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## Project Gallery

# Survival kit for the afterlife or instruction manual for prehistorians? Staging artefact production in Middle Neolithic cemetery Kadruka 23, Upper Nubia, Sudan

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The burials at the Neolithic cemetery Kadruka 23 in Sudan have yielded adornments and bone and lithic artefacts that occur as distinct stages of the chaîne opératoire. This article reports on a hitherto unrecognised funerary practice that highlights the importance of craftsmanship for Neolithic communities in life and beyond.

Keywords: Neolithic, Sudan, mortuary archaeology, artefact production

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## Introduction

Neolithic funerary practices in the Sudanese Nile Valley are varied and complex; they are also thoroughly and richly documented (e.g. Salvatori & Usai 2008, 2019; Maines 2019; Sellier *et al.* 2019). In Upper Nubia, in the District of Kadruka, around 20 Neolithic cemeteries were discovered in the 1980–1990s by J. Reinold (2001). Among them, Kadruka 23 (KDK23), located 14km east of the Nile River (Figure 1), is currently under excavation by a multi-disciplinary Franco-Sudanese team (Langlois *et al.* 2019).

Material culture studies suggest that the cemetery functioned during the Middle Neolithic. Radiocarbon dates obtained from an eroded settlement area to the west (KDK23H) place its occupation from the mid-fifth to the early fourth millennium cal BC (Langlois *et al.* 2019).

To date, KDK23 has revealed 142 human burials and three animal deposits (Figure 2). Individuals buried are predominantly juveniles (0–9 years) and adults (30–49 years) (Maines 2019), and all graves were endowed with funerary goods. Among the latter, beads, bone and lithic tools occur as finished objects and as distinct stages of the *chaîne opératoire*, including raw fragments, cores, preforms and unfinished items, some of which refit.

## Burying raw materials and unfinished artefacts

While finished beads (Figure 3c & f; Figure 6a) were found with juveniles, sub-adults and adults, unfinished items were discovered exclusively in adult graves (Figure 3b & e). In burial

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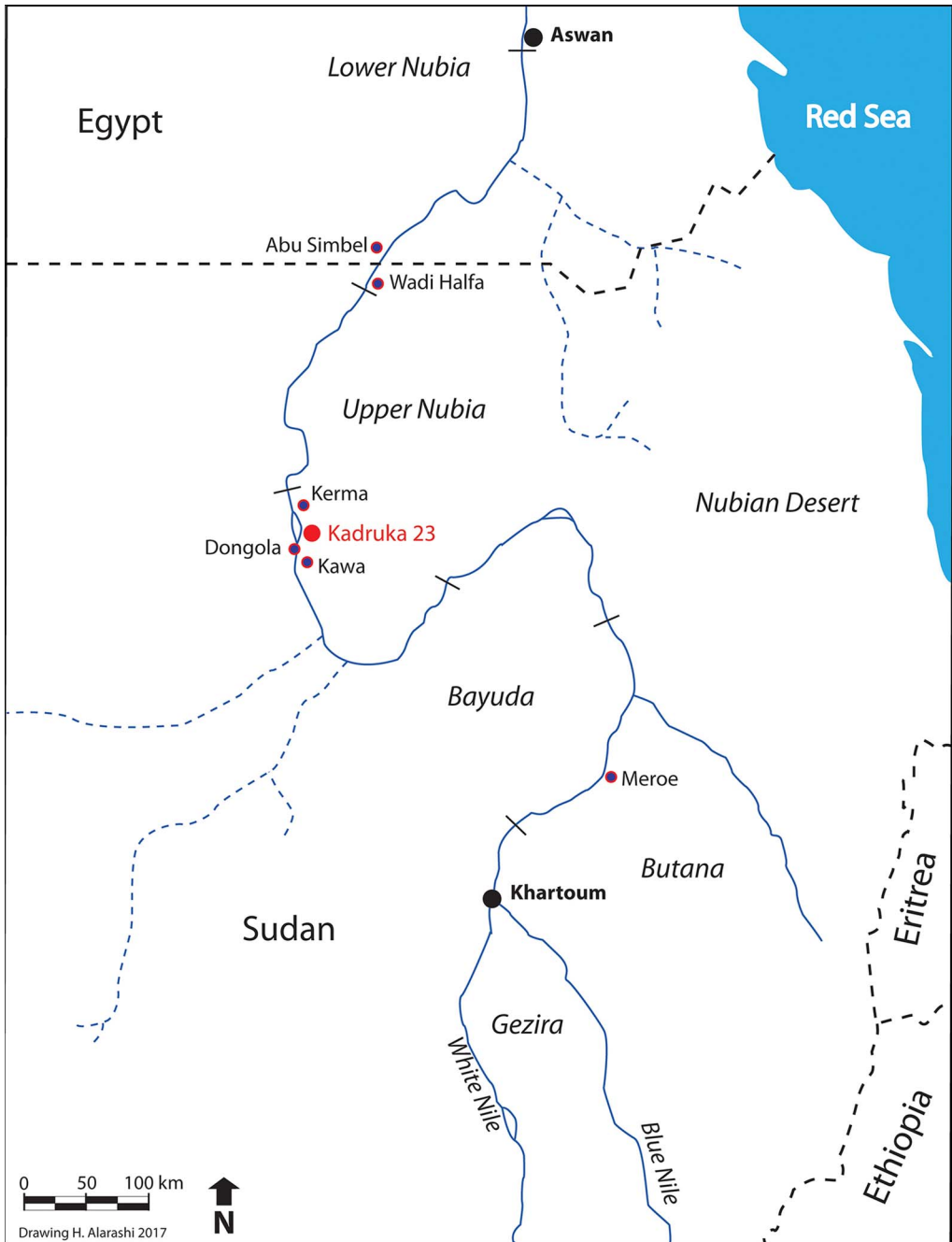


Fig. 1 - Colour online, Colour in print

Figure 1. Map showing the location of KDK23 (map by H. Alarashi).

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(st. 84), a concentration of items representing the production sequences of ostrich eggshell (OES) beads was discovered next to an adult male (Figure 3a & b). Preforms of agate and carnelian beads (Figure 3c) were also found in adult graves, including a male (st. 93) and

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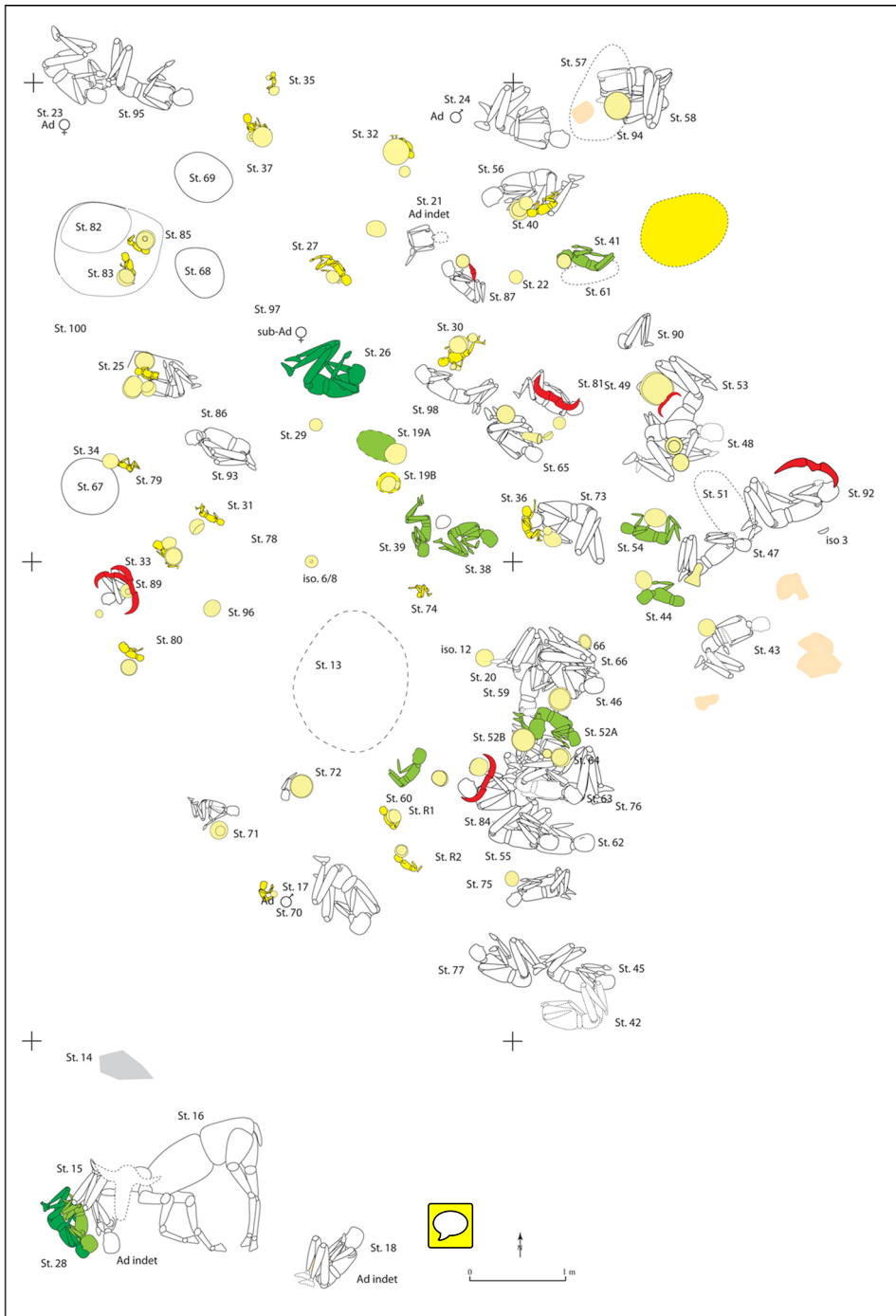


Fig. 2 - Colour online. Colour in print

Figure 2. General plan of the cemetery (illustration by P. Chambon).

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Fig. 3 - Colour online, Colour in print



Figure 3. a) Adult grave st. 84 with concentration of OES items (b), raw refitted fragments, sub-circular preforms and perforated preforms; c) finished OES beads from other graves; d–e) carnelian and agate bead core and preforms; f) finished agate beads (photograph (a) by Kadruka Project; b–f) by H. Alarashi).

an indeterminate adult (st. 73) (Maines 2019). In addition, a knapped bead core was recorded in the nearby settlement area (Figure 3d).

Knapped flint cobbles, associated flake debitage and backed microliths were recovered from several burials. Use-wear analysis of backed microliths recovered with an indeterminate adult (st. 24) indicates that these were unused. Moreover, almost all debitage flakes could be refitted together, allowing us to reconstruct the reduction sequences of the flake-on-cobble production (Figure 4). The freshness of the removals and number of refits suggest that they may have been produced shortly before burial.

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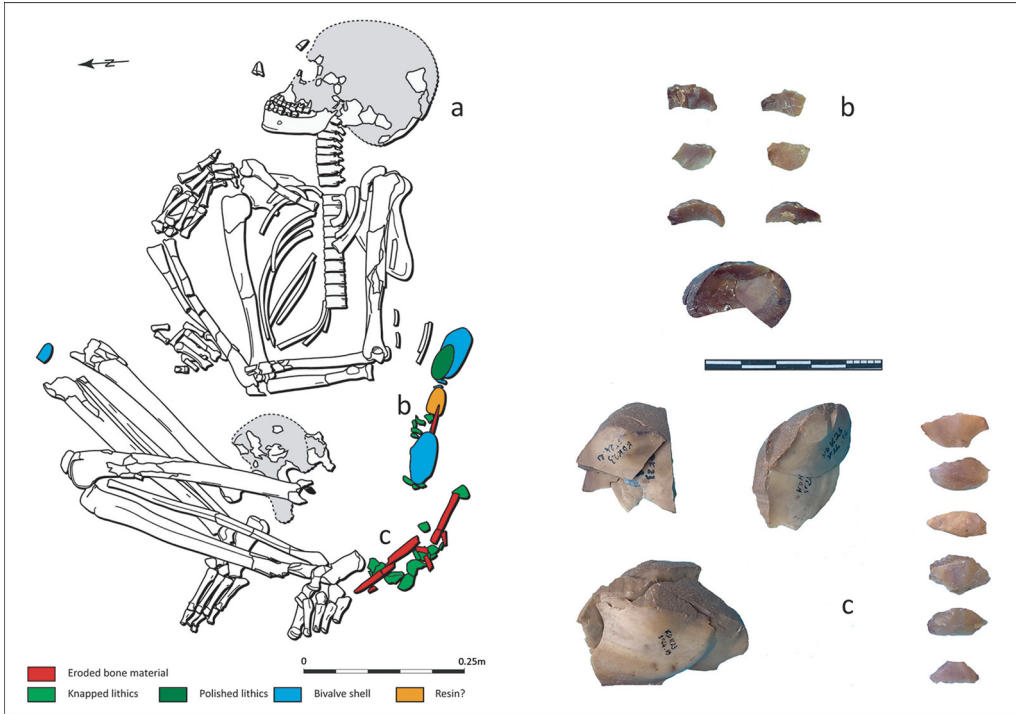


Figure 4. a) Grave st. 24 with knapped lithics including flint backed microliths (b–c) and refits of cobbles from which they were knapped (illustration by P. Chambon; photographs by L. Khalidi).

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Bone raw materials, preforms and final tools were also frequent. In an adult grave (st. 65), we recovered one unworked caprine tibia with two bevelled tools (‘spatulae’), one cattle rib split longitudinally and two flat tools (Figure 5).

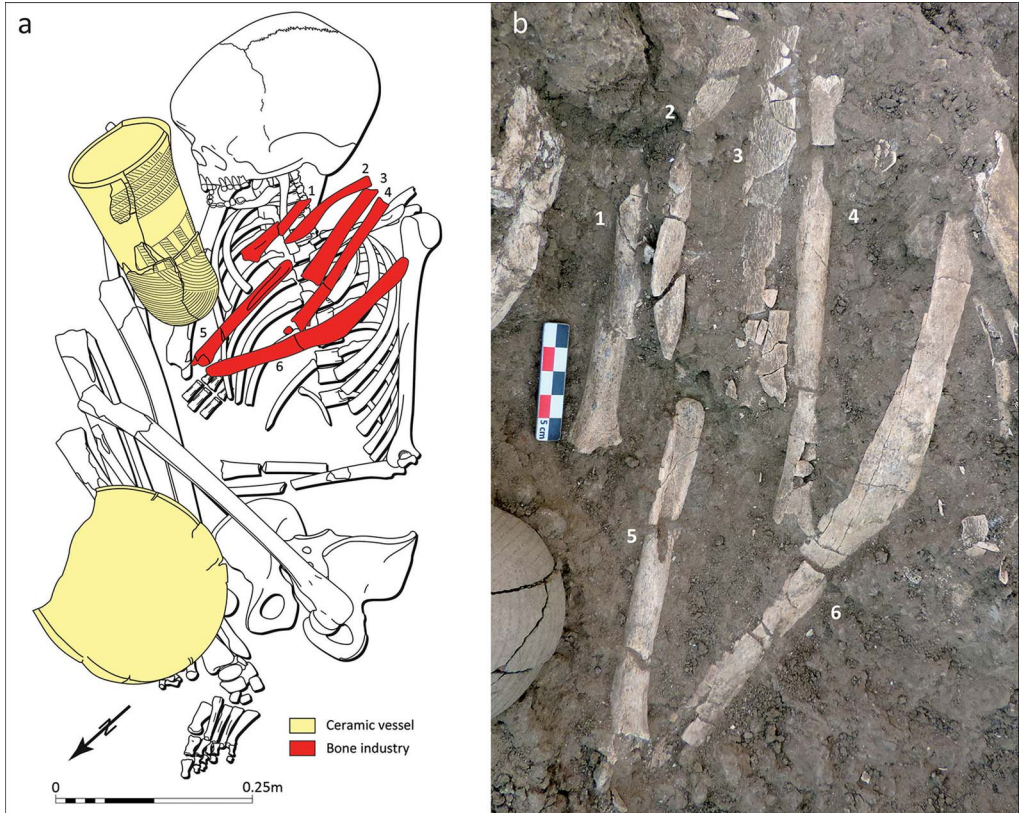
Some graves contain the production sequences of composite artefacts. In a female grave (st. 92), decorated ochre, four unworked animal bones and bone tools were discovered (Figure 6). Below them, rows of yellow backed microliths bound in resin were found, suggesting hafted sickles or composite cutting tools. Ephemeral imprints observed in the resin may suggest the use of handles that have not survived. Near this group, a concentration of red jasper backed microliths and small flakes were also recovered, but with no evidence of resin (Figure 6). These lithics, along with the unfinished long bones, may have been deposited together as the constituent elements of a sickle, representing its production sequence. This assemblage suggests the contents of a satchel that had disintegrated after being deposited near the deceased. Similar observations were documented at KDK1 (Reinold 2005: 108).

## Food for thought

While there has been little documentation of Neolithic craft activities in the District of Kadruka due to the paucity of preserved occupation sites, the presence of artefacts in different stages of production in some adult burials at KDK23 is akin to an instruction

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Fig. 5 - Colour online, Colour in print



245 *Figure 5. a) Grave st. 65 with animal bones (b), including ‘spatulae’ from caprine tibia (1 & 5); ‘polishers’ from a cattle*  
 246 *rib (2–3); unworked tibia of caprine (4); and cattle rib split longitudinally (6) (illustration by P. Chambon;*  
 247 *photographs by Kadruka Project).*

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manual for prehistorians, offering crucial insight into the fabrication steps of different artefacts and tools. Notably, this practice concerns local materials, such as OES, chalcedony and bone; it is not evidenced for objects made from non-local materials, such as amazonite.

These findings are not exclusive to KDK23, but occur in other Neolithic cemeteries in Upper Nubia, such as KDK1, R12, Ghaba and Geili (Caneva & Baracchini 1988; Reinold 2001; Salvatori & Usai 2008; Salvatori *et al.* 2016). For instance, at R12, a very rich group of finished and unfinished beads, raw materials, sandstone palettes probably used for bead abrasion, and a perforator were found in a grave of a male adult (38 Inf.), thus hinting at “an artisan specialized in bead-making” (Usai 2016: 69). In the case of KDK23, it is still unclear whether this practice illustrates the artisanal activity of the buried adults and represented ‘survival kits’ for the afterlife (i.e. rebirth or metempsychosis rites), or whether they carry further symbolic or sociocultural values related to the identity of the deceased (Stevenson 2009). Although this practice does not appear to be gender specific, it is premature to advance interpretations regarding gender-related patterns, as further data are required. Nevertheless, the deposition of raw materials, unfinished objects and tools in graves indicates that these





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