dongola Reach Survey produced only minute number of such type artifacts – each time recorded out of their primary context. Even if blade traditions were present between 3rd and 4th cataract, original sediments related to them eroded. In the contrary late-pleistocene silt terraces around Affad presents much higher value and their absolute dating (planned to 2013) should clarify the problem of last levallois craftsmen age.

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