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FURTHER NOTES ON THE FAMILY CORALLIOPHILIDAE

by Markus Lussi & Dawn Brink

Since publishing our article in the *Strandloper* of June 1999 (no. 258), there have been several corrections and further developments concerning this rather fascinating family.

Corrections

1. Dr. Sadao Kosuge from Japan, an expert on the family, has decided that the species originally identified as *Babelomurex diadema* (A. Adams, 1854) is in fact *Babelomurex purpuratus* (Chenu, 1859). Two specimens dredged off southern KwaZulu-Natal / Wild Coast were sent to him late last year for identification. As a result, the shell illustrated at the top left-hand side of Page 4 of *Strandloper* no. 258 must be corrected. See Figure 1.

2. On Page 5 of the same issue, centre, *Coralliophila erosa* (Röding, 1798) was incorrectly illustrated with a specimen of *Coralliophila bulbiformis* (Conrad, 1837) which has not yet been recorded from South Africa. See Figure 2 for the true *Coralliophila erosa*.

Developments

1. According to Dr. Kosuge, *Babelomurex purpuratus* (Chenu, 1859) is a first record of this species from South Africa. The species has been dredged from off southern KwaZulu-Natal/ Wild Coast for some years, and has in the past been incorrectly known as *Babelomurex diadema* or even *Babelomurex capensis*.

2. Another interesting species just identified by Dr. Kosuge is *Babelomurex nagahorii* (Kosuge, 1980) which has also been dredged off KwaZulu-Natal/ Wild Coast recently. According to Dr. Kosuge, this is another first record for South Africa. The authors have three specimens in their collections. See Figure 3.

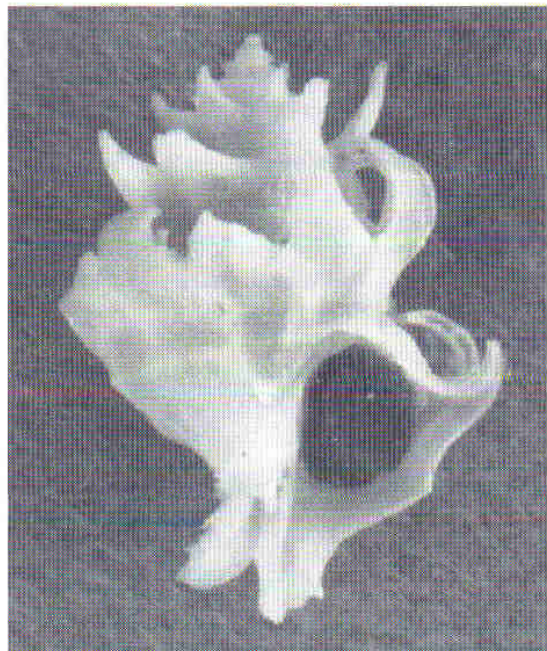


Figure 1. *Babelomurex purpuratus* (Chenu, 1859) 23.0 x 16.4 mm. Dredged Transkei -100 m.

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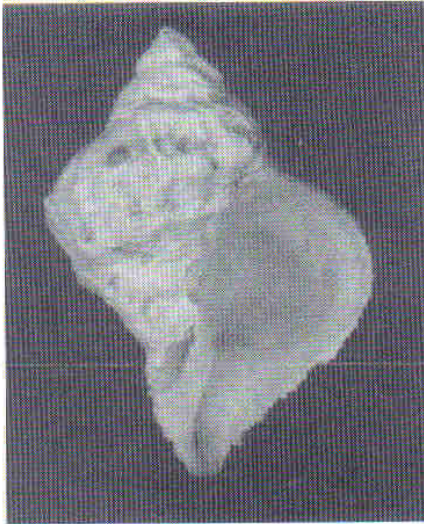


Figure 2. *Coralliophila erosa* (Röding, 1798). 26.5 x 19.7 mm. Northern KwaZulu-Natal, -18 m.

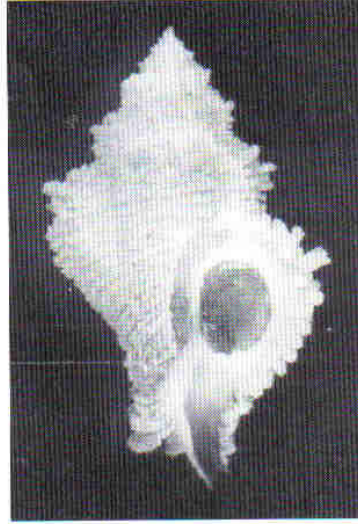


Figure 3. *Babelomurex nagahorii* (Kosuge, 1980), 21.5 x 16.7 mm. Dredged Transkei, -100 m.

3. *Coralliophila caroleae* D'Attilio & Meyers, 1984, identified by Dr. Kosuge, has been dredged off KwaZulu-Natal at a depth of 150 meters. The specimen measures 13.2 mm x 10.2 mm

4. *Coralliophila arabica*, Melvill, 1898 was taken off southern KwaZulu-Natal at a depth of 35 meters and measures 7.6 mm x 5.5 mm. This species was also identified by Dr. Kosuge.

5. *Coralliophila leucostoma* Kosuge, 1986 was dredged off Park Rynie at a depth of 100 m and is another species identified by Dr. Kosuge. The specimen measures 10.8 mm x 8.8 mm

Due to their small size, the last three species could not be photographed. They are all first records for South Africa.

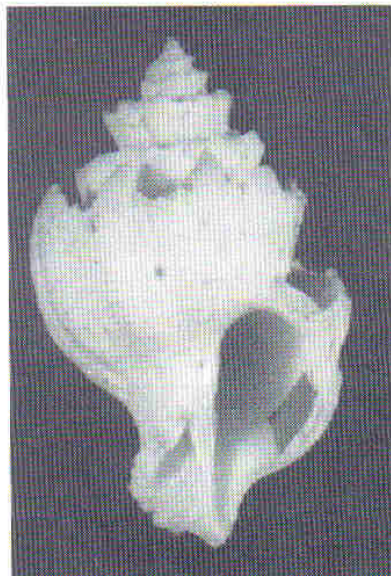


Figure 4. *Babelomurex capensis* Tomlin, 1928). Holotype. 21 x 13 mm. Dredged off Sandy Point, Transkei coast, -174 m. Photo courtesy of S. African Museum.

6. *Babelomurex capensis* (Tomlin, 1928) continues to create some confusion. One of the authors went to the SA Museum in Cape Town in 1996 to inspect the holotype and compare it with a specimen then thought to be *Babelomurex diadema* (now corrected to *Babelomurex purpuratus*). It was obvious that they were different species, but no further conclusion was reached. Mention of *B. capensis* again appeared in an article by Stephan Veldsman in the *Strandloper* of December 1999 (no. 260). Identification of his two specimens illustrated is difficult without being able to compare all species involved, but they seem to be closer to *B. purpuratus* than *B. capensis*. They also appear to be rather worn, which makes identification more difficult.

Upon request, Michelle van der Merwe of the SA Museum photographed the holotype of *B. capensis* for this article. At the time of description of *B. capensis*, the genus was *Latiaxis*, which was changed in 1985 to *Babelomurex*. See Figure 4.

The Natal Museum has several sub-adult and juvenile specimens, two of which were dredged in 1981 and 1983 off Qora River and Mtamvuna River respectively, in much the same area as the holotype was found. See Figure 5. They were thought to be *B. capensis* until compared with the photographs of the holotype and specimens of *B. purpuratus*. Dr. Kilburn concluded that they were indeed the same as the species we are now calling *B. purpuratus*.

As *B. capensis* is represented by a unique specimen, it is difficult to decide whether it is a valid species or an aberration of the commoner *B. purpuratus*, the two species being conspecific (same locality).

The unique specimen of *B. capensis* differs from *B. purpuratus* by having a much coarser spiral sculpture with more pronounced and rounded axial ribs. *B. purpuratus* has one or two angular spiral ridges median to the body whorl. In *B. capensis* these ridges are absent.

Reference

Kosuge, S. and Suzuki, M. (1985). *Illustrated Catalogue of Latiaxis and its Related Groups, Family Coralliophilidae*. Institute of Malacology of Tokyo, Special Publication No.1.

Acknowledgements

We are grateful to Ms. Michelle van der Merwe of the SA Museum for supplying photographs of the holotype of *Babelomurex capensis* and to Dr. R.N. Kilburn of the Natal Museum for the loan of specimens of *Babelomurex purpuratus*.

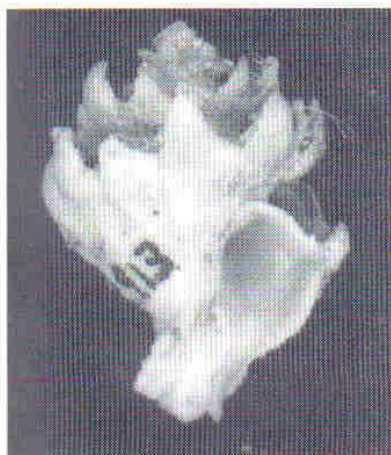


Figure 5. *Babelomurex purpuratus* (Chenu, 1859). Natal Museum specimen, dredged off Mtamvuna River, Transkei coast.

I see one of my main functions as "Technical Officer" to facilitate collaboration between the Border Shell Club and the East London Museum, in addition to assisting members with identification of molluscs. There has been a considerable amount of liaison this year:

Donation of Nogg's Newman's collection to the museum. Nogg's Newman donated his entire shell collection as well as the cabinets in which it was housed to the museum. It is the product of over 20 years of collecting and contains a comprehensive selection of species from South Africa as well as fine specimens from many other parts of the world.

Project on rocky shore invertebrates and their utilisation. Shell club members, D-J Hodgkinson, Mike Wigley and Nancy Tietz have spent a lot of time helping with a project on distribution and abundance of rocky shore invertebrates and seaweeds, the aim of which is to gather baseline data on stocks of these organisms in the East London area. There is increasing utilisation of living marine resources on rocky shores along this coast for both subsistence and recreational purposes. The data from this project can be used to provide managers of marine living resources with information on which to base decisions, to provide baseline data for future monitoring and comparisons of the

ACTIVITIES OF THE BORDER SHELL CLUB DURING THE PAST YEAR by Mary Burse

One of the highlights of the past year was the 3rd Great Shell Show hosted by the Border Shell Club and the East London Museum, from 10-13 August, in the Marjorie Courtenay-Latimer Hall. Vellies Veldsman, chairman of the Society was invited to judge and he gave a lecture on Volutidae.

Meetings were held regularly and several members gave talks and brought shells for others to see. Neville Bauer and Ivan Hartwell had meetings at their homes to view their collections. Our AGM, preceded by shelling, was held at the home of Nicky and Andries Steytler who have an effectively private shell beach meters from their door. Nancy Tietz is co-ordinating a display of shells for the hotel at Haga-Haga, a small coastal village east of East London. Mike Wigley, our librarian, had a job on his hands with the relocation of our library to the new meeting venue, the home of Ann Pollock. We have an annual "safari" to Xora, which took place in August. Among the interesting finds were a sinistral *Heliacus variegata* by D-J Hodgkinson and several epitoniids in zoanthids. A scrumptious Christmas lunch was supplied by Nancy Tietz at "Nancy's Ocean Liner", her flat overlooking the East London beachfront.

stocks and levels of exploitation, to provide information on the diversity of rocky shores in the East London area, to quantify oystercatcher food abundance, and to motivate for protection of certain intertidal areas

At each of the 5 chosen sites, we counted the organisms within a 50x50 cm quad in various ways depending on the species, and measured the sizes of limpets. The job of the helpers was to write everything down, but since the shell club members knew what the species were, they could also count and measure, making progress faster. We collected mussel samples to measure shell length vs. weight in the lab, to estimate the amount of mussel flesh available at the site. We also did a night sample at each site, so that those species which hide during the day were represented.

Collecting of terrestrial molluscs.

A fieldtrip was undertaken to Mkambati in March, in collaboration with Dr Dai Herbert from the Natal Museum. Those participating were D-J Hodgkinson, Ivan Hartwell, Maya Vincent and myself. Although it was unusually dry, the species total stands at 55. (See article on next page)

Mike Wigley, D-J Hodgkinson, Ivan Hartwell, Maya Vincent and I spent an afternoon collecting in the forests below the new casino site, East London. Live specimens, not yet adult, of an interesting member of the Achatinidae, were collected and are being grown out by Ivan Hartwell. One has been sent to Prof. Mead, University of Arizona, for identification together with shells of the species.

Museum collections. Ivan Hartwell donated a slug, *Limax flavus*, and Gerald Kirchoff donated 9 species of deepwater molluscs. Members have donated several species of terrestrial molluscs. D-J Hodgkinson helped with curation.

Dai Herbert peering over the edge of the 'Superbowl', contemplating the steep descent



Mkambati Game Reserve - another high diversity site for land snails

by Mary Burseley and Dai Herbert

After our very successful and enjoyable land snail field-trip to Dwesa a year ago¹, we decided that we would try to make a joint excursion to forests in the former Transkei on an annual basis. This year we chose to head for Mkambati Game Reserve in Pondoland and were accompanied by the same indefatigable members of the Border Shell Club who had participated last year, viz: D-J Hodgkinson, Ivan Hartwell and Maya Vincent. The more people looking for snails the merrier. This turned out to be especially true on this occasion as it was unexpectedly dry for March, making snail hunting even more difficult than usual. Others who helped collect, in between pursuing their own missions, were Tony Abbott, a plant specialist, Ernest and Ann Pringle, butterfly specialists, and reserve manager, Joggie Ackerman. We also learned a lot from them.

Geologically, the Mkambati area consists of Natal Group sandstone outcrops with grassy plateaux cut by narrow gorges (see photos). The reserve lies on the Mzikaba Formation, a particular type of sandstone which has given rise to a flora with many endemics^{2,3,4}; one endemic family, 5 endemic/near endemic genera and 30 endemic tree species. The forests are of the "Pondoland Coast Forest" type and are largely to be found in the gorges. We collected in several different forest patches and were rewarded with some very interesting finds as well as breathtaking scenery. The Superbowl area contains a magnificent forest, surrounded by high krantzes, and is near a Cape vulture colony overlooking the gorge of the Msikaba River. We entered from the top, which was treacherously steep and difficult to negotiate, but almost immediately we came upon one of the best finds of the trip - under a forest

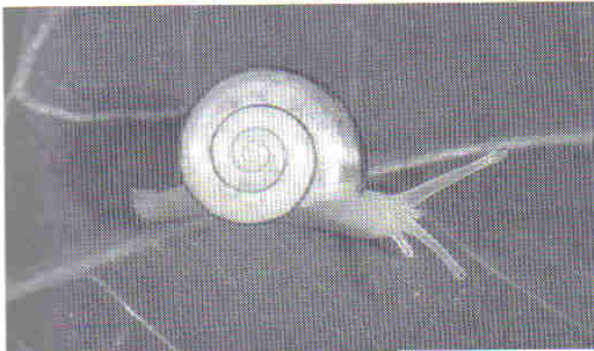
mahogany, *Trichilia dregeana*, we found a couple of live specimens of a large carnivorous snail, *Natalina beyrichi* (Martens, 1890), a Transkei endemic, of which no preserved soft parts previously existed in museum collections (photo on page 6). Under the same tree we also found a large specimen of the carnivorous slug, *Chlamydephorus sexangulus* (Watson, 1915). On the huge rocks were many flowering *Stenoglottis fimbriata*, a further bonus, and a small species of *Streptocarpus* was also in bloom. Other forest patches visited were in the Daza and Gwe Gwe sections of the reserve and on the dunes near the mouth of the Msikaba River. The Daza forest lay in a very narrow gorge with steep sides and deep pools, wonderful for swimming. We also scratched around below Horseshoe Falls, one of the most spectacular waterfalls in the reserve, a little downstream of which lies a further series of water-

falls which finally plunge into the sea.

Another interesting snail, an unusual tail-wagger, *Sheldonia leucospira* (Pfeiffer, 1857), was found when we joined Tony and Joggie on a walk to map endemic plants in an area formerly known as TRACOR, presently outside the reserve, but which they hope to get incorporated within it in due course. Taking a short-cut across some grassy slopes in this area, Ivan spotted these snails aestivating on the leaves of *Watsonia* species. We know very little about the snails inhabiting grassland in South Africa, so this was an interesting observation.



Chlamydephorus sexangulus, length ca. 100 mm. Colour of animal is a beautiful burnt orange.



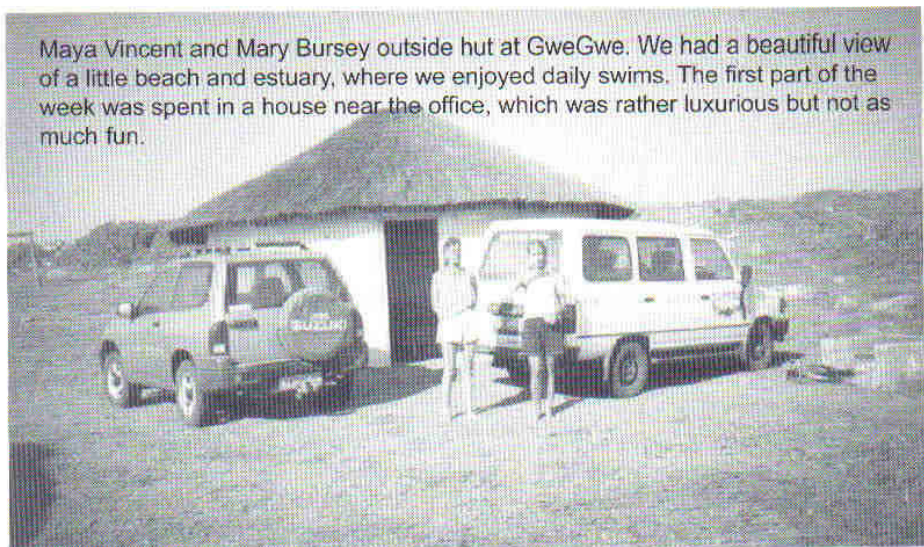
Trachycystis ?puzeyi, shell diameter 8.5 mm. Animal cream coloured, Shell has a chocolate brown stripe.

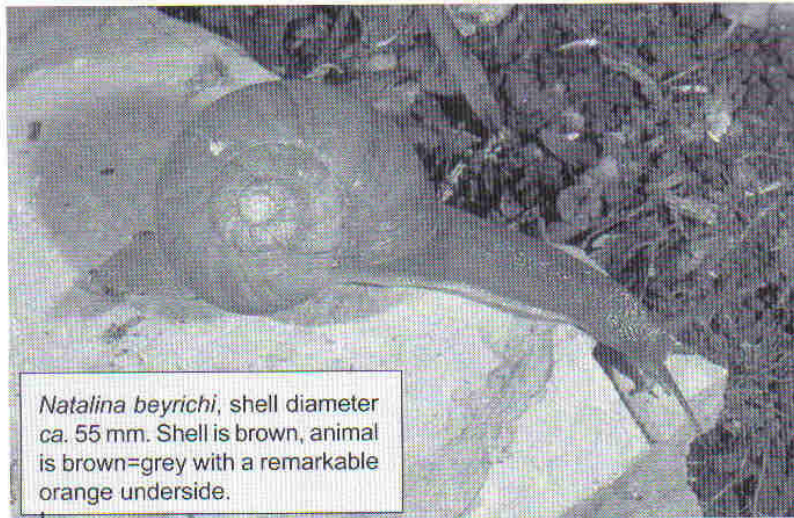
A most enjoyable day and a productive one snail-wise, was spent on the Mtentu River. Joggie allowed us to drive half the way in the wilderness section of the reserve. It being low tide, we looked at the rocky shores on the way. There is a community project at the mouth of the Mtentu which consists of a tented camp with canoes for hire. D-J and Mary also hired paddlers, not that they were lazy of course, but it enabled them to appreciate the awesome scenery and save all their energy for snail hunting. We admired the many specimens of the Pondo Coconut Palm, *Jubaeopsis caffra*, a species found only along the north-

eastern banks of the Mtentu and Msikaba rivers. The first stop on the north-eastern bank was actually quite damp and good for snails, our paddlers/guides and the Pringles eagerly helping to look. We found a *Gulella natalensis* (Craven 1880) on the hanging cactus, *Rhipsalis baccifera*, and several live specimens of *Gulella separata* (Sturany 1898) but this side of the river is technically outside the reserve, so we cannot add them to the species list. Suddenly, Ernest, not expecting to use his butterfly net for snail collecting, rushed down the slope to get it as he had seen a Spotted Buff, a species not recorded from Pondoland before. Further upstream the guides led us on a beautiful walk up a tributary of the Mtentu, where we had lunch at a waterfall with a large, deep pool at its base.

On a return visit to the Superbowl, D-J entered the forest via a less precipitous route than the steep descent and ascent at the top, braved again by the more foolhardy among us. Although we did not find all that much, back at the car D-J casually showed us a species she had found, and Dai couldn't believe his eyes. It was a large, handsome species of *Trachycystis*, which he had

Maya Vincent and Mary Bursey outside hut at GweGwe. We had a beautiful view of a little beach and estuary, where we enjoyed daily swims. The first part of the week was spent in a house near the office, which was rather luxurious but not as much fun.





Natalina beyrichi, shell diameter ca. 55 mm. Shell is brown, animal is brown=grey with a remarkable orange underside.

been particularly keen to find (photo on page 6). We all made a beeline for this area and found a few more specimens, often on leaves of *Buxus natalensis*, one of the dominant understorey trees. Dai had collected some empty shells of this species on a previous visit to Mtentu and had thought it might either be an undescribed species or a poorly known one, *Sheldonia puzeyi* Connolly, 1939, which he suspected was not in fact a *Sheldonia* (tail-wagger snail, family Urocyclidae), but rather a species of *Trachycystis* (family Charopidae). Anatomical observations support the latter contention, in particular the absence of a tail at the hind end of the foot, but he needs to confirm that the Mkambati material is indeed the same as Connolly's species by comparing it with the type specimens of *S. puzeyi* in the Natural History Museum, London. A number of poorly known species of *Gulella*, such as *G. pondoensis* Connolly, 1939 (photo page 6), and *G. rumpiana* Connolly, 1932, were also collected in this locality.

Not wanting to neglect the marine side of things, Mary, assisted by D-J, did some quadrat samples to quantify rocky shore invertebrates on two mornings at low tide. No collecting of shellfish is allowed in the reserve, so the intertidal life is rich. Prof. Arthur Dye and his team from the University of Transkei, who have done much work on shellfish resources and their

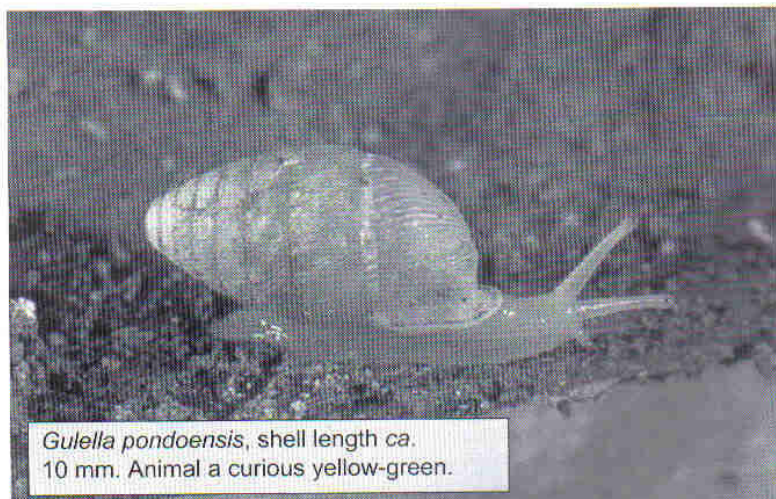
exploitation, have a long term data set from here, so this will complement their work. Some interesting molluscs that we found included *Micromelo undata* (Bruguière, 1792) and *Coralliophila clathrata* Adams, 1854.

We also joined Ernest and Ann on a walk along part of the Vulture Trail, to look for a particular acraea. Unfortunately we did not have time to join them when they covered the grassy slopes above the Horseshoe Falls, since they reported seeing a vast forest out of view of the road. That one will have to be kept for next time. Altogether Dai has now identified over 55 different species of terrestrial snails and slugs from Mkambati Game Reserve as a whole, a figure somewhat above

Dwesa's current total (ca 45)¹, which makes Mkambati a particularly species-rich locality. Only about half the species were found at both of these localities. As with Dwesa, a surprising number of the species found in Mkambati are restricted range endemics, known only from the Transkei and the most southern part of KwaZulu-Natal – a fact which emphasises the need to conserve this area.

Mkambati Game Reserve – terrestrial Mollusca species list

1. *Acanthinula* sp
2. *Afrodonta bilamellaris* Melvill & Ponsoby, 1908
3. *Afrodonta farquhari* (Burnup, 1912)
4. *Afrodonta inhluzaniensis* (Burnup, 1912)
5. *Afrodonta novemlamellaris* (Burnup, 1912)
6. *Afroguppya rumrutiensis* (Preston, 1911)
7. *Archachatina cf. vestita* (Pfeiffer, 1854)
8. *Ceciliooides gokweanus* (Boettger, 1870)
9. *Chlamydephorus sexangulus* (Watson, 1915)
10. *Chondrocyclus isipingoensis* (Sturany, 1898)
11. *Chondrocyclus putealis* Connolly, 1939
12. *Curvella catarractae* (M&P, 1897)
13. *Edouardia arenicola* (Benson, 1856)
14. *Edouardia carinifera* (M&P, 1897)
15. *Edouardia dimera* (M & P, 1901)



Gulella pondoensis, shell length ca. 10 mm. Animal a curious yellow-green.

16. *Edouardia spadicea* (Pfr, 1846)
 17. *Euonyma terebraeformis* Connolly, 1923
 18. *Fauxulus pereximius* (M&P, 1897)
 19. *Fauxulus ponsonbyanus* (Morelet, 1889)
 20. *Gulella cairnsi* (M&P, 1897)
 21. *Gulella farquhari* (M&P, 1895)
 22. *Gulella gouldi gouldi* (Pfeiffer, 1855)
 23. *Gulella pondoensis* Connolly, 1939
 24. *Gulella rumpiana* Connolly, 1932
 25. *Gulella umzimvubuensis* Burnup, 1925
 26. *Gulella* sp. cf. *sylvia* (M&P, 1903)
 27. *Gulella zelota* (M&P, 1907)
 28. *Hydrocena noticola* Benson, 1856
 29. *Kaliella barrakporensis* (Pfr., 1852)
 30. *Laevicaulis natalensis* (Krauss, 1848)
 31. *Maizania wahlbergi* (Benson, 1842)
 32. *Nata vernicosa* (Krauss, 1848)
 33. *Natalina beyrichi* (Martens, 1890)
 34. *Nesopupa farquhari* Pilsbry, 1917
 35. *Opeas florentiae* (M&P, 1901)
 36. *Pupisoma japonicum* Pilsbry, 1902
 37. *Pupisoma orcula* (Benson, 1850)
 38. *Sheldonia* sp.
 39. *Sheldonia leucospira* (Pfeiffer, 1856)
 40. *Sheldonia ?poepigii* (Pfr, 1846)
 41. *Sheldonia vitalis* (M&P, 1908)
 42. *Trachycystis bathycoele* (M&P, 1892)
 43. *Trachycystis burnupi* Connolly, 1933
 44. *Trachycystis falconi* Connolly, 1939
 45. *Trachycystis inclara* (Morelet, 1889)
 46. *Trachycystis loveni* (Krauss, 1848)
 47. *Trachycystis lunaris* Connolly, 1939
 48. *Trachycystis mcbeani/kincaidi*
 49. *Trachycystis rudicostata* Connolly, 1939
 50. *Trachycystis subpinguis* Connolly, 1922
 51. *Trachycystis puzeyi* (Connolly, 1939)
 52. *Trachycystis* sp. x2
 53. *Tropidophora insularis* (Pfeiffer, 1852)
 54. *Tropidophora ligata* (Müller 1774)

Acknowledgements

Joggie Ackermann of Eastern Cape Nature Conservation is thanked for accommodation and assistance. Maya Vincent supplied the photos of people.

References

- Herbert, D. 2000. Dwesa – a high diversity site for land snails. *Strandloper* 262: 3-4.
- Van Wyk, A.E. 1990. The sandstone regions of Natal and Pondoland: remarkable centres of endemism. In Heine, K. (ed.), *Palaeoecology of Africa*. Balkema, Rotterdam, pp. 241-257.
- Pooley, E. 1993. *The complete field guide to trees of Natal, Zululand and Transkei*. Natal Flora Publications Trust, Durban.
- Abbott, A. 1999. The plantaholic's hotspot guide. No.1. Mkambati Game Reserve. *Plantlife* 21: 41.



Taking a quick break near Daza. From left : Dai Herbert, Mary Bursey, D-J Hodgkinson

Strandloper


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Charonian musings

by Mike Cortie

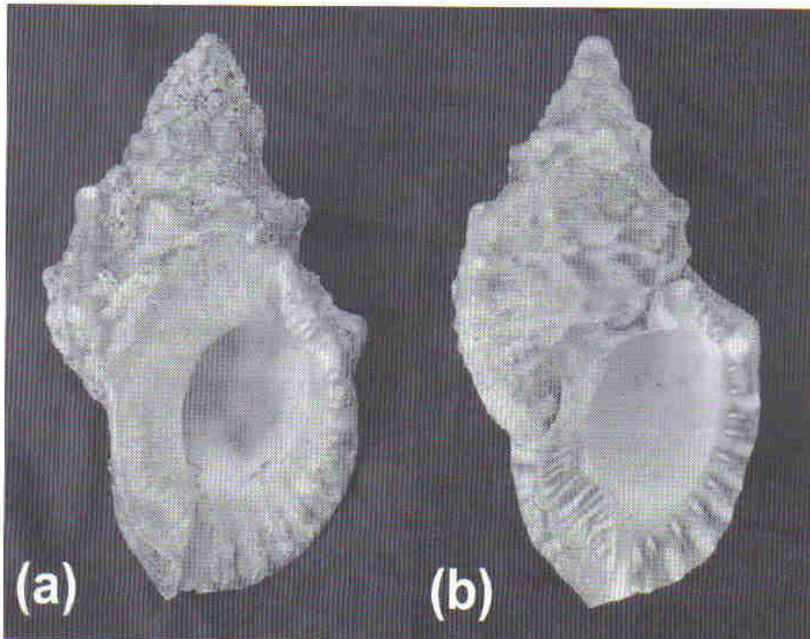


Figure 1. Typical Natal South Coast shells, showing characteristic thick-set and angular features. (a) dug out of sand in Shelly Beach tidal pool, 210 mm, (b) found while snorkeling beyond the breakers at Shelly Beach, 180 mm.

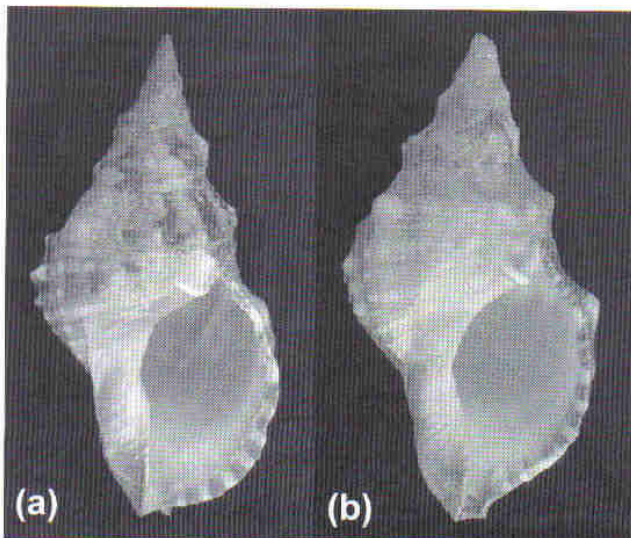


Figure 2. Shells from the Cape. (a) thin-walled and beautifully coloured specimen from inside Knysna lagoon, south-eastern Cape, 165 mm. (b) typical orange-coloured specimen from surf zone at Knysna Heads, 158 mm.

When I first began to collect shells, I regarded *Charonia lampas* with special awe. I started to collect at Shelly Beach on the KwaZulu-Natal South Coast, and well-meaning folks used to tell me about huge specimens that used to wash ashore, there and at Oslo Beach, the next beach to the north. However, no matter how diligently I scoured the beaches, no such monster came into my possession. My first lucky break came when the Shelly Beach tidal pool was 'dug out' by the municipality, having been silted up with sand. The workers uncovered two huge, rather weather-beaten specimens, one of which they sold to us (Figure 1(a)). Some years later, friends and I went snorkelling off Shelly Beach, and discovered to our joy that the sea bottom beyond the breakers was liberally littered with the shells of this mollusc (Figure 1(b)). An account of this enjoyable day's skin-diving appeared in a previous *Strandloper*¹. A year later we found two magnificent shells of *Charonia lampas* while skin diving between the Heads at Knysna. Although smaller than the Shelly Beach mate-

rial, they were well proportioned, and one of them was thin-walled and beautifully coloured, having evidently benefited from living in relatively sheltered water (Figure 2(a)). The other was the typical orange-colour form, known from the Eastern Cape (Figure 2(b)).

I do not know what the South African size record is and would be interested to hear from members. Steyn and Lussi report that they range up to 200 mm in length, and Kilburn and Rippey that the record in 1982 was 225 mm. The specimen shown in Figure 1 is 210 mm and I bet many members have seen bigger ones. The protoconch and early whorls are usually missing, making these shells decollate. Any specimen where this has not occurred becomes a very special prize.

The relationship between our local molluscs and those of Australasia, Japan and the North Atlantic is quite confusing, since the shells look very similar. Originally ours were called *Charonia pustulata*, and then they were declared a subspecies of the North Atlantic species, becoming *Charonia lampas pustulata* (Euthyme, 1889)². At least five geographically-based subspecies of *Charonia lampas* were proposed, with those from the eastern North Atlantic, the Mediterranean and the West African coast down to northern Namibia being known as *Charonia lampas lampas* (Figure 3). The Australian version was called

Charonia lampas rubicunda and the New Zealand form *Charonia lampas capax*⁵. There was also a Japanese species, *Charonia lampas sauliae*⁶. However, Beu has recently examined these variations and concluded that they are all just *Charonia lampas*⁸. The shells of these animals are compared in Figures 3 to 6, and can be seen to be very similar. Although, as a carnivore, the mollusc is not particularly common anywhere in its range, it is nevertheless fished for human consumption in a few parts of the world, such as Japan⁶ and the Mediterranean⁹.

Years passed before I encountered this species again, and the next time was in the form of a relatively small (110 mm) live specimen that I transferred to the marine aquarium that I had at that time. Although the tank was big (200 litres) this fellow was just too big for a small pond. The first night he extended his orangey-red mottled foot and set about eating all the starfish (*Asterina exigua*) in the tank whereafter he zoomed around ploughing the place up like some sort of marine bulldozer. I certainly would not recommend keeping one in a home tank.

In any event, there was some discussion about these creatures two years ago on the Mollusca forum of the Internet⁹. It was confirmed that in the wild they take starfish, echinoids and holothurians (sea-cucumbers). The Atlantic *Charonia lampas* has a very wide geographic range, extending from as far north as the Channel islands right down the western African coast and over to Brazil. Although normally a shallow water dweller, they occur down to 700 m off the West African coast ! The wide distribution is partially explained by the fact that it has long-lived planktonic larvae that wash around in the ocean currents for up to six months before, if they are lucky, finding a decent place to settle down and start a new life. In this time the veliger may travel thousands of kilometres.

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References

1. Cortie, M.B. Snorkle-diving : Natal South Coast, *Strandloper*, no.182, February/March 1977, p.1.
2. Kilburn, R. and Rippey, E. *Sea Shells of Southern Africa*, Macmillan, Johannesburg, 1982.
3. *Sea Shells*, Orbis Books, London, 1971
4. *Xenophora*, no.87, 1999.
5. Wilson B.R. and Gillett, K. *Australian Shells*, Reed, Sydney, 1980.
6. Kira, T. *Shells of the Western Pacific in Colour*, Hoikushu, Osaka, 1965.
7. Moon, G.J.H. and J. Penniket, J.R., *New Zealand Sea-shells in Colour*, Reed, Wellington, 1970.
8. Beu, A.G. *Memoires du Museum National D'Histoire Naturelle*, Paris, vol. 178, 1998, pp.69-73,
9. Lord, R. Mollusca discussion group on the Internet, 20th October 1999.

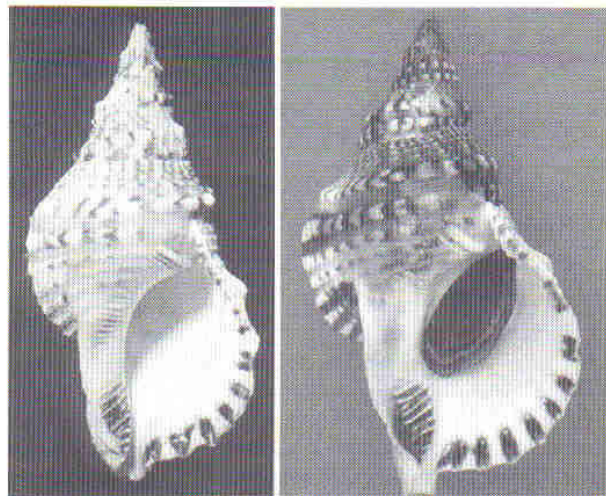


Figure 3. Shells of *Charonia lampas lampas*, (a) from 'Mediterranean/North Atlantic' (after *Sea Shells*³), (b) from Côte d'Azur, France, (after *Xenophora*⁴).

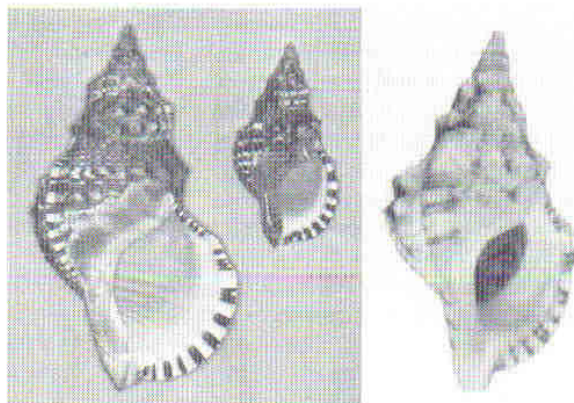


Figure 4. From Australia (after Wilson B.R. and Gillett, K.⁵)

Figure 5. From Japan (after Tetsuaki Kira⁶.)

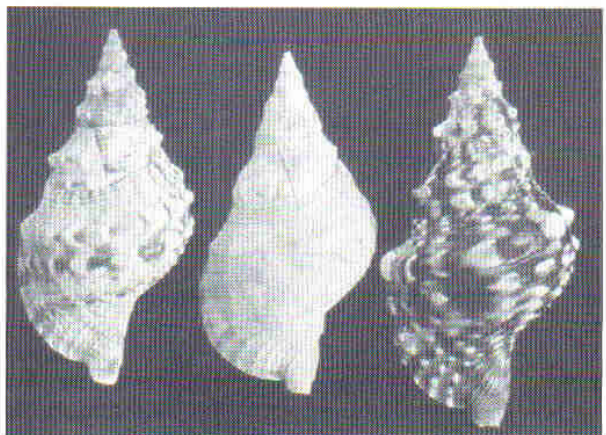


Figure 6. From New Zealand (after Moon, G.J and Penniket, J.R.⁷).

SHELLS FROM MAPUNGUBWE: AN AFRICAN TRADE KINGDOM

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The discovery sixty-eight years ago of the remains of an ancient African civilization marked the beginning of a seventy-year archaeological project for the University of Pretoria. The site, a sacred hill called Mapungubwe, meaning "Hill of the Jackal", is situated in the Limpopo Valley. It is particularly well known for its intricately worked gold funerary objects from royal burials on the top of hill. Public viewing of the material has recently been facilitated by the SASOL African Heritage Exhibition of the Mapungubwe Collection, which may be visited at the University of Pretoria. The national cultural treasure of this collection consists of thousand year-old artefacts, which include the famous gold rhinoceros, other gold ornaments, copper, shells, iron, ivory, trade glass beads, Chinese celadon and ceramic ware. Mapungubwe and K2, a related site, were proclaimed National Monuments and now fall

within the boundaries of a cross-border Peace Park named Vhembe Dongola National Park, which is listed to be proclaimed a World Heritage Site.

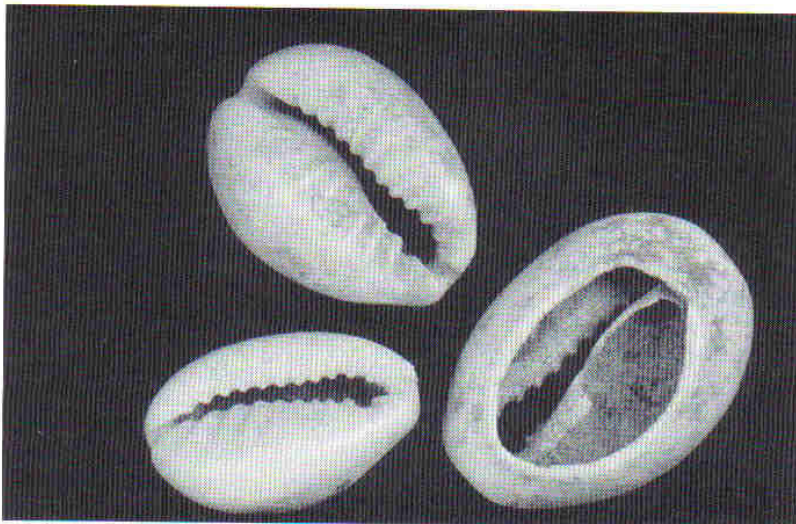
The Mapungubweans were extremely adept at smelting and smithing iron, copper and gold ornaments. Pottery, wood, carved ivory, bone, Chinese celadon ware; glass trade beads from Egypt and India, and ceramic figurines reflect a sophisticated African trade kingdom that ruled the entire Limpopo valley in the tenth century AD.

The archaeological excavations from Mapungubwe and K2 have also yielded many freshwater shells and seashells, which were certainly of significance to these people. The existence of shells tell the archaeologist much about the past. For example, they can serve as indicators of the climate of that time, and they may also

have served as food sources or body decoration. In this case, some of the shells may also have been used for trade, since Mapungubwe thrived as a centre of trade between the people of southern Africa, and the Swahilis and Arab traders on the East Coast. A larger question that remains unanswered is: in what way did the shells have cultural importance to the Mapungubweans?

There are two varieties of sea shell beads from Mapungubwe: those based on *Cypraea annulus* (a common cowry shell) and those based on *Polinices mamilla*. Both molluscs live along the tropical East African sea shore. Such beads are abundant all over Africa and can be found on numerous archaeological sites. Unfortunately the shell itself cannot be carbon-14 dated - unless burnt or viewed in an archaeological stratigraphic context.

A majority of the children's graves at K2 were buried in midden deposits, in a flexed, horizontal position, containing ceramic vessels, at times apparently ritually broken, as well as glass beads, ostrich eggshell beads, cowrie seashells and animal body parts. These were obviously associated as burial objects. The ivory artefacts from K2 may be evidence of ivory as a main export commodity bartered by the K2 community for foreign trade glass beads. The East Coast cowrie shells in the K2 deposits could therefore have been acquired along the same trade routes.



Cowry shells from Mapungubwe, probably *Cypraea annulus* from the Mozambique coast, five hundred or so kilometers to the east.

At Mapungubwe, at least two terrestrial materials were also used for beads. These were the shell of *Achatina*, the giant African land snail and the egg shell of ostriches. The ostrich shell has been a favourite material for making beads since the Stone Age, and is still being used



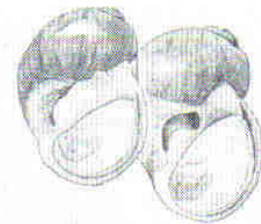
A pile of beads made from ostrich shells, excavated from archaeological sites at Mapungubwe.

throughout southern Africa for contemporary purposes. There are two varieties of ostrich eggshell beads. One is made out of the shell in its natural or white condition, and the other is made out of shell that had been artificially blackened. The white beads are numerous, and vary in size and in the extent of shape and corrosion. According to Fouche (1937) "...the black ostrich eggshell beads are rare. Richard Leakey found them at Elmenteita; Seligman found them in the Faragab mound in northern Kordofan, and they are also found at Malta, and a single specimen was found in Palestine and another among the odd beads from Ur." It was previously believed that the black colouring matter was iron, but the beads have been tested and no traces have been found. It is possible however that the beads were made by carefully heating them until they were red hot, possibly in a muffle furnace. Observations were made that ostrich eggshell beads with a smooth outer rim might indicate better manufacture or use over a long period of time. Those eggshell beads that are not well smoothed give the impression of newly made or not much used bead.

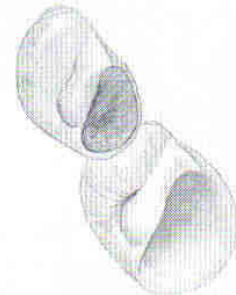
The ostrich eggshell beads at Mapungubwe however, do show considerable signs of weathering. This depends very largely on the place of burial. For example at Thulamela, a

related site in the northern regions of the Kruger National Park, some 990 ostrich eggshell beads were associated with one burial alone. At Thulamela beads made from *Achatina* shells or ostrich egg shells were predominant over the trade glass beads, perhaps the royalty preferred the 'local' beads to the imported ones. Two other shell types were found at Thulamela, namely *Natica gualteriana* and *Nassarius kraussianus*, both marine species from the East Coast

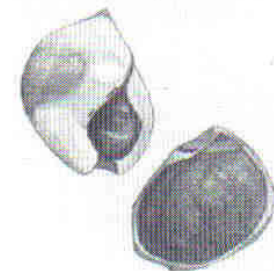
According to Voigt (1979), the presence of *Achatina* shells indicates an arid climate and a mopane savannah type of vegetation such as the environment at Mapungubwe or the Limpopo Valley today. Dr van Bruggen of the Rijks University in the Netherlands states, "...It is unlikely that achatinid species other than *Achatina immaculata* are found in the arid savannah environment. In my opinion *A. immaculata* in this part of southern Africa is best adapted to local climatic conditions. In any case, no other species reaches such a size locally. Shells of large *Achatina* were known to have been used by the population as hipposcaries in cultivating fields (pierced for suspension on lines) and as containers for all sorts of goods (e.g. snuff) when they are stoppered with wads of moss or other material." An interesting point is that shells of the freshwater snail *Bulinus forskali* are widely distributed at Mapungubwe; and that



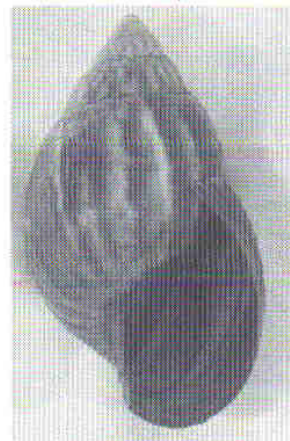
Natica gualteriana, 21 mm



Polinices mamilla, 36 mm



Nassarius kraussianus, 8 mm



Achatina immaculata, 85 mm

this species is known to host schistosome parasites of antelope (Appleton: 1996, Meyer: 1998).

There is no direct evidence in the skeletal remains of Mapungubwe that these people ate molluscs but it would be incorrect to rule this out for certain. Nevertheless, *Achatina* snails and other terrestrial and freshwater



Shells of freshwater bivalve *Spathopsis wahlbergi*. This is the largest freshwater mussel species in South Africa. It has a shiny nacreous layer beneath the outer surface of its shell. These specimens from the Mapungubwe site. It is not known why the inhabitants collected the molluscs.

molluscs are apparently not eaten in Southern Africa these days, despite being known food sources in other parts of the world. The diet of the Mapungubweans was probably high in carbohydrates, but they were not malnourished due to the fact that they kept so many cattle, which provided them with a more varied diet, inclusive of many proteins (Voigt: 1979).

It is interesting to note that the cultural significance of shells throughout Africa generally is associated with fertility and spiritual symbolism. It was noted that the BaVenda used a divining bowl with a large cowry embedded in the centre, which represented a mother's spirit or fertility. Shangaan diviners when casting bones, included seashells called *djuma djuma*, such as *Oliva* shells representing the attributes of the male and the *Cypraea* shells corresponding to the attributes of the female. In one of the Meroe pyramids near Gebel Barkal, gold necklaces of beads were found in the form of shells, some of which were cowries that were perhaps symbols of life - the eyes of Horus - with four ankh pendants. Perhaps the inhabitants of Mapungubwe revered shells such as

the cowries, ostrich eggshell and land snail shells for similar rituals and symbolism? The details of this may never truly be resolved. However, it is certain from the archaeological evidence at hand concerning marine and terrestrial shells that they had cultural significance to all the known African kingdoms, whatever their true purpose.

References

- Appleton, C.C. 1996. *Freshwater molluscs of Southern Africa*. University of Natal Press.
- Fouche, L. 1937. *Mapungubwe*. Cambridge: University Press.
- Jeffreys, M.D.W. 1958. *Cowry: Ndoro*. Native Affairs Department Annual NADA. pp.35-51.
- Kilburn, R. and Rippey, E. *Sea Shells of Southern Africa*, Macmillan, Johannesburg, 1982.
- Meyer, A. 1998. *The archaeological sites of Greefswald. Stratigraphy and chronology of sites and a history of investigations*. Pretoria: University of Pretoria.
- Voigt, E. 1978. *The faunal remains from Greefswald as a reflection of Iron Age economics and cultural activities*. MA thesis. University of Pretoria.

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