Boegoeberg 9/2/066/0044
Brand se baai 9/2/666/0034 or 9/2/102/0009
Elandsbaai Cave 9/2/072/0013/9
Hoedjiespunt 9/2/101/0004
Sea Harvest ?!
Yzerfontein 9/2/060/0035.

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MIDDLE STONE AGE COASTAL SITES AT BOEGOEBERG, BRAND SE BAAI, ELANDS BAY, HOEDJIESPUNT, SEA HARVEST and YSTERFONTEIN.

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What has emerged from field surveys over the past decade is that there are diverse faunal assemblages in the calcrete landscape, some of which are the result of human food gathering and consumption, others the accumulations of hyenas or owls. This is very reminiscent of the taphonomic complexities of the australopithecine sites, though the Cape stratigraphies seem far more simple. Even more interestingly, the stone tool assemblages from the human occupations are Middle Stone Age in character and unquestionably associated with marine shell collections. Although accurate dating is only just being obtained, it seems quite clear that these shell middens are too old for radiocarbon dating and, in most cases, date from some part of Marine Isotope Stage 5. This means that this particular archive contains evidence that relates directly to the behaviour of the earliest modern people, the origins of systematic shellfish gathering and is, therefore, of more than local interest. Here we describe the contexts of some of the sites we have found over the past decade, and the assemblages we have recovered from them. The sites are Boegoeberg, Brand se Baai 5, Elands Bay 17, Hoedjiespunt, Sea Harvest and Ysterfontein.

SITES

Boegoeberg

Boegoeberg 1 80/96/02/007/51
Boegoeberg 2. 80/96/02/008/51

The most northerly site is one we call Boegoeberg 2, or BOG2, located about 20km south of the Orange River mouth on the coast below the Boegoeberg hills in one of the Namaqualand diamond concessions. BOG2 is, or was, a small shelter fill at the head of a short, Y-shaped gully leading sharply down to the rocky shore. At the head of the other arm of the Y was another even smaller cave, BOG1, occupied by hyenas. BOG2 was completely blanketed by windblown sand, some time after it had been occupied, apparently only very briefly, by stone age shellfish gatherers. It remained blocked until the early 1990s when diamond miners excavated all the gravels and sands that had filled both arms of the gully, in search of diamondiferous deposits, of which there were lots. We were alerted only after most of the fills in the two caves had been removed. On our visit to the scoured gullies, it was still possible to see a line of marine shell, ostrich eggshell, stone and bone hanging as a remnant along the northern wall of the BOG2 shelter. There was also a small vestige of in situ deposit in the rear of the shelter where heavy machinery had struggled to remove sediment. We excavated both of these remnants and were quite sure that all material from BOG2 has come from one or two thin scatters of material near the middle of the cave fill.

Brand se Baai

At Brand se Baai diamond mining is less extensive than further north and consists mostly of massive gouged trenches dug at right angles to the shore. Adjacent to one of these trenches we found

a heap of material, which included stone tools, shellfish, fossilised animal bone and substantial amounts of ostrich eggshell. A careful search of the trench, and some subsequent excavation along the eroding edge, persuaded us that this sample derives from a single ephemeral horizon some 6m below the surface. Although there are Later Stone Age shell middens associated with some of these trenches, we saw no likely LSA site near the one we now call Brand se Baai 5 or BSB5. We have collected a large sample of the material dumped out of the trench and a smaller amount from in situ traces in the section.

Elands Bay

Immediately below the Elands Bay Cave on the prominent Cape Deseada, is a large borrow pit dug into the lower talus slope to obtain sand for road making. For some time we have known that the diggings here have produced fossilised bones of probably Pleistocene age. We recently excavated in the base of this pit and recovered an association of a few stone tools, lots of ostrich eggshell fragments, some heavily mineralised bone and some marine shells, mostly limpets. This site, which we refer to as EB17, awaits more substantial excavation, but is clearly a Middle Stone Age shell midden.

Hoedjiespunt

We have found three occurrences of Middle Stone Age material, sometimes stratified with hyena derived bones, on the small peninsula of Hoedjiespunt, on the edge of the town of Saldanha Bay. These had previously been known to archaeologists from the South African Museum and one (HDP1) is perhaps the same that had been systematically collected for many years by Graham Avery and Richard Klein. The peninsula is about two kilometres

distant from the site of Sea Harvest, which is located in the same stratigraphic context.

HDP1 is a locality with both a hyena lair and a MSA shell midden stratified in partly cemented aeolian sands directly opposite the entrance to Saldanha Bay. We began to work here in 1993 intending simply to continue the practice begun by Avery and Klein of collecting bones from an eroding face. But the discovery of fragments of a hominid tooth and the recognition that there were both palaeontological and archaeological faunal assemblages at the site necessitated a clarification of the stratigraphic sequence and the provenance of hominid remains. First, we cleaned off the surface smear of bone, ostrich eggshell, stone and marine shell that clothed the slope created by road construction. This has provided us with a valuable collection of material and revealed that MSA stone tools and associated marine shell and ostrich eggshell, with a small faunal assemblage, are stratified above another faunal assemblage with almost no marine shell, limited ostrich eggshell and no stone tools, evidently a lair used by a brown hyena. Because the two faunal assemblages are so different, not least in that the hominid derived MSA one is markedly marine in character whilst the hyena derived one is not, it is likely that much time separates the two occupations. This is extremely significant in that not far away at Sea Harvest hyena and hominid occupations were recognised but assumed to be approximately contemporary. This may not have been the case.

Our understanding of the stratigraphy is now fairly good and summarised in the accompanying measured profile (**Figure 1**). The surface shape of the Hoedjiespunt hill is determined, as elswhere in the local landscape, by the 1 to 2 metre thick calcrete carapace of heavily calcreted sands. Underneath this are some less cemented sands which include shell midden material and a dark clay-rich poorly sorted deposit (DAMA), which we are convinced is

an MSA occupation horizon, probably a fill eroding out from under the calcrete shelf. This dark material is ashy, contains great quantities of finely comminuted red ochre and charcoal and is highly fossiliferous. The contents include marine shellfish, very large numbers of ostrich eggshell fragments, the bones predominantly of small animals such as tortoises, cormorants, dune mole rats and steenbok, and a substantial collection of stone tools, most of them made of quartz. A few stone tools, especially those made from silcrete, look distinctly MSA and no necessarily LSA ones are found. Below the archaeological levels, which may turn out to be two or three differentiable shelly horizons, is a coarse shelly sand with land snails and below that again a fine stiff shelly sand without land snails. Neither of these sandy horizons have any macro vertebrate fossils. At the base of the fine stiff shelly sand there is a horizon of weak cementation, which probably allowed the development of a small overhang as the coarse sand below eroded out. This lower coarse sand is extremely rich in faunal remains and appears to be the much disturbed and churned fill of a cavity used by a bone accumulator, probably the brown hyena. Laterally this cementation is irregular and the faunal material is localised under what must have been a small feature about 8 metres across. The shape of the cavity is still to be revealed but underneath this coarse sand is another fine very stiff shelly sand that has not yet been extensively excavated. We expect that the irregular surface of the quartz porphyry, perhaps capped by some beach material, is lying below this fine sand at about local road level.

Dating such a sequence is clearly difficult, because the occupations by both people and hyenas could obviously postdate by some considerable time the accumulation of the sands. We are now convinced that both the hominid and the hyena visits were to small cavities caused by relatively rapid erosion of coarse shelly unconsolidated material under heavily or weakly cemented

shelves. In both cases it might have been possible for the people and hyenas to enlarge the spaces by digging further into the coarse sands. The stratigraphy and dating of this locality is the subject of a detailed paper in preparation, but it is fairly certain that the MSA occupations date to some part of Marine Isotope Stage 5.

HDP2 is defined as a scatter of bone, marine shell and stone tools eroding down from a brown, sandy, clay-rich horizon, very similar to DAMA at HDP1, below the calcrete carapace on the northern edge of the Hoedjiespunt hill. This erosion was caused by some mining of sand and calcrete for building purposes and underlines the observation that MSA shell midden sites in this area are almost always visible because of surface disturbance and subsequent erosion. The depositional sequence here is similar to that at HDP1 and it is noticeable that the archaeological level(s) is (are) also located in association with dark clay-rich sediment stratified immediately below the capping of heavily calcreted sand. HDP2 may also be the eroding fill from underneath a small shelf, which served to shelter people. So far our excavations here are modest and have produced a small assemblage of stone tools, almost all quartz but not obviously either MSA or LSA, associated with marine shell, lots of ostrich eggshell and some fossilised bone. We have found hyena coprolites here on the slope surface and are not sure yet what their relationship with the bone is. We have no new observations from here.

At HDP3, located at what was originally the easternmost point of the small Hoedjiespunt peninsula, there are several lenses of archaeological shell stratified under the calcrete capping of the hill, once again exposed by quarrying of building material. We have made no excavations here into in situ deposits but have collected and sieved a talus of loose sand, artefacts, marine shell, ostrich eggshell and bone which has accumulated at the foot of the

eroded face. The archaeological material is once again under the protection of the calcrete carapace in relatively loose sandy sediment. There is no sign of a hyena presence here. Marine shells have been analysed at Rainer Grun's laboratory using ESR techniques and have produced a suite of results broadly confirming our view that the shells were collected during Marine Isotope Stage 5.

Sea Harvest

Permit ?

For the sake of completeness, we also illustrate here the section through the Sea Harvest site (**Figure 2**), which we visited and surveyed in December 2000. Quite obviously the context of the shell, bone and stone tool horizon(s) here is very similar to that at Ysterfontein and Hoedjiespunt. Unfortunately, the slope at Sea Harvest is completely masked by large fallen blocks of calcrete so that any resolution of hyena and hominid occupations is not now possible. We have added some shellfish measurements to those of Volman, but these do not alter the pattern he recognised.

Ysterfontein

In the development of the new harbour at Ysterfontein (also known as Yzerfontein), local quartz porphyry bedrock and overlying partly consolidated sands were cut back, exposing artefacts, marine shell, ostrich eggshell and bone. These had been visible on a smaller scale before and noted by researchers from both the South African Museum and the University of Cape Town as part of surveys of west coast archaeological and palaeontological site distributions. The character of the stone tools encouraged the view that the site was a Middle Stone Age shell midden, one of several known along the Cape west coast.

Inspection of the exposed section along the road leading to the harbour reveals that there are two occurrences of artefacts eroding out of the quarried quaternary sands that lie on top of local quartz porphyry bedrock, one immediately east of the entrance boom the other behind the ablution facility block. Only the former has so far been investigated. This site, which we refer to as YZFN 1, is an extremely interesting occurrence, which requires rigorous dating of the undoubtedly associated bones, ostrich eggshell, marine shells and Middle Stone Age stone artefacts. The stratigraphy (**Figure 3**) is locally complex, but generally quite clear. The surface of the hill quarried back to extend the harbour entrance is a calcrete carapace some 1.5 metres thick where exposed. Underneath this protective shell are some loose or partly consolidated sands that contain the artefacts and associated foodwaste. These in turn are stratified above another series of partly calcreted sands that sit on a shelf of quartz porphyry. The surface of the bedrock is uneven and includes pillars of weathered material that in some parts are directly capped by the uppermost calcrete carapace. Between the pillars and under the carapace are pockets of loose material that probably accumulated as the fills of small cavities, which have now been partly or largely destroyed by the cutting back of this face. The fills that remain are probably the rear parts of cavities because they include blocks of aeolianite and calcrete cemented together with shells and artefacts, all of which have presumably slumped back by gravity.

A careful search of the surface of the hillside above the face reveals no Later Stone Age material. In fact the only archaeological material, in the form of marine shell, ostrich eggshell fragments and stone, above the calcrete is a pair of small banks of sediment which have probably been heaped up from the MSA assemblages below by earthmoving activities associated with the cutting back of the face. These two small heaps, which

we have mapped, show no characteristics that might be definitively identified as LSA but are similar to the assemblages eroding from the in situ levels below. Although this needs further investigation we assume at the moment that all material from this occurrence is MSA and originates from one or more in situ lenses of midden in the fills under the carapace.

Material is tumbling from the stratified archaeological horizons and forming a loose talus on top of the shelf of quartz porphyry before falling over the lip and accumulating in a second lower talus at the foot of the quarried bedrock. In February 1998 we excavated at the foot of the face in a wedge of deposit that had accumulated since the cutting back of the face. This material is obviously not in situ but provides us with a first opportunity to understand the character of the stone tool and associated shell and bone assemblage. In April 1999 we made a small collection of shell and stone from the upper talus where these remains are lying before tumbling further down to the level of the road. In December 2000 we scraped clean the surface of the slope above the bedrock shelf and were able to distinguish more clearly the stratigraphic horizons. It appears there may be both hyena and hominid generated faunal assemblages here, as at Hoedjiespunt and Sea Harvest. The hyena horizon at Ysterfontein is exposed only marginally and has probably contributed very little or not at all to the assemblages described below. It is our intention to excavate the in situ archaeological and palaeontological levels but only when some scaffolding can be built to make work on the very narrow shelf of bedrock more safe. Some preliminary observations on the composition of the archaeological assemblages can be made. A more complete description of the Ysterfontein material is in preparation.