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A Brief overview of major Pleistocene palaeoart sites in Sub-Saharan Africa

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Abstract

A literature survey shows that there are only seven sites in Africa south of the Sahara that have as yet produced multiple rock art objects of Pleistocene age, of which all are fortuitous, mobiliary finds, with the exception of the Chifubwa research in 1951. This sparse data-base does however provide evidence for figurative art by ~32.000 years ago at Apollo 11, of complex engravings in the 70.000-100.000 range at Blombos, of simple engraved patterns before 270.000 BP at Wonderwerk, and of c. 400.000-years-old cupules at Nchwaneng. Northern Cape occurrences before then consist only of specularite and haematite manuports that range back to c. 0.9 million year, which suggests that symbolism probably arose in sub-Saharan Africa with the slightly earlier advent of Homo rhodesiensis */ archaic* Homo sapiens*.*

In 1971 radiocarbon dates of up to >49.000 years ago were obtained for strata lying well above the lip of a shallow (27cm deep) grave with the remains of a 4-6 month-old modern human infant and a perforated seashell pendant (Vogel & Beaumont 1972; de Villiers 1973; Beaumont at al. 1978) that had been found during previous fieldwork at Border Cave in South Africa (Cooke *et al.*1945). As no such antiquity had, at that time, been established for the presence of *Homo sapiens* in Eurasia (Howells 1967), it was inferred that the savannas of sub-Saharan Africa with their surpassing abundance of game (Bourlière 1964) could have been the "hospitable hearth" (Howells 1974) where our species had originated (Beaumont & Vogel 1972).

A surge of subsequent studies (e.g. Rightmire 1975; Brauer 1984; Stringer 1985; Cann *et al.* 1987; Vigilant *et al.* 1989; Ingman *et al.* 2000; Underhill *et al.* 2001; Forster 2004) have amply confirmed that initial deduction, and, indeed, it is now widely accepted that modern human beginnings south of the Sahara extend back to at least 195.000 yrs BP (McDougall *et al.* 2005; Trinkaus 2005). Given that outcome, and, in particular, the ritual (symbolic) nature of the Border Cave infant burial, since dated to about 75.000 yrs ago (Grün & Beaumont 2001), it may have been expected that many rock art sites would have been recorded by now from sub-Saharan Africa, but that is not the case, and, in fact, only the following seven localities have produced multiple finds of Pleistocene age.

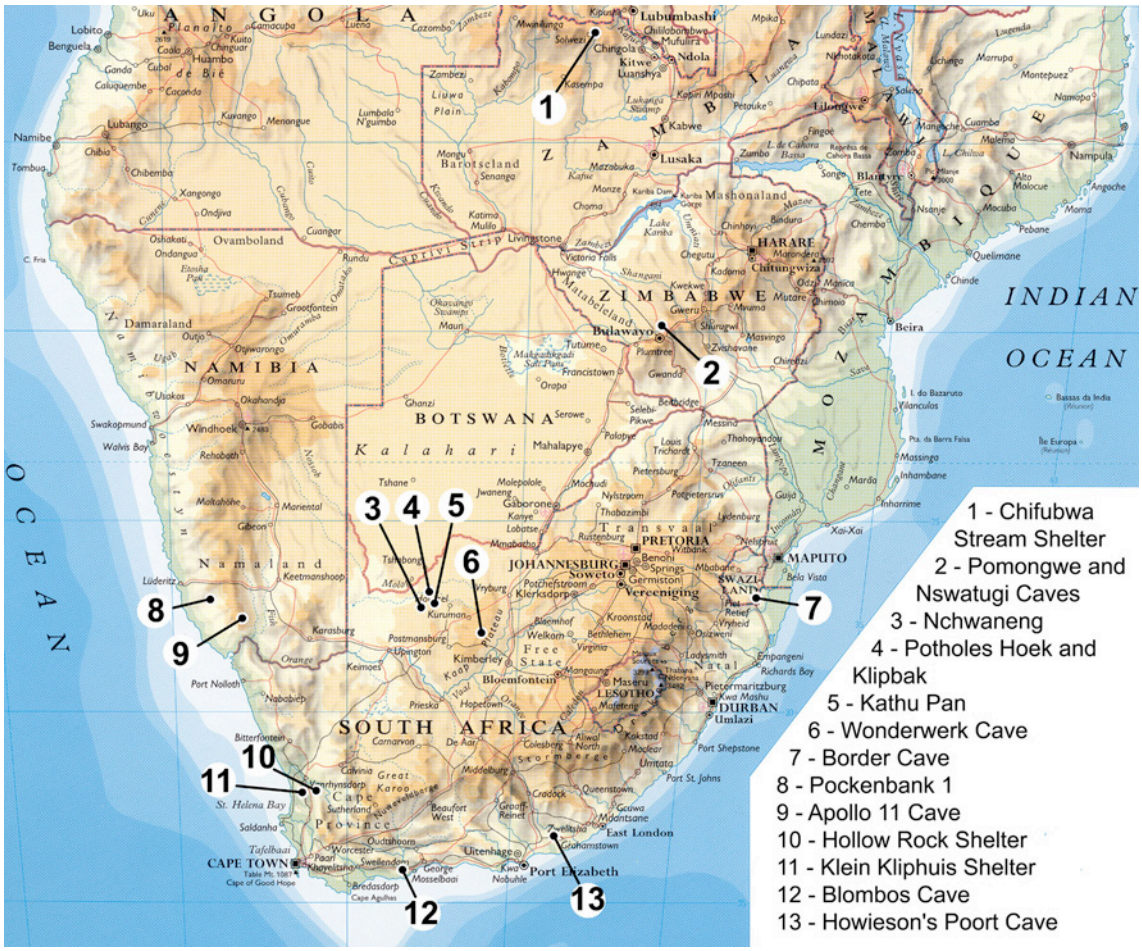

Fig. 1. Location of sites cited.

The sites

The youngest of them is **Chifubwa Stream Shelter** in north-western Zambia (Fig. 1), where excavations in 1951 (Clark 1958) revealed a sequence comprising surface soil with a few Iron Age sherds, ~2m of sterile yellow-orange sand, and up to 0.7m of red earth on schist bedrock containing a Later Stone Age assemblage belonging to the Nachikufan 1 industry (Clark 1950). The shelter wall exposed by that dig, down to 3cm above the occupation level, was entirely covered by incised and then rubbed petroglyphs, some coated by red or black paint, that were dominated by randomly-placed cupules, long and short vertical lines, and inverted U's, with or without a central vertical line, that may represent stylized spoor (Walker 1987). Only a minimum date was obtained then, but subsequent research (Miller 1971; Sampson 1974) placed the Nachikufan 1 between ~11.000 and 21.000 ^{14}C yrs / 25.000 cal. yrs $_{hulu}$ ago (Weninger & Jöris 2008), and it is consequently considered very likely (Clark 1958) that the Chifubwa petroglyphs were made at some time within that interval by its Nachikufan occupants.

Fieldwork in 1969 and 1972 at **Apollo 11 Cave** in southern Namibia (Fig. 1), located a cluster of seven painted plaques in a layer with "indeterminate" lithics (Wendt 1972), later subdivided into an upper Later Stone Age level and a lower Middle Stone Age one, with the mobiliary items referred to the surface reaches of the latter (Wendt 1974; 1976; Vogelsang 1988). Those slabs, with images that include a ?rhinoceros, a zebra? and a therianthrope?, are temporally constrained by many

radiocarbon readings, including a date on a sample from directly above one of the slabs (Wendt 1974) of ~28.000 ^{14}C/32.000 cal yrs $_{hulu}$ BP (Weninger & Jöris 2008), about 4.000 yrs younger than the earliest art at Chauvet (Jöris & Street 2008). Subsequent studies (Miller *et al.* 1992; 1999), on ostrich eggshell from closer to the drip-line, showed that Later Stone Age strata there extended back to 41.000 ^{14}C yrs ago (Brook *et al.* 2008), a finding in accord with age estimates for comparable assemblages of 19.000-30.000 ^{14}C yrs at nearby (Fig. 1) Pockenbank (Freundlich *et al.* 1980) and of over 32.000 ^{14}C yrs at Kathu Pan 5 (Fig. 1) to the east (Beaumont *et al.* 1984).

Excavations in 1960 and 1979 at **Pomongwe Cave** (Fig. 1) in the Matopo Hills of south-western Zimbabwe (Cooke 1963; Walker 1987) produced, from strata just above an undoubted Middle Stone Age sequence, two small (about 10cm across) cave wall slabs featuring painted patches with well-defined outlines, that may, in one case, be part of a larger deliberate design (Walker 1987). Problematical radiocarbon results (Beaumont & Vogel 1972), due in part to mixing from below (Cooke 1963; Mitchell 1997), presently precludes a firm age for those items, but sound chronologies at surrounding subcontinental sites (Van Noten 1977; Beaumont *et al.* 1992; Robbins *et al.* 2000) suggest that they postdate the regional onset of the Later Stone Age at about 46.000 cal yrs ago. Also pertinent here is the finding during 1975 fieldwork at closeby **Nswatugi Cave** (Fig. 1) of two granite slabs, each with a single painted surface, and consequently taken to be palettes, from a >42.000 ^{14}C yrs-old Middle Stone Age level (Walker 1987), typified by large segments (Volman 1984), which suggests a temporal correspondence with similar ~60.000-70.000 yrs-old assemblages in South Africa (Miller *et al.* 1999; Jacobs et al 2008).

Far more precisely dated are the deposits at **Blombos Cave** on the southern Cape coast of South Africa (Fig. 1), where 1992-2000 excavations (Henshilwood *et al.* 2001; 2002; 2009) probed Middle Stone Age strata containing a 70.000-77.000 yrs-old Still Bay assemblage overlying a differing industry dated to 85.000-100.000 yrs (Jacobs *et al.* 2006; Tribolo *et al.* 2006; Henshilwood *et al.* 2009). From those came an incised bone (d'Errico *et al.* 2001) and 15 engravings, usually on intentionally smoothed ferruginized siltstone surfaces, that feature parallel lines, right-angled juxtapositions, fern-like dendritic forms, and more complex cross-hatched designs, which are deemed to reflect a single rock art tradition spanning about 25.000 yrs (Henshilwood *et al.* 2009). Also from a Still Bay context are two engraved haematite fragments for **Hollow Rock Shelter** in the south-western Cape of South Africa (Fig. 1), one with a series of notches on a concave ground edge; the other thin and roughly rectangular, with notches around much of the periphery (Evans 1994).

And lastly is **Wonderwerk Cave** in the Northern Cape of South Africa (Fig. 1), where a cultural succession extending back from early in the 20th century to Oldowan times at about 1.9 million years ago was established by fieldwork between 1978 and 1996 (Beaumont 1990; Beaumont & Vogel 2006; Chazan *et al.* 2008). Palaeoart from there comprises some 20 fine-line engraved slabs, dominated by schematic motifs, from the Holocene strata (Thackeray *et al.* 1981; Beaumont 1990), four incised haematite plaques from Middle Stone Age contexts, one dated to about 70.000 yrs (Mitchell 2002), the others postdating 152.000 yrs, and five incised slabs from Fauresmith levels that predate 270.000 yrs BP (Beaumont & Vogel 2006; Chazan & Horwitz 2009). All of these latter came from the cave's rear, an area of near-total darkness some 140m in from the drip-line, and close to an as-yet unexcavated tunnel leading further into the mountain, with associated finds that include a number of

unutilized small exotic chalcedony pebbles and quartz crystals (Beaumont & Vogel 2006; Chazan & Horwitz 2009).

Discussion

This overview shows that sub-Saharan Africa has, as yet, produced only seven Pleistocene sites with multiple rock art occurrences, which is a meager tally when contrasted with the hundreds of such localities that have been documented in the much smaller extents of Europe or Australia (Bednarik 1995). Field observations suggest that this finding should not be taken to indicate a deficiency in the number of early sub-Saharan rock art sites, but rather a latter-day disinclination by most palaeoart practitioners to investigate the rich potential of rock art beginnings there. Another curious finding, as shown by Figure 1, is that all the sites are located in the southern sector of sub-Saharan Africa, which may, at least in part, reflect a somewhat greater post-1950s research emphasis in that region on the cultural succession subsequent to the Acheulian. As for data from the listed sites, the Apollo 11 findings clearly show a sub-Saharan onset of figurative art by at least 32.000 calendrical years ago, while a painted outline on one of the Pomongwe slabs, perhaps a bovid torso in side view, suggests that such art may extend back a further ten millennia or so, regionally. However, a firm onset date for representational art will require the microscopic study of potentially painted spalls that are systematically retrieved from excavations flanking cave walls, as was so successfully applied to the Holocene levels at three sites in the Matopo Hills (Walker 1987). Regarding the Blombos and Wonderwerk plaques, these show that incised line geometric art extends back subcontinentally to at least 270.000 years ago, and that the patterns would seem to become more complex over time, in accordance with the way in which children's art develops (Kellogg *et al.* 1965; Kellogg 1970). Still earlier, and the subject of a separate paper, is a cupule occurrence at Nchwaneng in the south-eastern Kalahari (Fig. 1), where associated Fauresmith technocomplex artefacts are conservatively linked to an interglacial at ~400.000 yrs BP that would equate with the Holsteinian of western Europe. Other Fauresmith occurrences in the Northern Cape, as at Nooitgedacht (Beaumont 1990), Canteen Koppie (Beaumont & McNabb 2000), Pniel 6 (Beaumont 1999) and Kathu Pan 1 (Beaumont 1990), have all been found to contain modest complements of specularite and / or haematite. The last-mentioned locality has latterly yielded an ESR age of 540.000 yrs (Porat *et al.* 2010), while still older are Late-Middle Acheulian finds at Kathu Townland and Kathu Pan 1 (Beaumont & Vogel 2006) that are estimated to lie in the 700.000-900.000 yrs range. In contrast, large lithic samples dating to about 1.3-1.7 *million* yrs (Gibbon *et al.* 2009) from two excavations at Canteen Koppie (Fig. 1) produced no trace of pigments, from which it is tentatively deduced that deliberate Pleistocene palaeoart in southern Africa originated about a million years ago.

Conclusions

Although the number of Pleistocene rock art sites south of the Sahara is presently scant in the extreme, it is to be hoped that regional research priorities will eventually shift to a clearer focus on the pivotal task of locating evidence that bears on the temporal development of palaeoart in Africa. An initial challenge would be to define when the subcontinental transition to figurative art took place during the "Big Dry" (Barham & Mitchell 2008) interval from ~73.000-11.000 yrs ago (Martinson *et al.* 1987), at which time humans would, in the main, have been displaced closer to the

equator, to regions such as Zambia and Angola. The listed data also demonstrate that rock art, as with other behaviours, grew by slow accretions (Beaumont 1992; McBrearty & Brooks 2000), in accord with advances in symbolic capacity, but with manifestations that were modulated by cultural norms and a population size that oscillated with the supporting food base. As for the humans who first felt impelled to collect and bring back (from over 15 km away) soft red haematite fragments to Kathu Pan 1 during Middle Acheulian times, they almost certainly belonged to the species *Homo rhodesiensis* / archaic *Homo sapiens*, which replaced *Homo erectus* in the Africa savannas by about a million years ago (Hendey & Cooke 1985; McBrearty & Brooks 2000). Subsequent northwards dispersals by some of those people are recorded in the Levant at ~800.000 BP (Bar-Yosef & Belfer-Cohen 2001), with a subsequent one (Sharon 2007) to Europe some 150.000 years later (Santonja & Villa 2006), where they morphed over time into *Homo neanderthalensis* (Dean *et al.*1998), which is therefore a sister species of modern humans (Beaumont *et al.* 1978; Ovchinnikov *et al.* 2000). In view of the long separation of these two kindred species, it is of note that their respective rock art repertoires show some remarkable concordances, as in the case of cupules (Peyrony 1934), in addition to some significant differences, exemplified by the Nswatugi palettes (Walker 1978), which have no clear match in the Middle Palaeolithic. What that may mean is but one of the many mysteries that remain to be revealed by rock art science.

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