

The Strandloper

BULLETIN OF THE CONCHOLOGICAL SOCIETY OF SOUTHERN AFRICA



Strandloper 256

December 1998

Page 1

The Cephalaspidea

a collaborative contribution



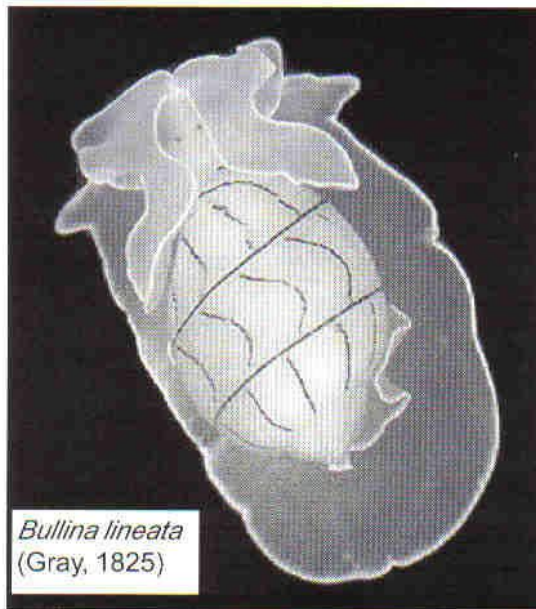
text : Mike Cortie

colour photographs : Bill Rudman's 'Sea Slug Forum'

biological facts drawn from work by Dr R. Kilburn and Dr W. Rudman



The class Gastropoda is divided into various orders. Some of these— for example the Pyramidelloida, Cephalaspidea, Thecosomata, Anaspidea, Notaspidea and Sacoglossa, are sufficiently related to one another, and sufficiently distinct from the rest, to qualify as members of a subclass, the Opisthobranchia¹. The subclass spans a range of malacological characteristics, ranging from relatively primitive, as in the Pyramidelloida, through to the numerous species of nudibranchs (shell-less sea slugs) in which both shell and mantle cavity have been lost during the course of evolution. The Opisthobranchs exhibit very interesting and diverse anatomy and adaptations, and are well loved by many professional malacologists. They are hardly known to most Southern African conchologists since most of them



Bullina lineata
(Gray, 1825)

are either shell-less or have rather fragile, bubble-like shells. However, there are some exceptions. For example, the Thecosomata (sea butterflies or glass shells) may sometimes be collected in large numbers in beach drift and have had some coverage in the *Strandloper*^{2,3}, while *Umbraculum umbraculum*, a member of the Notaspidea, was featured on the front page⁴ of *Strandloper* 238 and was also discussed in *Strandloper* 241⁵. The genus *Hydatina*, which falls into the order Cephalaspidea, has also had some recent exposure in the *Strandloper*⁶. In addition, both the Kilburn and Rippey¹, and the Steyn and

Lussi⁷ books contain good accounts and illustrations of the shells of the local opisthobranch species. In the present article we will deal with the shelled Cephalaspidea, with some emphasis on the species likely to be encountered by a Southern African collector. However, no treatment would be complete without at least a mention of the family Gastropoteridae, which contains the wonderful 'batwing slug', *Sagaminopteron ornatum* and the astonishing *Sagaminopteron pyschedelicum*. The inspiration for the article was the wonderfully informative web site maintained by Dr Bill Rudman of the

Australian Museum, and it is from that source on the Internet⁸ that the pictures of the live animals were downloaded with permission. Dr Rudman invites anybody with opisthobranch photographs or questions to 'post' them on his 'Sea Slug Forum' at the address given in reference 8. You may also wish to look at Steve Long's *Opisthobranch Newsletter* at www.seaslug.com.

ORDER : CEPHALASPIDEA

FAMILY Acteonidae

The acteonids are some of the most 'primitive' of the opisthobranchs in an

anatomical sense, with a prominent, heavily calcified shell, an operculum, and a relatively small colourless animal. They have posterior flaps on the head, which forms the "headshield" which gives them the name "cephalaspid". The flaps overlap the front of the shell and protect the mantle cavity from being clogged with sand when the animal is burrowing. Despite their "primitive" body plan, they are in fact highly specialised, feeding on polychaete worms. South African waters contain several more species than those described here, including *Rictaxis albus* (Sowerby, 1873), *Pupa affinis* (A. Adams, 1855) and *Pupa nitidula* (Lamarck, 1822)⁷.

***Maxacteon flammeus* (Gmelin, 1791)**

This species is very rare in South African waters and the few specimens known have generally come from Durban Bay⁷. It dwells in fine sand or sandy-mud, intertidally and subtidally. According to Rudman, the shell is variable in colour, with *Maxacteon flammeus* being at one end of the colour range and *Maxacteon fabreanus* (which occurs around the Arabian Peninsula) at the other. Rudman notes that the malacological characteristics of this species are neatly intermediate between those of the genera *Pupa* and *Hydatina*. For example, its shell is thinner and more colourful than most species of *Pupa* and its body is larger, relative to the size of the shell. The headshield is beginning to elaborate secondary tentacles, looking much more similar to *Hydatina* than *Pupa*. The shells are up to 22 mm in length.

PHOTO C1: Koumac, northern New Caledonia, October 1993 by Bill Rudman.

DISTRIBUTION: Found throughout the tropical Indo-West Pacific extending to southern Arabia and KwaZulu-Natal.

***Pupa solidula* (Linnaeus, 1758)**

Pupa solidula has a spiral pattern of black spots and, according to Rudman⁸, can sometimes be found with two other similarly coloured species, *Pupa strigosa* (Gould, 1859) and *Japonacteon suturalis* (A. Adams,

1855). Another species which is very similar in shape and size is *Pupa coccinata* (Reeve, 1842a), and it differs only in having orange-red spots. It is considered just a colour form of *P. solidula* by some authors. Examination of the example illustrated in the Steyn and Lussi book⁷ shows that their specimen is intermediate in appearance between the two. The shells may reach 30 mm in length.

PHOTO C2: *P. solidula* Koumac, New Caledonia, October 1993 by Bill Rudman.

PHOTO C3: *P. coccinata* Koumac, New Caledonia, October 1993 by Bill Rudman.

DISTRIBUTION: Found throughout the tropical Indo-West Pacific. Burrows in sand and is recorded in South Africa from Durban Bay.

***Pupa sulcata* (Gmelin, 1791)**

This species is recorded by Rudman as inhabiting intertidal and subtidal coral sand. However, it is apparently known in South Africa only from Durban Bay, an environment characterized by sand, mud and silt. Shells range up to 20 mm in length.

PHOTO C4: Koumac, New Caledonia, October 1993 by Bill Rudman.

DISTRIBUTION: A widespread tropical Indo-West Pacific species, extending to Durban Bay

FAMILY Bullidae

***Bulla ampulla* (Linnaeus, 1758)**

This opisthobranch has a relatively solid shell, which reminds one of a glossy brown bird's egg. Maximum length of the shell is about 60 mm. It is herbivorous and has a strange relatively soft radula, and the gizzard has four large crushing plates. All other cephalaspids with gizzards, (other than the runcinids), have three gizzard plates. The Bullidae seem to have evolved separately from a very early stage in the evolutionary history of the opisthobranchs¹². All species of *Bulla* have very similarly shaped shells and there is some confusion in their taxonomy at present. Unfortunately little difference has been found in the morphology of the radular teeth, or any other part of the anatomy, of the spe-

cies of the genus that have been investigated. The spawn is laid as a long, bright yellow string of jelly, which contains tiny oval capsules, each with 1 to 25 eggs¹. These hatch to free-swimming veliger larvae which drift in the ocean until a suitable habitat is found. This factor presumably explains the very extensive distribution of the species. They appear to be nocturnal, burrowing in soft sediment or hiding under coral slabs during the day. Live examples may often be found in the sandy bottom of tidal swimming pools along the KwaZulu-Natal coast.

PHOTO C5: Koumac, New Caledonia, October 1993 by Bill Rudman.

DISTRIBUTION: Found throughout the tropical Indo-West Pacific and along our coastline to Still Bay.

FAMILY Bullinidae

***Bullina lineata* (Gray, 1825)**

According to Rudman⁸, *Bullina lineata* shows an interesting transition stage between the heavily shelled acteonids, such as *Acteon* and *Pupa*, and the more lightly shelled hydatinids, such as *Hydatina physis* whose bright colourful animal dominates its body plan. The family Bullinidae has a mixture of anatomical features, some common to the more primitive Acteonidae, and some to the Hydatinidae.

Bullina lineata retains a thin operculum and is able to retract completely back into its shell. It is believed that it eats polychaete worms. It is found intertidally and in the shallow intertidal through most of its range but at the temperate extremes it is usually found subtidally⁸. Beach shells are only very occasionally found along our shore. However the odd live specimen has come to light in the East London area¹⁰. There is also a related, endemic South African species, *Bullina oblonga* Sowerby 1897, which is illustrated in the books by Kilburn and Rippey¹ and by Steyn and Lussi⁷. The shells of both species range to about 18 mm in length.

PHOTO C6: Shelly Beach, Manly, Sydney, New South Wales, October 1986, by Bill Rudman.

DISTRIBUTION: Found throughout the tropical and subtropical Indo-West Pacific from Japan to Arabia, down to Jefferys Bay in South Africa and as far east as New Zealand.

FAMILY Gastropteridae

***Sagaminopteron ornatum* Tokioka & Baba, 1964**

This spectacular species is sometimes known as the 'batwing slug' because of its greatly enlarged wing-like parapodia. It was first found in Sagami Bay, Japan which gives rise to its name *Sagaminopteron*. The Gastropteridae are specialised bubble shells related to *Philine* and *Chelidonura*. Unfortunately we know little about their biology. Some tropical species are usually found on particular sponges but the radular morphology suggests they are carnivores eating small active invertebrates rather than rasping sponge feeders. One of the most fascinating features of the gastropterids is their swimming behaviour. The genus name *Gastrop-teron* can be loosely translated as "winged stomach", which is quite apt. Like most opisthobranchs, they are normally benthic crawlers, but when disturbed they can vigorously flap their greatly enlarged parapodia and remain suspended in the water column for some minutes. The various stages in the swimming "stroke" are illustrated in the composite picture supplied by Bill Rudman.

PHOTO C7: Coffs Harbour region, northern New South Wales, December 1990 by Bill Rudman.

PHOTO C8 : composite montage of *S. ornatum* 'launching' itself by Bill Rudman

DISTRIBUTION: It is recorded from southern Japan and the east and west coasts of tropical and subtropical Australia.

***Sagaminopteron psychedelicum* Carlson & Hoff, 1974**

Given its name for its bright and exceedingly garish colour pattern, this species is not as spectacular a swimmer as *Sagaminopteron ornatum*. Grows to about 12 mm long.

PHOTO C9: Coffs Harbour region,

New South Wales, Australia, December 1990, by Bill Rudman.

DISTRIBUTION: Originally described from Guam, this animal is now known from many parts of the tropical western Pacific.

FAMILY Haminoeidae

This family dwells on shallow water substrata of sand or mud, often in estuaries or bays. They are herbivorous, feeding on surface detritus. The taxonomy of the species occurring in South African waters seems not to have been completely resolved. Only one species is illustrated here in colour; refer to Kilburn and Rippey¹ or Steyn and Lussi⁷ for some of the others such as *Haminoea alfredensis* (Bartsch, 1915) and *Haminoea petersi* (von Martens, 1879).

***Atys cylindrica* (Helbling, 1779)**

The animal can scarcely retract into its cylindrical, rather delicate shell, which can be up to about 23 mm long. PHOTO C10: Koumac, northern New Caledonia, October 1993, by Bill Rudman. Animal of specimen illustrated is 28 mm long.

DISTRIBUTION: A common Indo-West Pacific species, occasionally found from Durban Bay northwards..

FAMILY Hydatinidae

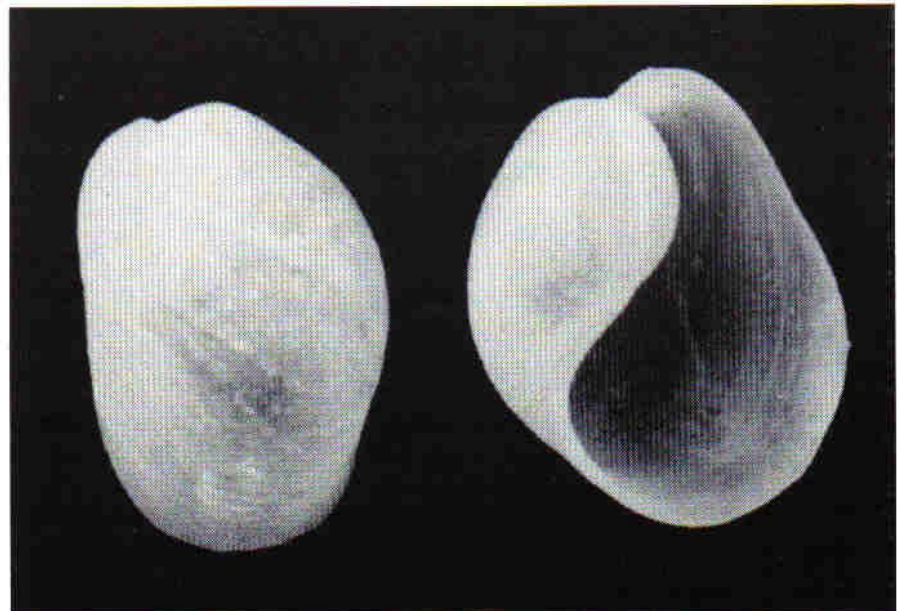
According to Rudman⁸, the Hydatinidae are the most modified of a group

of cephelaspid which show the gradual diminution in the importance of the shell as a protective organ. In *Hydatina* and *Micromelo* the shell has become thin and the animal large and brightly coloured. The protective operculum has disappeared. Species of *Hydatina* are very specialised worm feeders, eating only cirratulinid polychaete worms. The shells are colourful and delicate. Besides the two species described here, South African waters are also home to *Hydatina amplustre* (Linnaeus, 1758) and *Hydatina zonata* (Lightfoot, 1786).

***Hydatina physis* (Linnaeus, 1758)**

This species is seasonally abundant in rockpools and tidal pools along our eastern coastline (see, for example *Strandloper* 244⁸). It seems equally at home on sand in sheltered bays or in rockpools on the open shore. The shells of the latter ecotype have brownish longitudinal marks and were once thought to be a separate species, *Hydatina vesicaria* Lightfoot, 1786. The shell of the animal may reach 45 mm in length. Kilburn reports¹ that it copulates in pairs, head to tail. The spawn, an example of which is shown on page 7, contains tens of thousands of eggs, and these hatch to free-swimming veligers.

PHOTO C11: Shelly Beach, Manly, Sydney, New South Wales. October 1984 by Bill Rudman.



Haminoea alfredensis (Bartsch, 1915) from "Cape", 8 mm in length

PHOTO C12: Egg mass of *Hydatina physis*

DISTRIBUTION: Found circum-globally in tropical waters both in the Indo-West Pacific and the Atlantic. Occurs in South Africa along the east coast down to Table Bay.

***Micromelo undata* (Bruguiere, 1792)**

This stunning little opisthobranch occasionally turns up in intertidal rock pools along our coast line. Few can ever forget the sight it makes as its fantastically coloured body speeds its way over an underwater landscape of multicoloured seaweed. The otherwise pretty little shell is drab by comparison. Like *Hydatina physis*, the species occurs circum-globally (i.e. in the tropical Atlantic as well) but for many years the Indo-Pacific form was known as *Micromelo guamensis* (Quoy & Gaimard, 1825). However, when the two populations were carefully studied it became evident that there were no differences in shell shape between Indo-Pacific and Atlantic populations and the differences in colour in the lines on the shell - either red or black - appeared to be merely intraspecific variation (differences between different animals). They were synonymized in 1984 by Willan¹¹. According to Rudman, *Micromelo* is closely related to *Hydatina*. In these cephalaspids the animal is beginning to assert itself over the shell which is becoming much thinner and less important as a protective organ.

PHOTO C13: Long Reef, Sydney,

New South Wales. November 1989, by Bill Rudman.

PHOTO C14: Blue form laying egg mass. Margaret River, Western Australia, January 1985, by Clay Bryce. DISTRIBUTION. The Indo-West Pacific, including Arabia and South Africa down to Port Alfred. Also the Caribbean and tropical Atlantic.

FAMILY Philinidae

The Philinidae contain an internal shell, and are inhabitants of soft sediments in quiet bays as well as in the deeper waters of the continental shelf which they roam in search of small molluscs, worms and other animals¹. The animal has glands which can exude sulphuric acid and thereby act as a useful deterrent to predators. The common South African species is *Philine aperta* (Linnaeus, 1767) which inhabits our eastern coastline. The same, or perhaps a very similar species, is found in the Mediterranean, Western Europe and West Africa. In the absence of a photograph of the living *Philine aperta*, I have included some details on *Philine trapezia* Hedley, 1902.

***Philine trapezia* Hedley, 1902**

Originally described from a shell collected in Sydney Harbour, the bright orange animal of this tiny species of *Philine* is not uncommon in intertidal algal turf along the coast of New South Wales in eastern Australia. It has also been collected in New Caledonia and Tanzania. Gosliner (1988) has described the very similar *P. rubrata* Gosliner, 1988 from Aldabra Atoll and

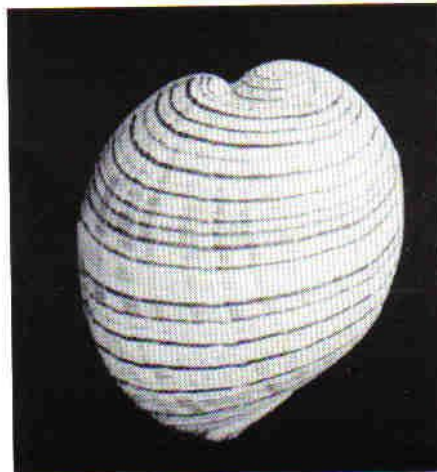
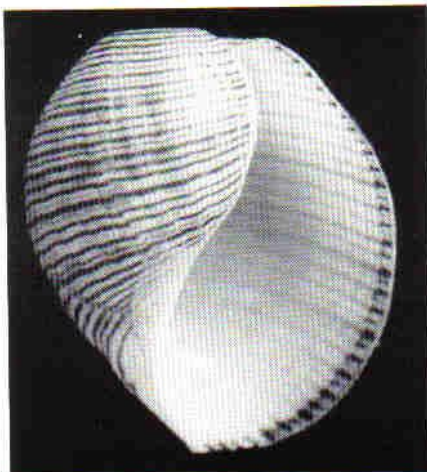
Papua New Guinea, and Baba reports *P. trapezia* also from Japan. Evidently, it is not unlikely that this shell may turn up along the KwaZulu-Natal or Mozambique coastlines. It could be easily missed however because the whole creature is only about 6 mm long. PHOTO C15: Minnie Waters, E. of Grafton, northern New South Wales, November 1977, by Bill Rudman. DISTRIBUTION: Tropical Indo-West Pacific to East Africa.

Conclusion

There are many more species of cephalaspid in South African waters than those described here. These include the Ringiculidae and Tornatiniidae. However, I hope that the limited information provided will stimulate some readers to collect, study and perhaps photograph these animals.

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2. Peel, O., Pteropods (Cavoliniidae) *Strandloper* 236, Oct. 1993, pp.4-5.
3. Cortie, M.B. and Venter, A.M., Pteropod bonanza, *Strandloper* 239, September 1994, p.12.
4. Tarr, R., The umbrella shell, *Strandloper* 238, June 1994, pp.1-2.
5. Whitehead, T., Letter, *Strandloper* 241, March 1995, p.9.
6. Cortie, M.B., A new species of *Hydatina*, *Strandloper* 244, December 1995, p.9.
7. Steyn, D.G. and Lussi, M., *Marine Shells of South Africa*, Ekogilde Publishers, Hartebeespoort, South Africa, 1998.
8. Internet, December 1998 - <http://www.austmus.gov.au/science/division/invert/mal/forum/aboutfor.htm#406>
9. Bosch D.T., Dance, S.P., Moolenbeek, R.G. and Oliver, P.G., *Seashells of Southern Arabia*, Motivate Publishing, Dubai, 1995.
10. Muller, S. For the record, *Strandloper* 220, April/June 1987, p.9.
11. Willan, R.C., The Guam Bubble Shell *Micromelo undatus* (Bruguiere, 1792) in Australia, *Shells and Sea Life* vol.16(5), 1984, pp.49-50.
12. Rudman, W.B., Structure and functioning of the gut in the Bullomorpha (Opisthobranchia). Part 1. Herbivores., *Journal of Natural History*, vol.5, 1971, pp.647-675.



Hydatina physis (Linnaeus, 1758) from KwaZulu-Natal South Coast, lengths are 30 mm (left) and 29 mm (right).

New regulations concerning collection of marine life in South Africa

The newly proclaimed Marine Living Resources Act No. 18 of 1998 now makes it necessary for all salt-water fishermen to have a fishing permit (freshwater fishermen have technically required one for years). There is also a 'mollusc' or 'bait' permit to cover the collection of sedentary organisms off the rocks. Both of these permits may be purchased at any post office, apparently for about R50, and they last one year. Proceeds will go into the Marine Living Resources Fund.

After more than thirty telephone calls I ascertained at time of going-to-press that there is not yet any specific permit for shellers. The liaison officer at Sea Fisheries claimed that the 'Mollusc permit' would be sufficient, however, other personnel there were of the opinion that a new category of permit should be created for us. I am engaged in correspondence on the matter. Use the 'mollusc permit' for shore collection in the meanwhile.

In terms of Section 38 of the Sea Fishery Act No.12 of 1988 (which is incorporated into the new Act in respect of shells only) **no permit is required to collect beach (i.e. empty) shells for personal use.**

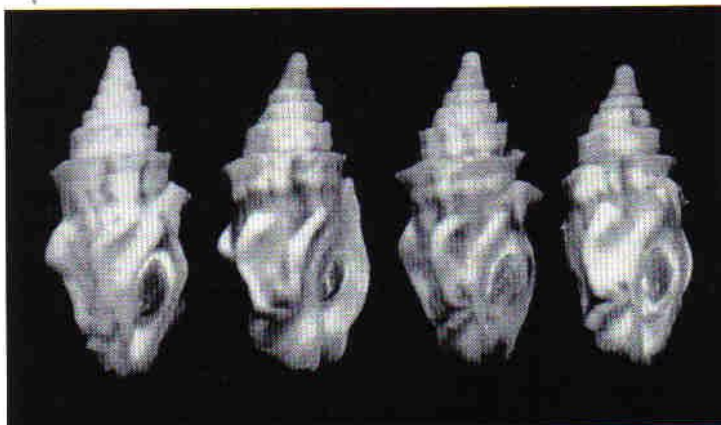
These are national laws, and they now override all former provincial legislation, including that of KwaZulu-Natal. However, I suspect that the bag and size limits of the former provinces regarding fish and other edible organisms still apply, since they would very likely have been re-gazetted as one of the applicable Regulations.

A very important point to note is that the 'mollusc permit' mentioned above covers only recreational collection and specifically excludes the use of SCUBA. I will investigate further and report back with updated information in due course.

Mike Cortie

An Unusual Deep-water Turrid, *Toxiclionella elstoni* (Barnard, 1962)

by Brian Hayes*



South Africa is rich in molluscan species diversity, and all along the 3000 + km coastline, which ranges from the cold-temperate waters of Cape Town to the sub-tropical waters of Natal, we have more than 4000 different species of molluscs. Many new S. African species are constantly being found. *Toxiclionella elstoni* is not a newly discovered species but has only been known from one or two poor examples. So, the finding of a handful of living specimens is very exciting as this is a most remarkable shell.

T. elstoni was named by Barnard in 1962 after Mr Percy Elston (who died in 1969). He lived in Durban and helped to form the Natal group of the Conchological Society of S. A. He also served on the executive council of the C.S.S.A. Mr Elston edited the book by Barnard called *Personal Names in S.A. Conchology*, 1965. After his death, his collection was bequeathed to the Natal Museum.

T. elstoni was originally put into the family Coralliophilidae and was called *Latiaxis elstoni*. But subsequent study of the animal revealed that it is indeed a turrid. The spirally flanged sculpture of the upper whorls (see colour

Figures 1 & 2, page 7) seem to put it amongst *Latiaxis* but the overall shape of the shell and the body whorl with axially angled ribs and blunt protoconch make it seem more to belong to the Turridae, as is indeed the case.

What makes this such a unique shell is that it has such differing sculpture which is distinctly separate from each other, almost as if the animal grew one way and then changed its mind half-way through and decided to grow in a different way. There are only about half a dozen live-taken specimens that have been found so far. The mature shell measures 32 to 37 mm in length. It is cream with axial brown markings. Almost pure white specimens have also been found. It has a horny operculum as do most turrids. The specimens in Fig 1 and 2 were dredged off the northern Transkei coast at approximately 100 m.

This is indeed one of the most remarkable shells I have ever seen and I am sure that it won't be the last such beautiful species to be found off the South African coastline.

Acknowledgements

I wish to thank Mr Willie Immelman for making the specimens available and Mrs Dawn Brink for contributing information about Mr P. Elston.

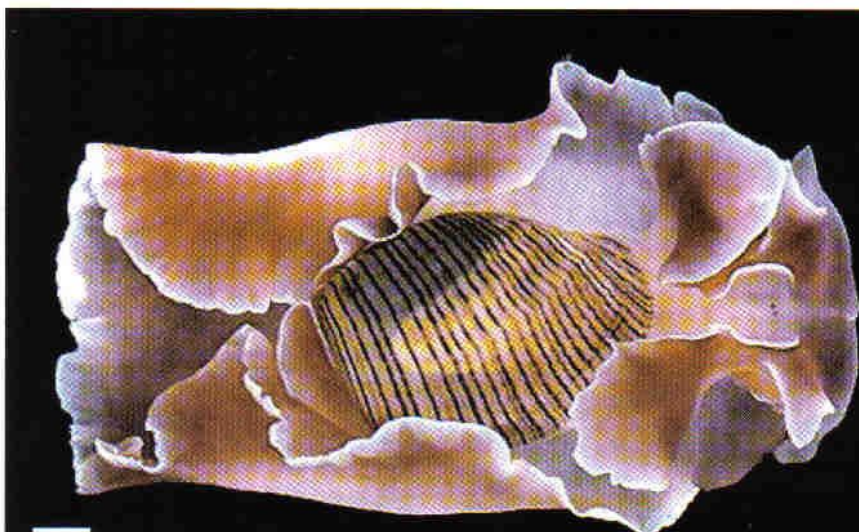
*Algoa Bay Specimen Shells
P.O. Box 804, Port Elizabeth 6000
SOUTH AFRICA

Cephalaspidea



C9

All pictures courtesy of Sea Slug Forum, <http://www.austmus.gov.au/science/division/invert/mal/forum/aboutfor.htm#406>



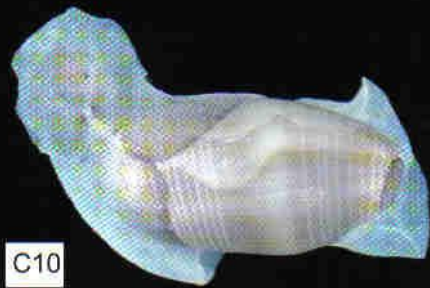
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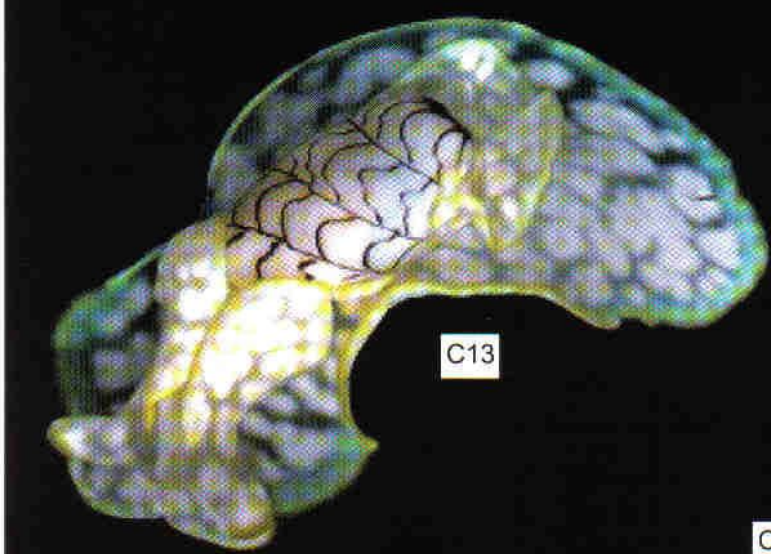
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An Unusual Deep-water Turrid, *Toxiclionella elstoni* (Barnard, 1962) text of article is on page 5

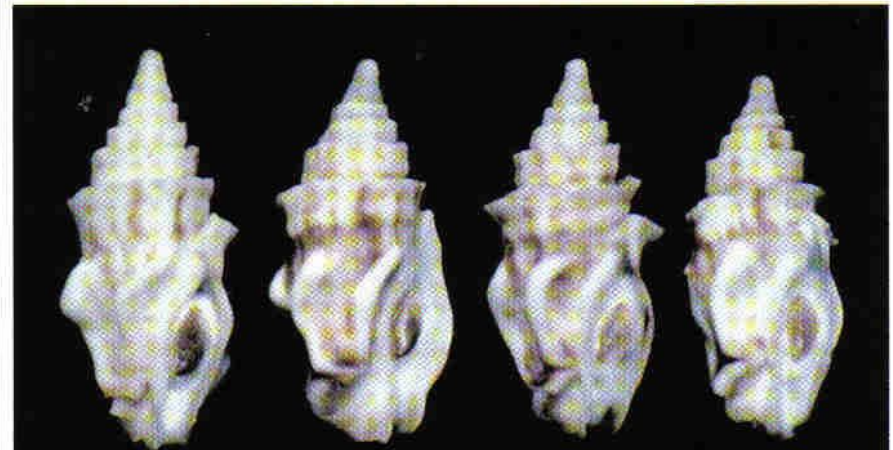
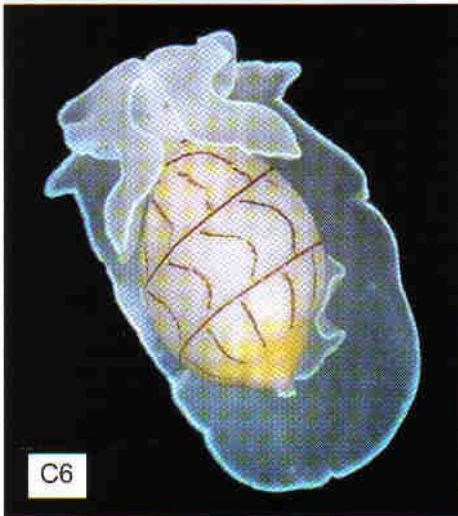


Fig. 1 *Toxiclionella elstoni* - ventral view

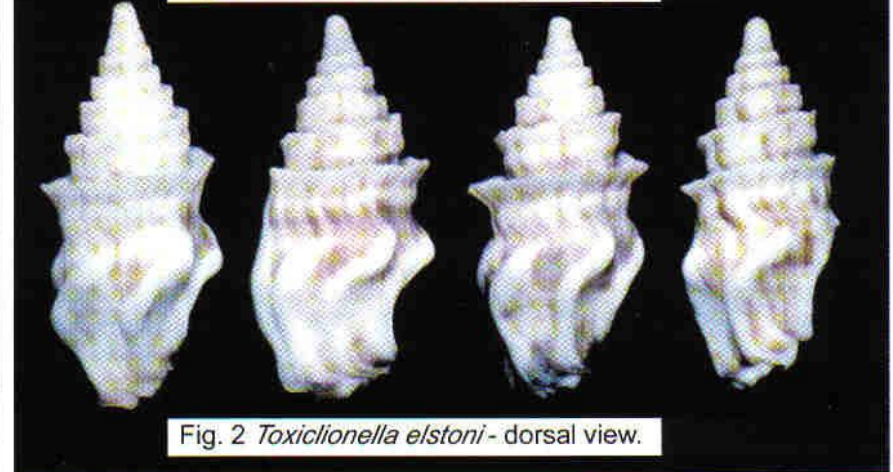
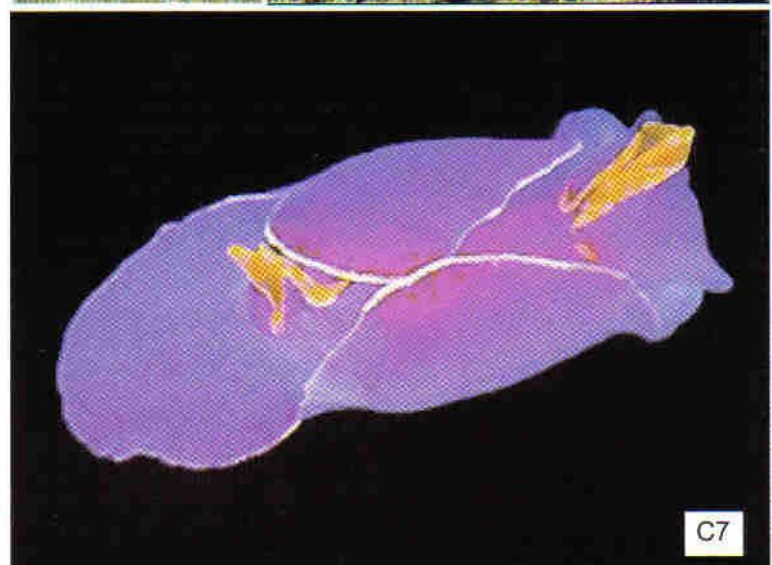
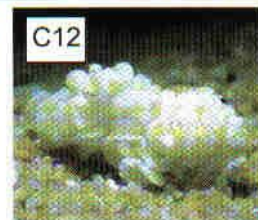
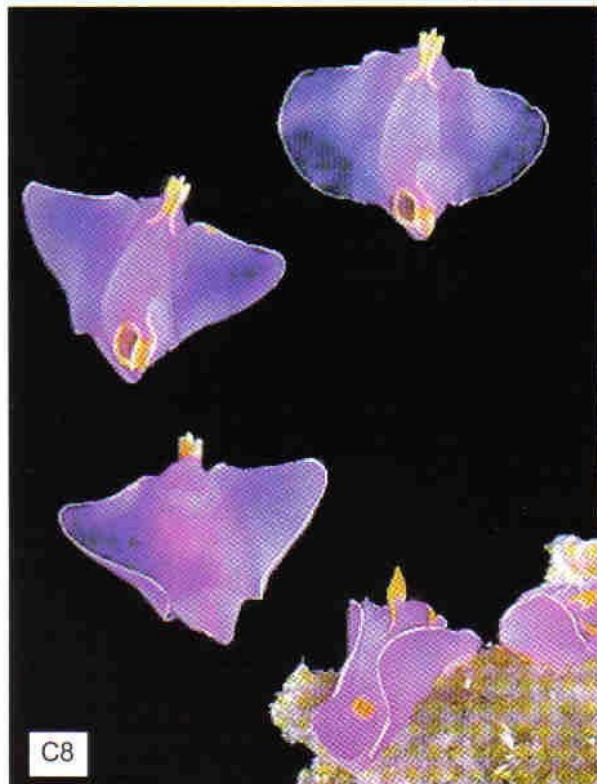


Fig. 2 *Toxiclionella elstoni* - dorsal view.





Shellbook drawings 1996
Broken shells from Port Macquarie, N.S.W.

Flotsam

More on Maldivan moneta's

My apologies to Ken Brown, whose article on the *Cypraea moneta* of the Maldives appeared in a somewhat shorn state in *Strandloper* 254 due to cybernetic glitches. The original article contained quite a bit more information than that finally printed. For example, did you know that an estimated 11000 tons of *Cypraea moneta* shells were exported to Africa during the 1700's? That is around two billion shells! A slave was worth 6400 shells in 1520, 80 000 by 1710 and 176 000 by 1770 - a familiar story of inflation.

Sea shells of Mayotte

Mayotte is one of the islands of the Comores archipelago at the northern end of the Mozambique channel. Unlike the other three islands, which opted for independence, first from France and more lately from each other, the population of Mayotte voted to stay under French rule. There is an extensive fringing coral reef of over 150 km in length. An account of a recent shelling trip there was given recently in *Xenophora*, the bulletin of the French Conchological Association¹. It looked positively mouthwatering. Any takers? However, potential visitors should note that tourism is not highly developed on this island and a working knowledge of French would be helpful.

Reference

1. Hoarau, A. and Pelorce, J. Voyage a l'île aux parfums, une collecte a Mayotte, *Xenophora*, No. 84, Oct-Dec 1998, pp.24-36.

Erratum

The tiny snail tentatively identified as *Trachycystis* on pages 3 and 4 of *Strandloper* 253 (March 1998) is actually one of the non-indigenous species of Valloniidae. These tiny Eurasian terrestrial snails have spread to many temperate parts of the world. The specimens figured look like *Vallonia enniensis* (Gredler, 1856).

To : The Editor
Strandloper

Jeffreys Bay Shell Museum

We would like to inform all shell collectors that, after many years of negotiation and planning and the special endeavours of our councillor Mr. Peter Sharman, Jeffreys Bay's new shell museum has finally opened.


It is now housed in a very modern building built at a cost of R1.2 million. The museum is specially designed to comply with all the requirements needed to accommodate a shell collection. As we have plenty of space available to expand, we would like to appeal to fellow collectors to donate their spare shells to the museum. Any old and uncared for collections will be most welcome. All donors receive full recognition for any shells exhibited in the museum. It is always very interesting to visitors to see where all the shells came from and who donated them.

We invite all collectors to pay us a visit. The shell museum is a must for anyone interested in shells,

Best wishes and a happy New Year,

Thea Marsh : Curator
Jeffreys Bay Shell Museum

Port Elizabeth



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Letters

To : The Editor,
Strandloper

Important correction to Presidential Report

My ill-thought out comment in the presidential report about the supposed threatened state of molluscan research in New Zealand has earned me a justified dressing down from colleagues in New Zealand.

Bruce Marshall of the Museum of New Zealand Te Papa Tongarewa, Wellington, points out that his institution in fact has a thriving malacology section that puts any South African equivalent to shame. In charge is Bruce, whose ground-breaking papers on such diverse groups as deep-sea limpets (some of which live only on bones!) and that nightmare family, the Triphoridae, are the envy of colleagues everywhere. Dick Dell, famous for his work on Antarctic and subantarctic molluscs, is currently revising the Philobryidae, although officially retired. Karin Mahlfeld is doing brilliant work on New Zealand's amazing land snail fauna. These scientists have a publication record which amply demonstrates that malacology is alive and well in New Zealand. They also have an assistant AND a database technician, who are obviously kept very busy as each year they not only add an amazing 10 000 new lots of molluscs to their collection, but database about 15 000!

I had no intention of disparaging the Museum of New Zealand or its scientists, for whom I have the greatest respect possible, and humbly apologise for any offence caused....

Dick Kilburn
Natal Museum, South Africa

STOP PRESS 4-Jan-99

Dear sir,

This is to inform you that a number of specimens of *Cypraea fultoni* have recently been fished in Mozambique and that it will cause a price drop for this shell.

Yours sincerely,

Manuel Amorim, Mozambique (m.amorim@mail.teledata.mz)

To : The Editor,
Strandloper

Achatina immaculata

After having read Kobie's article about the 'slooie' (see *Strandloper* #253) on our farm in Brits, I have remembered some information about something she didn't know about.

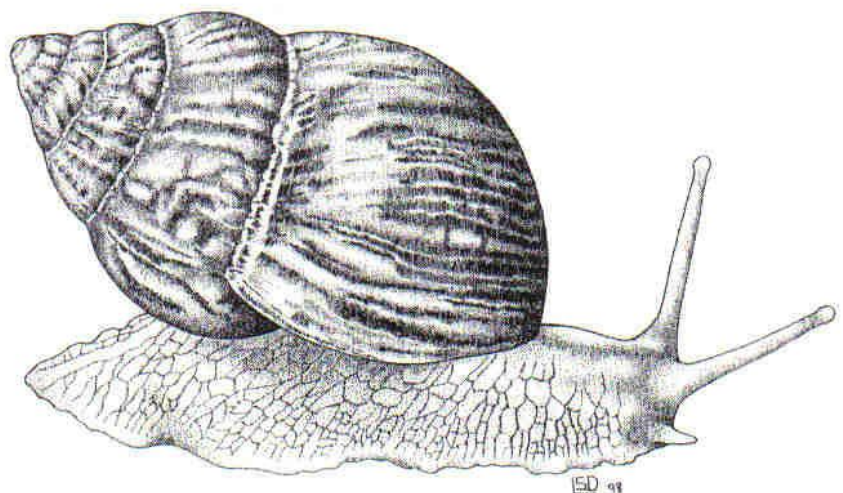
One Saturday afternoon in 1990 the workers on the farm came anxiously to my father and told him that they had seen a very big snake. Actually they had seen only a very big yellow tail moving in thick grass and that the 'snake' had gone into one of their rooms. Being very superstitious about reptiles near or in their homes, they immediately demanded that it be killed. They were too scared to come near the building. My father went into the room with a .22 rifle, and I stood at the door. It was very dark in the room, and it was packed with bags of old clothes, mattresses, etc.

After a while, my father saw a part of the 'snake' behind a bag full of something. He thought it was a puff-adder, and shot it with the .22. Great was our surprise to see it was an innocent leguan lizard! Being very inquisitive, he skinned the leguan and opened the stomach to see what the poor thing had for breakfast. He thought that he might of at last caught the thief of the eggs that were disappearing every day! Much to his surprise it was not my mum's chickens' eggs, but juvenile slooie!

There were two medium size slooie in his stomach, the one's shell was broken, but still there, while the other one had been swallowed intact! We were very surprised, and of course sorry that we have killed the leguan. Our other choice was, of course, to build new rooms for the workers!

I hope that this piece of information will help!

Regards
Magda Odendaal



drawing of *Achatina immaculata* courtesy Linda Davis, Natal Museum

'Recent Cassidae' by Kurt Kreipl

Reviewed by David Freeman

Published by Verlag Krista Hemmen, Grillparzerstr 22, D-65187 Wiesbaden, Germany, 1997. Hard cover, A4 format, 151 pp., 24 colour plates from photos by Uschi Damaschke and numerous text drawings by Dora Jäggle. The author and publishers acknowledge the assistance of the late Heinrich Mühlhäusser whose expertise with the family Cassidae inspired the completion of this publication.

The book covers the Tonnoidean family Cassidae in which are included eight genera, eight subgenera, with 71 species and 10 subspecies. There are additional notes on the related 'family' Oocorythinae whose systematic position is uncertain, but which has been regarded most recently (Riedel, 1995) as a subfamily of the Cassidae. Seventeen species in this group are dealt with. To give a fuller position of the systematics, the family Cassidae of Swainson, 1832, is separated into two subfamilies Cassinae and Phaliinae, as set out by Beu in 1981.

The Cassinae include the following genera and subgenera:
Cassis (*Cassis*) Scopoli, 1777
Cassis (*Hypocassis*) Iredale, 1927
Cypraeacassis (*Cypraeacassis*) Stutchbury, 1837

Cypraeacassis (*Levenia*) Gray, 1847
Galeodea (*Galeodea*) Link, 1807
Galeodea (*Galeocorys*) Kuroda & Habe, 1957
Sconsia Gray, 1847

The Phaliidae include the genera and subgenera:

Phalium Link, 1807
Echinophoria Sacco, 1890
Casmaria H & A Adams, 1853
Semicassis (*Semicassis*) Mörch, 1852
Semicassis (*Antephalium*) Iredale, 1927

South African readers who are familiar with the available literature on our local mollusca may be disconcerted to find that several local species, which we are used to seeing in the genus *Phalium*, are here placed in the genus *Semicassis*. Hence we now have:

Semicassis (*Semicassis*) *labiata* subspecies *zeylanica* (Lamarck, 1822)
Semicassis (*Semicassis*) *craticulata* (Euthyme, 1885)
Semicassis (*Semicassis*) *faurotis* (Jousseume, 1888)
Semicassis (*Semicassis*) *microstoma* (von Martens, 1903)

Although no specific reason is given for this placement, the brief diagnostic description given for the type species of these two genera might help explain the difference.

Genus *Semicassis* Mörch, 1852
 Shell globular to ovate; varices rarely retained; usually with spiral threads or incised lines on the body whorl, axial sculpture obsolete; outer lip finely denticulate; often with anterior spines; umbilicus usually deep; false umbilicus small or sealed; operculum fan-shaped and either smooth or radially sculptured.

Genus *Phalium* Link, 1807
 Medium sized shells; spire tall and well pointed; former varices retained at the growth pauses; parietal shield

moderately developed; axial and spiral sculpture of about equal strength; outer lip thickened, with one row of denticles and sometimes spines anteriorly; shield plicate or granulose; umbilicus deep, false umbilicus a small chink or closed; operculum chitinous. On the basis of the above, there seems to be a good case for placing our species in *Semicassis*.

There are two useful indices and an extensive bibliography. The author apologises for the absence of some information such as the synonymy, types etc., of some species whose details are not readily available. These minor short comings do not materially reduce the usefulness of this well laid out monograph. The excellent illustrations and clear text are of the same high quality that we have come to expect of this publisher of books on the popular molluscan families.

EXCHANGES WANTED

Mrs Dawn Brink of Natal is interested in acquiring quality specimens of the larger landsnails, such as the Achatinidae. In return she can offer specimens of *Metachatina kraussi* and *Natalina cafra*, or by mutual agreement, marine shells. Why not write to her at 2 Highfield Drive, Westville 3630, South Africa?

Mr N.A. Zachariades is an advanced collector of Tertiary fossil molluscs. He is interested in exchanging English Eocene, Oligocene, Pliocene and Pleistocene fossil molluscs for Tertiary fossil molluscs from South Africa and/or other countries. Write to him at 34 Fairlie Park, Ringwood, Hampshire, BH24 1TU, England.

Mr Mike Malicki of 3775 East Denton Ave., #83, St Francis, Wisconsin 53235 USA is a sculptor, naturalist & collector who wants to exchange for South African shells. His email address is arnut@webtv.net.

Strandloper

The editor welcomes original articles, news, shelling reports, feedback, advertisements (rates on application) and any other material likely to be of interest to members of the Society. Illustrations are especially welcome. Please send to

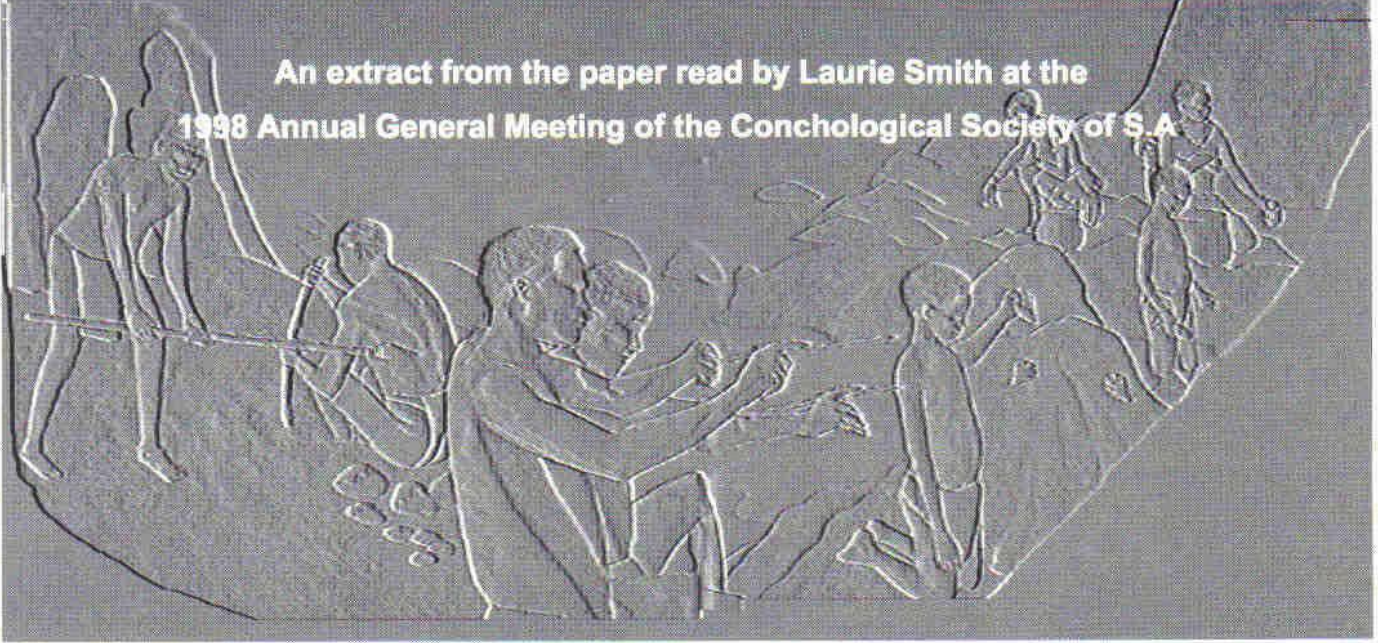
Dr M.B. Cortie,
 P.O. Box 1664,
 Ferndale, 2160
 South Africa

or e-mail me at

mikec@mintek.ac.za

SOUTH AFRICA'S FIRST CONCHOLOGISTS

An extract from the paper read by Laurie Smith at the
1998 Annual General Meeting of the Conchological Society of S.A.



South Africa is sometimes described as the 'cradle of man', and there are many publications that set out to prove these theories. Somewhere within these publications, something about shells is often hidden. In particular, two informative publications give us details of marine shells found in two important Cape habitations of early man.

The oldest of the two archaeological sites excavated, the Matjes River shelter near the Keurbooms River in the Southern Cape, has been dated as being from 10 000 years old¹. The people who inhabited this shelter supplemented their protein diet with molluscs from the sea identified as Mytilidae, possibly *Perna perna*.

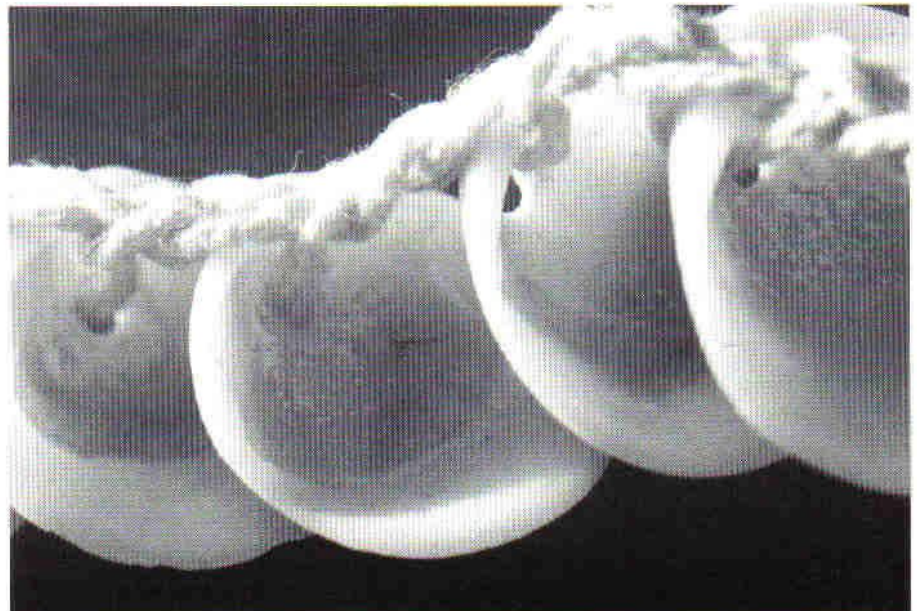
Among the remains of the shells of these edible examples however, it is the other shells which tell us another interesting story. The snails of these other shells do not really have any food value; they were collected for their beauty. The early people used the shells for making jewellery.

Archaeologists have identified the tools with which neat holes were made in the shells for use as beads, pendants *etc.* The small perlemoen or

venus ear - *Haliotis spadicea* - was used for producing nacre beads. Key-hole limpets - Fissurellidae - with their natural hole, were a bonus and cone shells were also used for necklaces. In the very oldest layers cowries were found, unblemished and therefore they were most probably collected merely for their beauty. *Patella cochlear* with its pear-shaped shell was used as pendants, a neat hole

being punched in its thin end. The most amazing discovery was beads made of *Nassarius kraussianus*. The indigenous oyster *Pinctada capensis*, although wrongly described as *Margaritifera* in the publication, was also probably used as ornaments.

Moving westwards, researchers found the caves at the Kelders at Walkers Bay near Hermanus in the Cape to



An replica of the Kelders necklace, made by the author from beached valves of *Glycymeris connellyi* Tomlin, 1925.

contain a wealth of artefacts of man's habitation some 2000 years ago². The people who used these caves did not live there permanently. They were livestock farmers who came to the coast to graze their bovine stock when grazing inland was poor due to drought. They supplemented their diet with shellfish and, from the deposits, it is obvious that they gathered blue mussels (Mytilidae) and white mussels (Donacidae) plus perlemoen (*Haliotis midae*). These stockfarmers or 'herders' had their families with them, and if we look at the variety of shells that they collected, it would appear that they did not differ much from modern collectors who collect shells for their beauty. Cones of different species were used as pendants. Beads were made from *Tricolia capensis* and these shells are still used by the women of Jeffreys Bay as beads with the holes punched in them exactly as indicated in the excavated relics. Disc shapes were cut from *Turbo sarmaticus*. Venus ears - *Haliotis spadicea* - were used as pendants and *Patella compressa*, collected along the beaches, was used for storing their cosmetics, especially ochre.

An exceptional find at the Kelders was a necklace made from *Glycymeris connellyi* although these shells were originally wrongly described as *Glycymeris queketti* (*G. queketti* is naturally replaced westwards with *G. connellyi*). The shells were carefully selected to range from small to large to create the necklace.

References

1. Louw, J.T., Prehistory of the Matjesrivier rock shelter, *Memoir* No. 1, National Museum, Bloemfontein.
2. Schweitzer, F.R., Excavations at the Kelders C.P. South Africa, *Annals S. African Museum*, Cape Town, 1979.



Laurie Smith's replica necklace of *Glycymeris connellyi* modelled by Rosemary Tuites, age 1½ years (photos - Mike Cortie).

Conchological Society of Southern Africa

Founded 1958

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