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AN ARCHAEOLOGICAL SURVEY OF
REIN'S NATURE RESERVE,
SOUTHERN CAPE COAST.

Prepared for

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by

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1. EXECUTIVE SUMMARY

An archaeological survey of Rein's Nature Reserve on the southern Cape coast has found the area to be rich in archaeological sites. An extensive series of well preserved open station shell middens were found among the frontal dune system along almost the entire length of the 7.5 km sea frontage searched. A number of ancient stone-walled, tidal fishtraps (visvuyers) associated with the pebble and cobble beach of the nature reserve, were also observed. Further inland from the coastline, an assemblage of much earlier stone implements within a disturbed deflation basin, as well as among the exposed lower ridges of Buffelskop overlooking Gouriqua, were also found.

The archaeological evidence at Rein's Nature Reserve can be traced back at least 400 000 years, until the more recent past about 350 years ago, when the stone walled fishtraps and rocky shoreline were still being utilised by the Bushman communities living there.

The archaeological survey also forms part of a much broader comprehensive environmental study commissioned by Rein's Nature Reserve. The results of these studies will be used to draft a Management Plan for the reserve. The approval of the proposed development plans for the nature reserve, which includes hiking trails, conference facilities, as well as an environmental/education centre, is subject to the approval of this Environment Management Plan by Cape Nature Conservation.

The proposed development plans, which also include the construction of chalets within the Main Complex area, the extension of the present clubhouse, and the development of Rest Camp C, will have a low level impact on some of the already disturbed shell midden deposits present there. No mitigation is therefore considered necessary, as the shell middens among the frontal dunes will be incorporated into the management plan implemented for the nature reserve.

It is recommended, however, that an archaeological component be included in the proposed environmental/education centre. This should take the form of one or two of the better preserved shell middens among the frontal dunes being excavated, and the artefacts excavated exhibited in the environmental/education centre.

The production of a pamphlet describing the early history of South Africa in general and of Rein's Nature Reserve in particular, as well as possibly the production of an audiovisual show, (eg video), of the excavation, is also envisaged.

In addition, sites of archaeological interest could be included into a hiking trail along the coastline, by way of information boards placed strategically close to some of the shell middens and fishtraps located along the coastline.

If these recommendations are accepted, it would be the first privately-owned nature reserve to adopt an archaeological protection plan in South Africa, thus ensuring the sustainable development of cultural resources as an integral part of environmental management.

2. INTRODUCTION AND BRIEF

The Agency for Cultural Resource Management has been commissioned by Rein's Nature Reserve Pty. Ltd., to undertake an archaeological survey of the proposed nature reserve.

The specific issues to be addressed include the following:

1. a systematic archaeological survey of the proposed nature reserve;
2. the identification of sites of archaeological interest that may exist, including their status and significance;
3. the proposal of measures to protect the archaeological integrity and sustainable development of archaeological sites in the proposed nature reserve; and
4. an assessment of the buildings described as "Ruins" in the proposed nature reserve.

3. LOCATION

The properties to be included in the proposed Rein's Nature Reserve comprise the portion of three farms known as Buffelshoek No. 455, Langefontein No. 453 and Viswatersplaas No. 536. The combined length of the sea frontage of the properties to be searched for archaeological sites is about 7.5 km, comprising a rocky shoreline interspersed with pebble and cobble beach, and a well vegetated frontal dune system. In addition, a number of inland locations on the Farm Buffelshoek (the originally owned Atomic Energy Corporation nuclear testing facility of Gouriqua), were also searched for the presence of archaeological sites.

4 THE SURVEY

About 7.5 km of sea frontage of the proposed Rein's Nature Reserve was systematically foot searched for the presence of archaeological sites (Figure 1). All the sites located are described in detail and their locations marked. The description of the sites include the physical characteristic of the location of each site, the extent of the sites, and the nature of the archaeological remains present. A photographic record of the sites, including the stone walled tidal fishtraps, was also made.

5. RESULTS OF THE SURVEY

5.1 Shell middens

One of the best-known sites in the coastal zone of South Africa is the open station shell midden. These sites represent the accumulation of food debris from Bushman groups visiting or living close to the coast and exploiting the abundant marine resources, predominantly shellfish. Open station shell middens may also represent

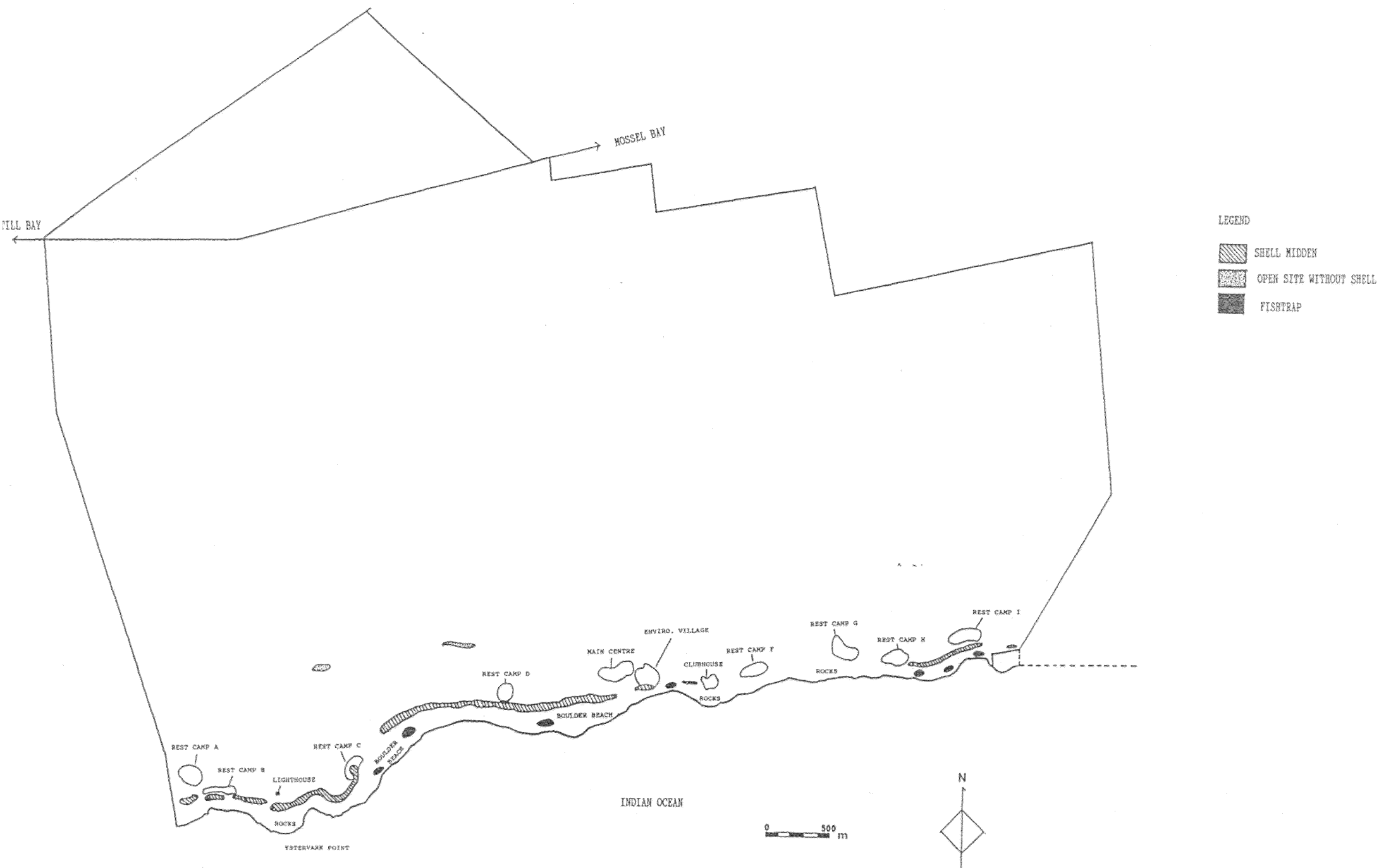


Figure 1. Rein's Nature Reserve: Concentration of archaeological sites.

short-term campsites and include remnants of structures, fire-places, etc. The remains of terrestrial animals including fishbones, crayfish, seal, birds, tortoise, and small antelope, are commonly found. Stone tools, pieces of ostrich eggshell, and pottery sherds also occur. Human burial remains are also occasionally found in shell midden deposits.

Open station shell middens can be found along the entire length of the South African coastline (Kaplan 1993). They are, however, predominantly located on or close to exposed rocky headlands or shorelines, and among vegetated and exposed dune systems. They vary considerably in size, from hundreds of square metres in extent and several metres deep, to a small pile of shell and one or two stone tools.

Many of the open station shell middens in South Africa dating to the last 2000 years contain fragments of clay pots. These findings mark the appearance of herders into the South African landscape. Archaeological evidence suggests that hunters and herders may have continued to live side by side after this time, but hunters were gradually assimilated by herders or moved further inland (Deacon 1985).

The Rein's Nature Reserve shell middens are predominantly concentrated in three areas (Figure 1).

Well preserved shell middens can be found along a stretch of coastline immediately south of the proposed environmental village (part of the main Conference Complex), till a sign marked 'Bosbokbos', at Gouriqua (Figure 2A-B). The middens are found among the vegetated frontal dunes which run parallel with the coastline, broken occasionally by road, path and stream cuttings. These middens are present in varying degrees of density and extent.

The exposed tops of the dune cordon contain abundant scatters of fragmented and crushed shell, numerous stone artefacts, pieces of ostrich eggshell, and pottery. The bones of seal, small antelope and bird (cormorant), were also found. Many more scatters of fragmented shell, both marginal and substantial, may also be found among the seaward-facing slopes of these frontal dunes. Fragmented scatters of shell and some stone implements may be found behind the barrier dunes where they have spilled over the back.

The stone tools on these middens are predominantly made of quartzite, and comprise unmodified and modified flakes (including both utilised and retouched pieces), large flake blades, split and unmodified cobbles, and chunks. Some partially ground pieces of stone, hammerstones, as well as one haematite (ochre) pencil, and several pieces of unmodified ochre were also found. Several stone tools, including flakes, small blades, utilised pieces and an adze, are made in silcrete. Pieces of ostrich eggshell

are present, as are several small pieces of red and black-burnished, grit tempered pottery.

A substantial scatter of fragmented and crushed shell, and stone implements, were found among lower frontal dunes in front of the proposed environmental village, as well as at the environmental village site identified for the construction of further accommodation units (Figure 1).

North of the proposed environmental village, toward the clubhouse and boundary fence of Gouriqua, the frontal dunes are low and thickly vegetated. Yet still marginal scatters of fragmented shell and some stone tools were found here, as well as behind the dunes (Figure 1).

An indication of the richness of the archaeology of Rein's Nature Reserve, is attested by the midden material which can be clearly seen eroding out of the (coastal) road cutting at Gouriqua. Stone implements were also found in the road.

Fragmented shell and some stone implements were found on the seaward side of the coastal road, but the bulk of the middens are located among the frontal dunes.

The shellfish species and the type of stone implements present on all the shell middens are consistent. Limpets are the dominant shellfish species, with small amounts of periwinkle and perlemoen. Mussels are conspicuous by their absence.

South of the sign "Bosbokbos", marginal scatters of fragmented and crushed shell, and fewer stone tools, are present among a low vegetated dune system. The shell thins out considerably beyond this point, almost disappearing, near a fairly large wetland system.

Numerous small marginal scatters of fragmented shell, and some stone tools can be found above a large sand dune close to and associated with the non habitable dwellings Nos. 59 and 60. Dune mole rat activity is extensive. The proposed development of Rest Camp C will have a low level impact on these largely disturbed shell middens present here. Midden material was also found scattered among the seaward facing slopes of this large dune, but none was found among the thickly vegetated coastal fynbos on the plain below.

A second, large concentration of both substantial and marginal shell middens, was located where the cobble beach bends around the coast toward Ystervarkpunt, extending beyond the lighthouse toward proposed Rest Camps B and A and the southern boundary fence of Gouriqua. Here the well vegetated frontal dunes are steeper and higher than the frontal dunes located parallel to the coastline. Numerous scatters of shell remains, both large and small, occur here.

Three large shell middens comprising fragmented and whole shell remains, stone tools, pottery and ostrich eggshell, are clearly visible from the coastal track, against the seaward facing slope of the steep frontal dunes. Midden material also occurs on top of the dunes (Figure 2C). These middens contain abundant concentrations of fragmented shell, dominated by limpet with some periwinkle and perlemoen. Stone artefacts made of quartzite are numerous, and include a range of unmodified and utilised flakes, flake blades, several retouched pieces, chunks, and whole unmodified as well as split cobbles. At least two upper grindstones, one lower grindstone and several single and double pecked hammerstones were found. Three silcrete adzes, one with end-scraper retouch, were also found. Ostrich eggshell and several sherds of black and red-burnished and plain unburnished, grit tempered pottery were present.

Yet more marginal and fairly extensive scatters of fragmented and crushed shell can be found among the steep frontal dunes above the coastal road, where they finally flatten out toward the lighthouse. Fewer quartzite stone tools including unmodified and modified flakes, split cobbles, some ostrich eggshell and a few pieces of grit tempered pottery occur.

A small site on the rocky coastline was found. This site is situated in the lee of some large quartzitic rocks about 20 metres south of the existing boat launch site. Remains of a modern fire, pieces of rusted metal and beer tops attest to a much more recent occupation. A large number of unmodified quartzite flakes and chunks, as well as a few large pieces of black burnished and plain, grit tempered pottery sherds, were found.

One of the most visible shell middens encountered during the survey is located alongside the coastal road leading down from the lighthouse (Figure 2D). The midden consists of a compacted and substantial accumulation of shell about one metre thick, located in a wind deflated gully. The midden unfortunately will over time become further eroded and damaged, and may eventually disappear altogether. A wide spread of fragmented shell covers the deflated slope, which is littered with stone artefacts. These include unmodified and modified quartzite flakes, large chunks, split and unmodified cobbles, and a hammerstone. Some ostrich eggshell and numerous pieces of red and black burnished grit tempered pottery sherds were also found.

An interesting feature on this midden, is the presence of a localised pile of quartzitic stone on the southern edge of the deflation basin, about 10 metres behind the main (compacted) shell concentration. Numerous unmodified flakes and pieces of flaking debris are associated with these stones, which may be the remains of a small knapping or workshop area.

South of the lighthouse toward the southern boundary fence of Gouriqua the frontal dunes are steep and well vegetated. A marginal but extensive scatter of fragmented shell can be found among these dunes. One such scatter, about 50 metres south of the lighthouse, is associated with a band of exposed calcrete. Fragmented shell is widespread. Nodules of calcrete, stone artefacts, including unmodified and modified quartzite flakes, a hammerstone, an upper grindstone, chunks, split and unmodified cobbles, some ostrich eggshell and a few pieces of pottery were found. A natural spring can be seen below this dune which probably acted as a focus of settlement at Ystervarkpunt.

Yet more marginal scatters of fragmented and crushed shell were located among the steep frontal dunes all the way till the southern boundary fence of Gouriqua. Small scatters of fragmented shell were also noted close to the non-habitable dwellings (proposed Rest Camp B), as well as above the dirt road among the vegetated coastal plateau. The impact of proposed Rest Camp B on these ephemeral scatters will, however, be low. No mitigation is therefore anticipated.

Marginal, but fairly extensive, scatters of fragmented shell were also discovered among the vegetated frontal dunes on the farm Langefontein No. 453 (Figure 1). These dunes are considerably flatter and more vegetated than the dune system at Gouriqua, making archaeological visibility low. This, and the fact that a number of holiday cottages, non-habitable dwellings, and structures are located here, as well as overgrazing, has meant that fewer and less well preserved midden occurrences were found.

Midden material can be found on the surface, as well as eroding from a small cutting, about a metre from the fence at the northern boundary of Langefontein. Stone flakes including unmodified flakes, some split cobbles and chunks were found. Fragmented and crushed limpets dominate the shellfish composition.

Several more thin scatters of fragmented shell can be found among these lower frontal dunes along this stretch of coastline. These scatters are located from the northern boundary fence of Langefontein until Neliesgif, where a cluster of non-habitable buildings and holiday cottages are located. Dune mole rat activity is quite extensive, especially in the vicinity of Neliesgif. Fragmented shell and stone tools including a broken upper grindstone, can be found among a raised pebble beach about 20 metres north of non-habitable dwelling No. 14. The impact of these clusters of cottages and dwellings on the scattered shell and stone remains is considered to be low. As a result no mitigation is considered necessary.

Midden material can also be seen in the sections of road cutting along this stretch of coastline. Beyond holiday cottage No. 22, the frontal dunes are heavily vegetated and no further midden occurrences were located.

5.2 Open-air sites without shell

Coastal open sites that are not shell midden dumps are generally interpreted as sites that are associated with one or other aspect of the Stone Age. These open air locations are usually found between dunes or behind frontal dunes and ridges (which afforded protection) - and often referred to as deflated sites. They are also found along exposed mountain ridges. They are usually fairly large in extent, with artefacts including stone, pottery and beads scattered widely. Coastal open sites without shell may also include quarry or manufacturing sites, where Stone Age people went to obtain raw materials for making stone tools.

Two such open-air sites were found at Gouriqua (Figure 1). A fairly large assemblage of stone implements was located on the coastal plateau, and within a wind deflated basin, about 500 metres inland from the coastline behind the lighthouse. A few stone implements were found scattered about the plateau on this disturbed site, while the bulk of stone is associated within the deflation basin among thatch and an outcropping of calcrete. The stone tools found are Middle Stone Age¹ and Early Stone Age² in character, and include both large and small unmodified flakes (some with faceted platforms), a few utilised implements, some cleavers, choppers and three crudely retouched handaxes all in quartzite. One possible upper grindstone was also found.

This site has been disturbed, however, attested by extensive dune-mole rate activity on the coastal plateau. There have also been attempts within the deflation basin to reduce wind erosion of the loose sandy soils by erecting shade cloth. This has caused further disturbance to this site.

The second open-air site was located among exposed quartzitic rocks on the mountain ridge overlooking Gouriqua (Figure 1). A few Early Stone Age implements were found, including some crudely struck flakes, and a large irregular core.

5.3 Fishttraps (visvywers)

Visvywers or tidal fishttraps typically consist of stone-walled enclosures built in either gullies or low-energy bays with an abundance of loose boulders. The dams range in size from a few metres in diameter to as much as 100 metres. The low piled stone walls are assembled with gently sloping seaward sides and almost vertical interior walls - thus entry of fish at high tide was facilitated while their exit at low tide was prevented. A number of south coast complexes comprise several tiers of enclosures extending from the high water mark to spring-low areas to ensure catches through a range of tidal situations.

1. A broad term referring to a period between 400 000 years and 20 000 years ago.
2. A broad term referring to a period between 2.5 million and 400 000 years ago.

Tidal fishtraps have been recorded on the south coast, for example at Still Bay and Cape Agulhas. Archaeologists have proposed that the concept of tidal fishtraps may have originated among Later Stone Age³ (LSA) people who lived at the coast some time after 2000 years ago (Avery 1975;). Archaeological deposits attributed to the LSA, like open station shell middens, contain far more fishbone than deposits of greater antiquity. Archaeologists have therefore concluded that LSA people invented a fishing method that enabled them to effectively exploit large quantities of vertebrate fish - mainly by means of fishtraps at suitable locations along the coast (Goodwin 1946). "Ownership" of some south coast fishtraps has continued through to the historic period with some families maintaining the devices and achieving catches to the present day.

At least nine tidal fishtraps were located along the 7,5 km stretch of coastline surveyed at Rein's Nature Reserve (Figure 1 and Figure 3A-D). They are all clearly associated with the pebble and cobble beach. Three were located within the farm Langefontein and six within Gouriqua. The walls of most of them have been washed flat by wave action, but generally they are in a fairly good condition. Three of the fishtraps at Gouriqua comprise several tiers of enclosures, similar to tidal fishtraps found to the south at Still Bay.

RUINS

All the buildings described as "Ruins" on the properties of the proposed Rein's Nature Reserve were provisionally assessed.

"Ruin" Nos. 57 and 58 on the farm Buffelshoek No. 455, are in a poor state of disrepair. Apart from the standing remains of a partial wall on "Ruin" No. 58, this building is completely destroyed, with only the foundation floor remaining. "Ruin" No. 57 is badly damaged; the roof has collapsed and only three incomplete walls remain. The thatch roof of "Ruin" No. 52 has collapsed, but the building is still standing, thus retaining its structure and architectural integrity.

The remaining "Ruins" are located on the Farm Langefontein No. 453. "Ruin" No. 10 has retained its architectural integrity. The use of modern building materials has however, reduced its historical value.

"Ruin" No. 11 has only three walls remaining and no roof. "Ruin" No. 13 is a more recent building. The roof has collapsed, but the walls are still standing. Modern cement building bricks have been used to construct this house.

3. A broad term referring to the last 20 000 years of early history

"Ruin" Nos. 57, 58, 11, 13, 25, 27 and 32 are not considered to be conservation worthy. These buildings are either completely destroyed, in a bad state of disrepair with roofs and walls collapsed, or fairly recently constructed with little architectural integrity.

"Ruins" Nos. 53 and 10 are the best examples of historical buildings on the respective farms. They retain a major part of their architectural integrity and should qualify for proposed conservation attention.

Although all buildings that are older than 50 years are protected by the National Monuments Act (Act No. 28 of 1969 as amended), the "Ruins" on Rein's Nature Reserve are not of such historical significance as to warrant much further attention. Most of them are badly damaged and do not retain much architectural integrity. Any proposed restoration of "Ruin" No. 52 on the farm Buffelshoek No. 455 and "Ruin" No. 10 on the farm Langfontein No. 453, however, should be surveyed and assessed by qualified specialists. In addition, a restoration permit will need to be obtained from the National Monuments Council before restoration be allowed to commence.

DISCUSSION

The archaeology of Rein's Nature Reserve can be traced back at least 400 000 years, until the more recent past about 350 years ago when Stone Age hunter-gatherer Bushman and Khoikhoi herders inhabited the region.

The population density during the Early and Middle Stone Ages at Gouriqua was probably low. This is attested by the fact that only two sites dating to this period were located in the survey. Other early sites may however be buried by recent wind-blown sands. Caution should therefore be exercised when excavating building foundations and undertaking construction activities.

The shell middens located among the frontal dune system of the nature reserve, as well as the tidal fishtraps along the gently shelving rocky coastline, were probably formed sometime after 2000 years ago, when Later Stone Age Bushman hunter-gatherers inhabited the region. These shell middens likely represent a continuous series of midden formation reflecting sustained use of coastal resources after 2000 years ago. Population density after this time was probably quite high, resulting in the formation of the many shell middens, and the construction of a large number of tidal fishtraps in a relatively short stretch of coastline.

The range of stone implements, and cultural finds such as ostrich eggshell, and the remains of clay pots found on the shell middens, strongly point to a Later Stone Age presence at Gouriqua after 2000 years. Shellfish, particularly limpets, were predominantly exploited by the inhabitants, but fish, seal, small antelope, tortoise and

marine and terrestrial birds were also consumed. Activities such as gathering, grinding and preparing of plant foods, fishing, and snaring of animals, were practiced.

The manufacture of stone tools, and possibly of wooden artefacts as well, were some of the daily tasks performed. This is clear from the range of stone implements and flaking debris present on the shell midden sites, which reflect plant food processing, meat processing, and wood working activities. Pieces of ostrich eggshell may be parts of broken water containers, or raw material for making beads. Pots were used to store water, food, and for cooking. Thatch, and reed from the wetlands, may have been used to construct huts and windbreaks. Abundant fresh water was available to the Gouriqua hunter-gatherers from a number of springs and freshwater streams in the area, and from the wetlands.

RECOMMENDATIONS

A management plan will be implemented at Rein's Nature Reserve which will include measures to protect and sustain the archaeological resources present there. The development of an environmental/educational centre at Gouriqua is envisaged. The aim of the centre will be to promote environmental awareness among visitors and school groups to the nature reserve. It is in this context that the following recommendations are made.

It is recommended that:

1. One or two of the shell middens at Gouriqua be excavated, and the excavated artefacts, along with photographs, drawings, and maps of the excavation, be exhibited in glass-covered display cabinets in the environmental/educational centre.

The excavation of stratified midden deposits in such close association with tidal fishtraps has not been undertaken in South Africa. Thus the visywers of the southern Cape coast have not been directly or securely dated. The excavation of one or two of the Gouriqua shell middens may hold clues as to why and when these structures were built.

2. A pamphlet be produced describing the archaeology of South Africa in general, and of Rein's Nature Reserve in particular, focussing on the early history of Gouriqua and the hunter-gatherers of the area.

3. An audiovisual, (eg video or slide-tape show) of the excavation be made, to be used in the environmental/educational centre.

4. Archaeological sites of interest be included in a hiking trail along the coast and that information boards be placed strategically close to fishtraps and middens along this route. This will further ensure the protection of the shell middens and fishtraps.

5. The Figure 2D shell midden be preserved and protected as part of an open-air exhibit, and included in the hiking trail.
6. Activities such as the proposed development of the environmental village, the proposed extension of the clubhouse and the proposed development of Rest Camp C, may impact on human burials buried beneath the surface. If burials are uncovered, a professional archaeologist must be called onto site to intervene where necessary.
7. Long-term proposed development plans (not included in the present study Terms of Reference) should be subjected to an archaeological impact assessment. The anticipated impacts of these plans on archaeological deposits, which include the proposed Rest Camps for example, are however, considered to be low.
8. All Rein's Nature Reserve personnel be informed of the presence of archaeological sites in the area, and the importance of protecting them.
9. "Ruin" No. 52 on the farm Bufelshoek No. 455 and "Ruin" No. 10 on the farm Langefontein No.453, should be surveyed and assessed by National Monuments Council personnel, should plans to restore these buildings be proposed.
10. Finally, it should be acknowledged in the environmental management plan that archaeological sites are protected by the National Monuments Council (Act No. 28 of 1969, as amended) (Appendix 1).

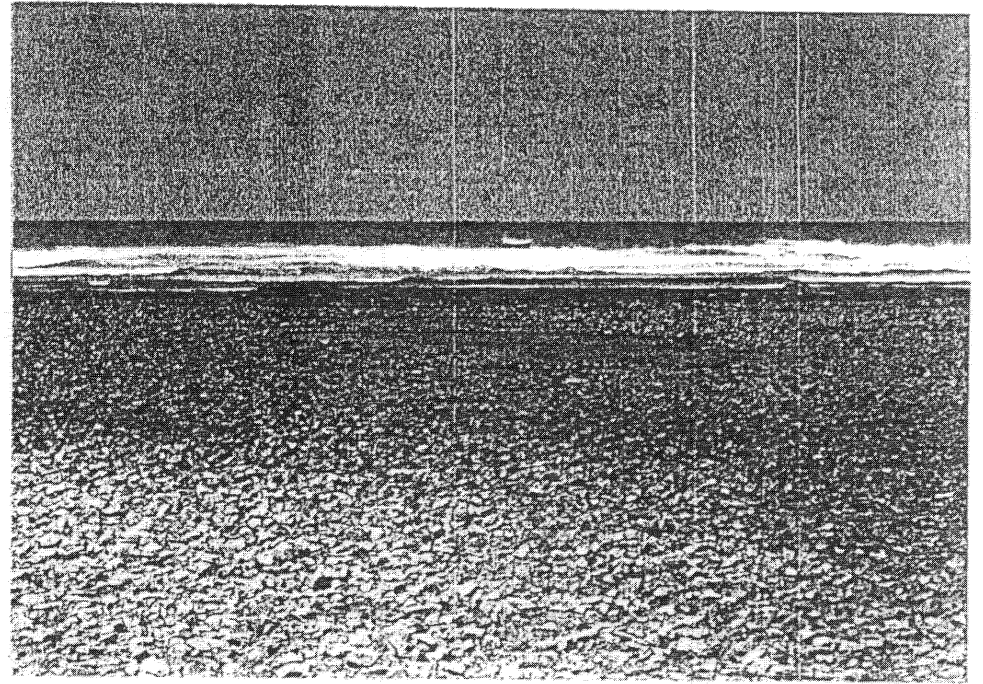
CONCLUSION

The excavation and display of excavated artefacts in an environmental/educational centre at Rein's Nature Reserve offers a unique opportunity to make archaeological information accessible to large numbers of people. Coupled with environmental education, an appreciation of the rich cultural history of the area will ensure the protection of archaeological sites in Rein's Nature Reserve.

If the recommendations proposed are accepted, it would be the first privately-owned nature reserve to adopt an archaeological protection plan in South Africa, thus ensuring the sustainable development of cultural resources as an integral part of environmental management.



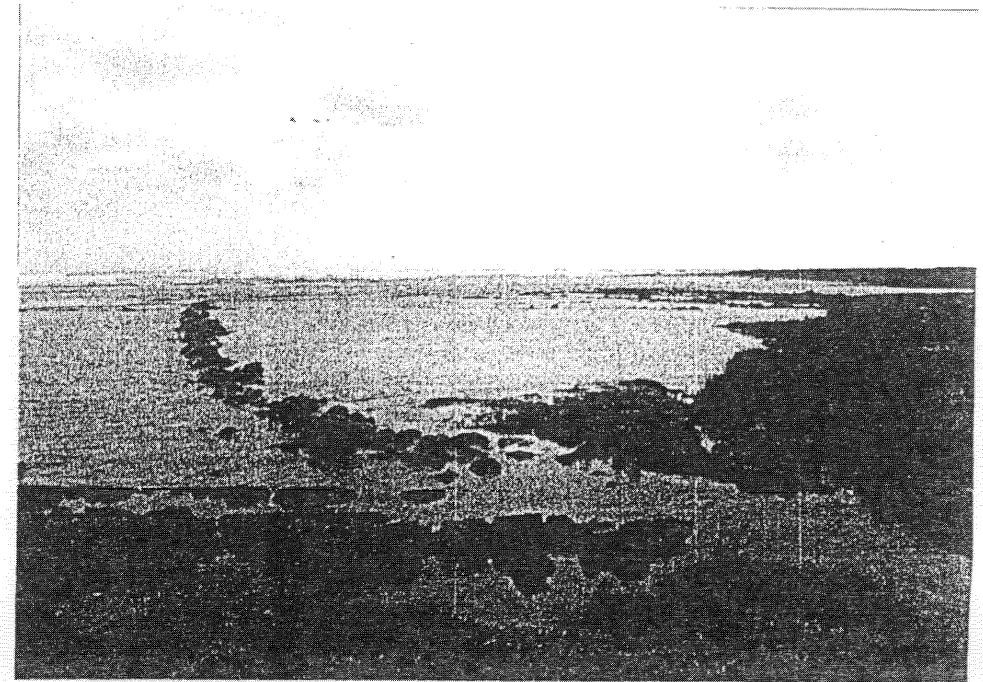
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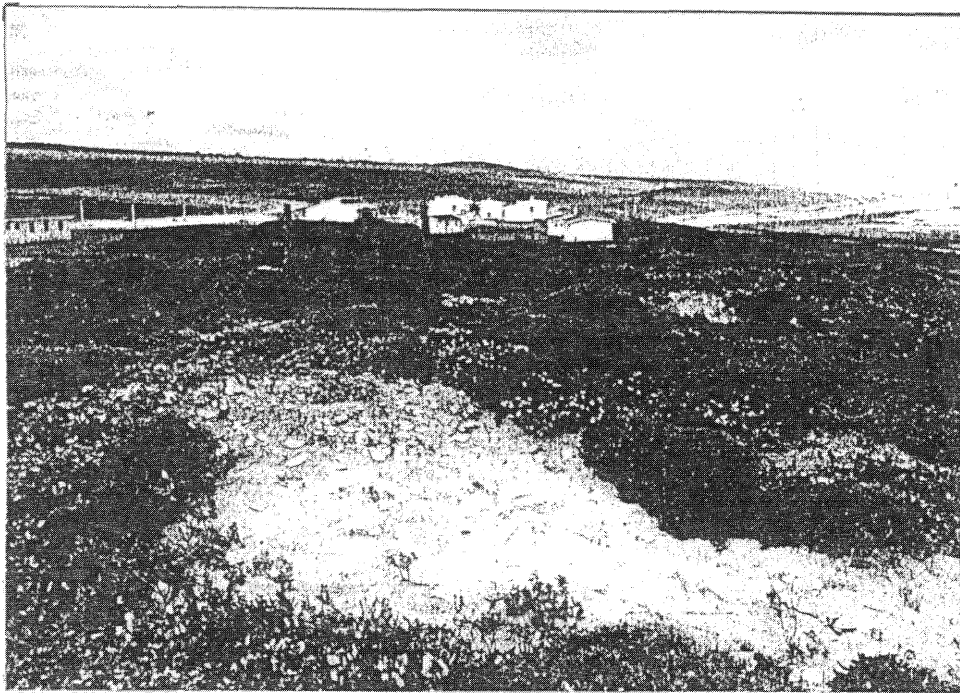


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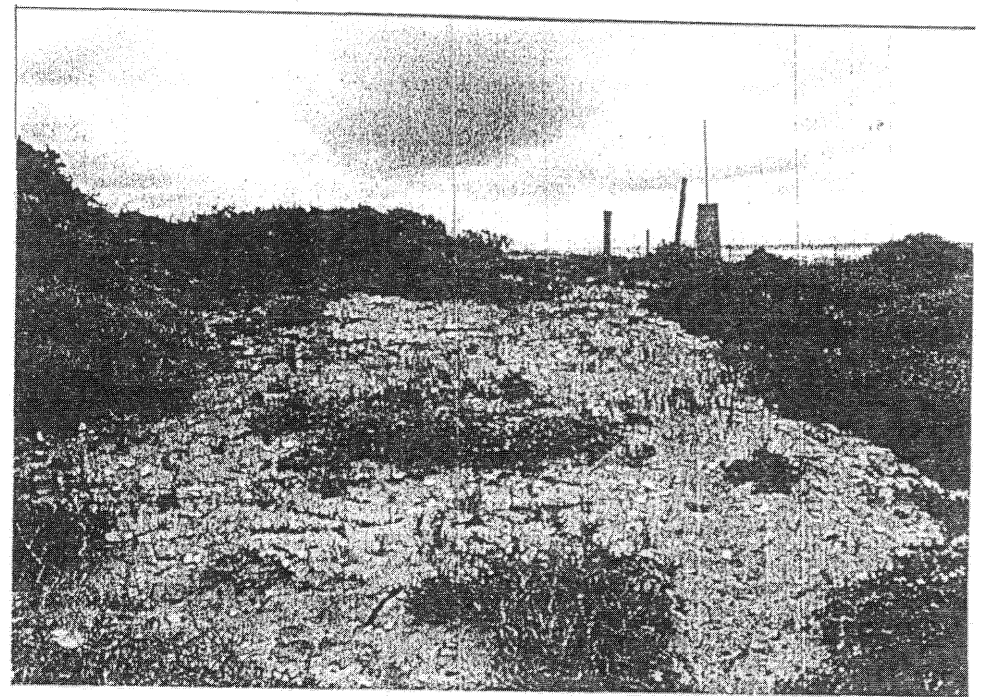


D

Figure 3A-D. Rein's Nature Reserve. Fishtraps



A



B



C



D

Figure 2A-D. Rein's Nature Reserve: Shell middens.

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