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A UNIQUE STONE TIPPED ARROWHEAD FROM ADAM'S KRANZ CAVE, EASTERN CAPE

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Of particular interest to archaeologists is the design and material used for the foreshaft and arrowhead. Apart from linkshafts, only a few fragmented pieces of this type of equipment have been reported from archaeological contexts. The presence of mastic on microlithic backed stone tools from several archaeological sites have given rise to speculation that these stone tools were used as projectiles for hunting equipment (Clark *et al.* 1974; Deacon 1976; Parkington 1980). Portions of arrows have been found at Big Elephant Shelter (Clark & Walton 1962; Wadley 1979) Pomonwe Cave (Cooke 1975), Melkhoutboom Cave (Deacon, H.J. 1976), De Hangen (Parkington & Poggenpoel 1971), Collingham Shelter Mazel (1992) and fine examples of two bone points with mastic mounts still in place have been reported from Faraoskop Rock Shelter in the western Cape (Manhire 1993). Stone tanged and barbed 'arrowheads' have been reported from open sites (Wilson 1955; Humphreys 1969; Dreyer 1975).

Several early travellers and writers reported that stone and when obtainable also glass was used as arrowheads (see Rudner 1979). For example, Wikar, a Swedish runaway soldier who lived among the Khoisan groups along the Orange River between 1775 and 1779 reported that arrowheads were usually iron-barbed, but that they also used sharp-edged white stone. Arrowheads were also made of sharpened bones of gemsbuck (Mossop 1935). Dale (1870) described an arrow collected by a certain W.C. Palgrave from the Orange River area as being fitted with a small leaf-shaped flake made of quartz crystal with sharp edges and point and set in a "fine cement". Dunn (1873) reported that an old Bushman in Bushmanland showed him how arrowheads were made. Two equal sized stone flakes were semented together so

that the sharp ends coincided to form a piercing end. This description by Dunn agrees with the arrows made during 1878 for Dr W. Bleek by Jantje, a Bushman prisoner, using backed glass flakes. These arrows are housed in the University of Cape Town's ethnographic collection (Goodwin 1945) and at the Pitt Rivers Museum at Oxford (Clark 1977).

Despite these reports not a single example of arrowheads fitted with stone is to be found anywhere. From Schapera's (1927) report on the different types of arrows found historically among Bushmen groups of southern Africa, it would appear that bone and iron were the only materials used for arrowheads. This observation is confirmed by the survey done by J. Deacon (1984) who determined that all arrows in museum collections in Namibia and Botswana which pre-date 1920 are made of bone or beaten fencing wire and those in South Africa which pre-date 1920 are made of bone (Deacon J. 1984).

STONE TIPPED ARROWHEAD FROM ADAM'S KRANZ CAVE

Adam's Kranz Cave is situated some 60 km north of Grahamstown in the eastern Cape Midlands (Fig. 1). The cave is located in steep cliffs some 200 m above the Great Fish River in the Double Drift Nature Reserve in the Ciskei. The surface units at Adams Kranz Cave consist of large patches of well-preserved plant material and during the excavation of these an almost complete arrow foreshaft was found. The very tip was broken off but a large piece of mastic was still attached to it. The end bit, a small chert stone flake set in mastic, was later recovered when material from the same floor was sorted. It fitted exactly the broken end of the foreshaft. A

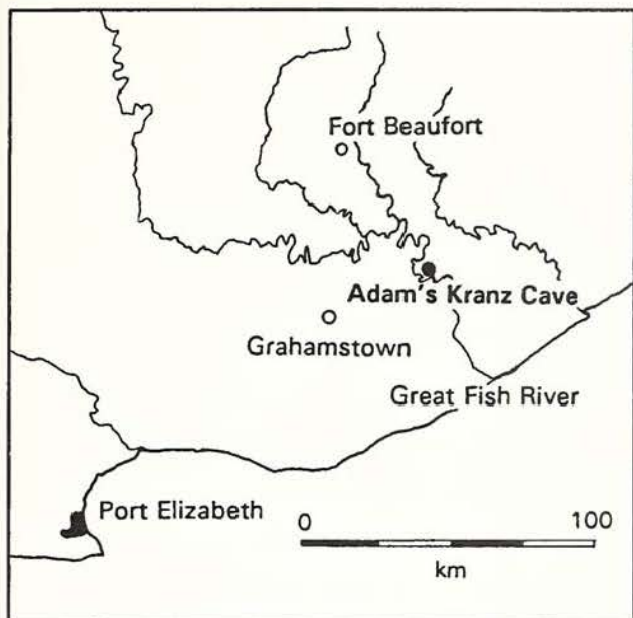


Fig. 1. Location of Adam's Kranz Cave.

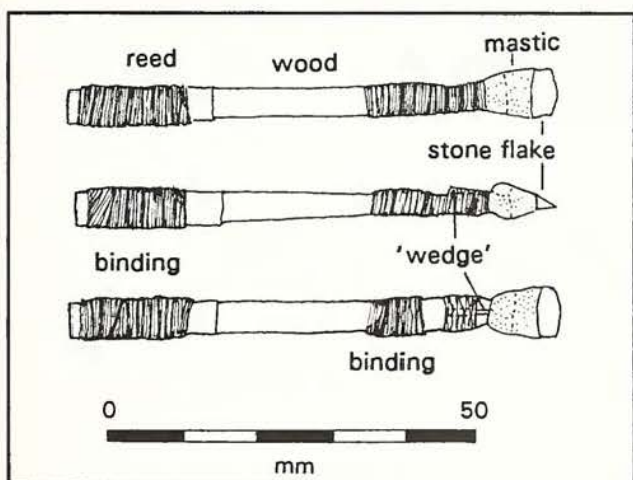


Fig. 2. Drawing of the stone tipped arrowhead.

radiocarbon date of 1760 ± 50 (Pta-6418) BP was obtained for the specimen from charcoal collected from the same surface on which the arrowshaft was found.

The total length of the foreshaft and stone tipped arrowhead is 66,5 mm (Fig. 1). It consists of a small unretouched chert flake (not known if it is backed) set in mastic and fitted to a wooden shaft inserted in a short reed tube. The thin, smooth, straight wooden shaft is approximately 48 mm in length and 4 mm in section. The reed tube is 19 mm long, 5 mm in section and bound over with what appears to be plant fibre. Whittle marks visible on the wooden shaft at the connection suggest that this end was shaped or thinned/tapered before it was inserted into the reed tube. Both ends of the reed tube was ring-cut and snapped while it would appear if the one end was trimmed after the wooden shaft was fitted. The wooden shaft penetrates the reed tube some 7 mm which leaves room of some 12 mm for a linkshaft.

The small, unretouched chert flake is 6,5 mm in length and estimated to be between 5 mm-6 mm wide which leaves approximately 2 mm of the flake set in mastic. The mastic completely covers the left lateral edge of the stone flake and it is therefore not known whether it is backed. The exposed right lateral edge of the stone flake is slightly convex with no visible damage. A few minute half-moon breakages are visible along the cutting edge on the ventral aspect when examined under a microscope. The flake is set in its length in the same plane as the wooden shaft (chisel hafted).

An interesting feature of the arrowhead is the tiny, thin, unknown material 'wedge' into the mastic where it joins the wooden shaft. The exposed wedge is 6 mm long and also bound over with plant fibre. The purpose of the 'wedge' is not known. No traces of poison were present.

DISCUSSION

As this is the first complete example of its kind reported on in southern Africa, it would be premature to draw too many conclusions from it. Nevertheless, it confirms the observations of the early travellers and writers that stone was used for arrowheads. However, it would appear that this example, for the moment at least, does not conform to the general idea that segments were used as arrowheads. An interesting aspect is the striking resemblance to stone tipped arrows (also chisel hafted) found in the tombs at Naga-ed-Der in Egypt dating between the VIth and XII Dynasties (BC 2341-1991) (Clark *et al.* 1974). These arrows were no doubt used for hunting and warfare (Clark *et al.* 1974).

It is, however, difficult to imagine that the Adam's Kranz arrowhead was used for hunting. Experiments conducted by Simon Hall and myself with ethnographic Bushman bow and arrows fitted with segments similar to the Jantje example, chisel and end hafted and shot at a dead calf, proved to be ineffective in penetrating the carcass (Binneman & Hall in prep.). In this example the flake is chisel hafted which would make it even more difficult to penetrate an object.

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A SHORT NOTE ON THE NAMAQUALAND DIARY ENTRIES OF W.G. ATHERSTONE RELATING TO BUSHMEN BOWS AND ARROWS

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Dr William Guybon Atherstone was a nineteenth century medical practitioner and astute natural scientist who resided in Grahamstown but visited Namaqualand in 1854 to investigate the rapidly expanding copper industry. His diaries are housed in the 1820 Settlers Memorial Museum, Grahamstown. In diary Number 29 he records his encounters with a Bushmen group and briefly discusses their bows and arrows.

While prospecting for copper he visited !Kosis (29.06.40S; 17.34.05E) some 35 km north-west of Kookfontein (later named Steinkopf). !Kosis refers to a settlement named Kosies which is near the Kosiesberg. According to Atherstone he "awoke at dawn by wild singing, jumped up and saw two or three women walking off singing merrily to the Bushman's huts in the next valley to see if there was any beer left" (page 73). These Bushmen, he noted, came from the 'Am Alip' Mountains which were situated some three miles to the east of !Kosis and were the highest mountains in the region. It is possible that the 'Am Alip' mountains refer to the nearby

Rooiberg.

His diary continues (page 74), "got the Bushman arrow, lit a fire and got a lot of information, respecting their bows and poison (see end of book), and got him to dig up one of the so-called poisonous worms, they say they never use snake poison". One page 76 he notes "I bought some real Bushman arrows for Johnny and tried hard to get the bow, but the man wanted it to shoot wild horses to eat".

His description of the bow and arrow is in the back of the diary and commences on page 10 (Figs 1 & 2).

I saw a real Bushman bow at (the name is omitted here). The arrow is 2 ft 6 inches, bow 4 ft 8 inches long, when strung. The string made of sinews of ostrich legg (3 strands) fastened at one end and coiled into 10 or 11 coils at the other end, bow tightened by turning the coils. When strung the end of the bow just came up to my chin. About one and a half