

# The Strandloper

BULLETIN OF THE CONCHOLOGICAL SOCIETY OF SOUTHERN AFRICA

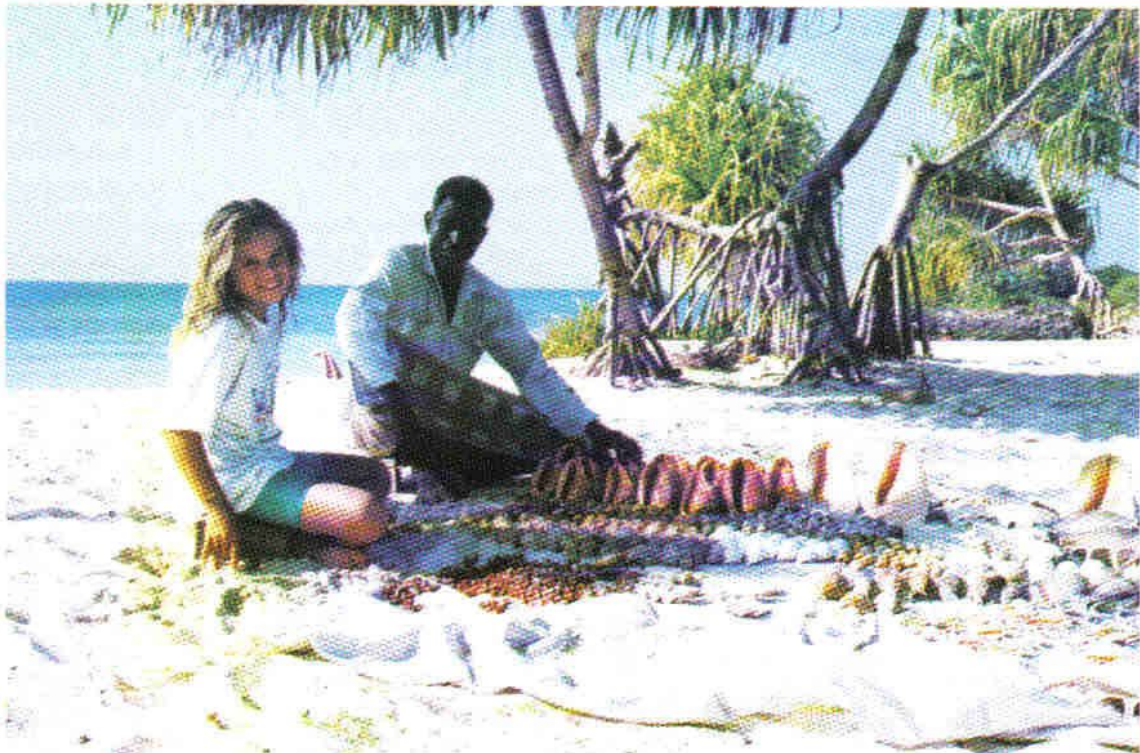


Strandloper 244

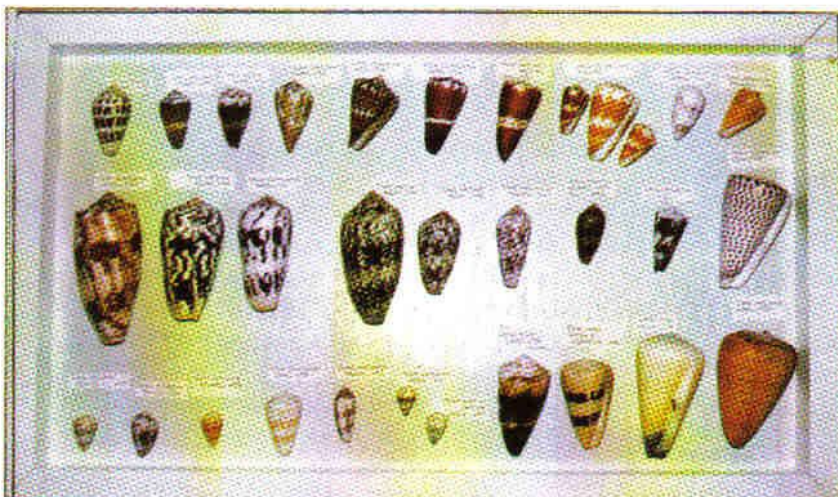
December 1995

Page 1

## Zanzibar



In February 1995 eight members of the Pretoria club travelled to Zanzibar on a shelling expedition. Our interest was sparked by Dr Olwen Evans who, on one of her many visits to that lovely island brought home a collection of very beautiful shells. Having decided to go and see the shells for ourselves, we were fortunate that on her next visit she negotiated prices and reserved accommodation for our party. Our air bookings were provided through Indian Ocean Divers who also provided local back-up for us on the island. Our land transfers were in the capable hands of Salim Abdullah of SAMA tours, who honoured all his commitments and always got us to our destination safely and on time.



Zanzibar, which lies 6° south of the Equator, is 86 km north to south and 39 km east to west. It is 37 km from the mainland. By far the largest number of people live in and around Stonetown. Others live in groups of about 6000 in many villages on the island. Since the massacre of the Arab community in 1964 most of the properties in Stonetown have become derelict and little or no maintenance has been done. Now the United Nations has declared Stonetown a heritage site and hopefully funds will be found to restore it to its former beauty.

Our first stop was in Stonetown where, unfortunately we spent too little time to visit the many historical sites. On what started out to be an expedition to the waterfront, we hired a motor boat and crossed the short distance to Prison Island to see the giant tortoises. It was low tide and in spite of not being suitably shod or dressed we were soon on the reef enthralled by all we saw. Time passed very quickly and in the boat on the return journey we realized we had never seen the tortoises!

Next we travelled north to Nungwi - the home of the *Cypraea*. Iorry and I had done some homework and extracted a list of 72 species and subspecies of *Cypraea* from *A Guide to World Cowries* by Lorenz and Herbert, and *Cowries of the World* by Burgess. We were pleased to find thirty nine. With hindsight, we should also have hired a boat and gone to Tumbatu Island where many interesting cowrie finds have been recorded.

At Nungwi we stayed at Baraka Restaurant in very basic but clean accommodation. The owners went out of their way to make us feel comfortable. They even spent hours carrying sacks full of beach sand into our camp to cover the coral and make walking more comfortable. Our visit coincided with Ramadan so most of our accommodation was bed and breakfast. In the villages it varied from \$7 to \$10 per night - in Stonetown \$15.

Most of our evening meals consisted of rice, grilled small fishes and octopus stew served with a spicy sauce made from coconut milk thickened with cassava. It was mango time so most meals included a generous helping of this fruit.

To go south we had to return to Stonetown and to do so we went down the centre of the island on their famous spice tour. We saw spices: cloves, cardamom, cinnamon, nutmeg (with its beautiful lacy covering of mace); vanilla pods, pepper, coffee and a large variety of tropical fruit. After another two nights in Stonetown (where we discovered good Goan

food) we headed south on such bad roads that it took five hours to cover 40 km.

At Bwejuu we had more conventional accommodation with electricity and running water. The beach stretched for miles, was rock hard and was used by bicycles and motor vehicles travelling north. Some of our party went to the reef to photograph live coral, starfish and molluscs etc. Those who just pottered round described the area as a bivalve and *Strombus* territory. Many of the beached bivalves were double.

After another slow journey, 20 km in two hours, we got to Jambiane and our Gomani Guest House - running water but no electricity. Here there was a deep channel in the reef and as the tide comes in very quickly we hired two galawas to get to the sea side of the reef. What a wonderful experience this proved to be. Many starfish, reef fishes in pools, sea cucumbers that did amazing things when you touched them, large *Cypraea*'s: *tigris*, *histrion*, *lynx*, *vitellus* - our boatman could not believe that we were happy just to look and not to

take. All too soon we were being hurried back on the boat because of the incoming tide. It was so fast that we were no sooner on the boats than the sails were being hoisted and we were sailing back the 4 km to the beach.

For all of us it was an interesting and fascinating holiday - one we would all like to repeat. Back home I found we had 197 species and subspecies of shells, too many to list so I give two families, *Cypraea* and *Conus*.

#### Subscribe Now to *LA CONCHIGLIA*

The international shell magazine with all the latest news; 60 pages of glossy print packed with colour photos. Read scientific articles, new species' descriptions and book reviews by the world's top conchologists and malacologists. For only R180 per year, 4 issues will be sent to you by air mail. For more information, or payment of subscriptions write to: Brian Hayes, your local agent, at: P.O. Box 804, Port Elizabeth 6000

#### *Cypraea*

*annulus*  
*arabica*  
*caputserpentis*  
*carneola*  
*caurica*  
*chinensis*  
*chrysalis*  
*cicercula*  
*cribraria*  
*diluculum*

*erosa*  
*fimbriata*  
*helvola*  
*histrion*  
*isabella*  
*lamarckii*  
*lynx*  
*mappa*  
*mauritiana*  
*moneta*

*microdon*  
*onyx*  
*punctata*  
*staphylaea*  
*stolida*  
*teres*  
*testudinaria*  
*tigris*  
*vitellus*

#### *Conus*

*arenatus*  
*augur*  
*betulinus*  
*capitaneus*  
*convolutus*  
*coronatus*  
*ebraeus*  
*euetrios*  
*fulgetrum*  
*generalis*  
*geographus*

*gubernator*  
*litoglyphus*  
*litteratus*  
*lividus*  
*miles*  
*miliaris*  
*musicus*  
*namocanus*  
*omaria*  
*quercinus*  
*rattus*

*sponsalis*  
*striatellus*  
*striatus*  
*tenuistriatus*  
*tessulatus*  
*textile*  
*violaceus*  
*virgo*  
*viridis*

## Letter from the Editor

Dear members,

Sorry about the delay in getting the December issue out to you. The good news is that the Cortie family has gained a new member, one who no doubt will eventually scour the beach and rocks for useful shells while his Dad relaxes in the shade of an umbrella! Life remains quite hectic at home and those of you who have not had replies to your letters yet will have to be patient just a few days longer. Please make a note in your diaries that the Society's AGM and biannual conchology conference will be held on June 1st at the Pretoria Zoo. There will be an interesting line-up of speakers once again. This could be a good excuse for members from further afield to pay a visit to their relatives in Gauteng! Details of the programme will be issued in the March 1996 *Strandloper*.

The two Special Publications produced last year generated quite a lot of interest. In particular, the one on the Streptaxidae seems to have been a hit with dozens of requests from around the world. All going well, there will be another chapter of the late Don Aiken's book out this year, this time on the genus *Trachycystis*. As mentioned previously, we basically only charge for materials and postage on these publications and I expect that the low cost has contributed to their popularity. Any members who may wish to use this facility to distribute work of their own are welcome to discuss the possibility with me. Remember though, this is not a money-making scheme and you will have to type the document yourself into a suitable word processing format. All we can do up here is assist with scientific checking, produce the booklet and post it to whoever orders it.

Best regards,



Mike Cortie

I. Yaroslavsky, P.O.Box 6085, Beer Yaakov  
70300, ISRAEL

Exchange worldwide/Red Sea pectens,  
murex, *Ornis*, volutes and *Cypraea* for  
same families from S.A. Also sell/buy/  
exchange freak & unusual cowries.

## *Cypraea flaveola* Linne, 1758 and *Cypraea labrolineata* Gaskoin, 1849

by David Freeman

Cowrie collectors whose interests go back 20 years or more, have probably been using the name *Cypraea labrolineata* Gaskoin, 1849 for the small (12 mm to 22 mm) Western Pacific species, which somewhat resembles the Indian Ocean *Cypraea gangranosa* Dillwyn, 1817, or the Atlantic species *Cypraea spurca* Linne, 1758.

There have been a number of synonyms and/or varietal names for the geographically localised forms.

In 1956, Joyce Allan mentioned that the name *Cypraea flaveola* (Linne, 1758) had been more or less abandoned since it was considered to be unidentifiable. She accepted the classification *Ravitrona labrolineata* (Gaskoin, 1849).

In 1970 and again in 1985, C. M. Burgess also preferred the name *Cypraea labrolineata* Gaskoin, 1849. He regarded the name *flaveola* Linne, 1767 (note the date) to be a synonym of *C. spurca* Linne, 1758.

Joyce Allan recorded the subspecies:  
*helenae*, Roberts, 1869  
*maccullochi*, Iredale, 1939  
*nashi* Iredale, 1931  
*nasese* Steadman & Cotton, 1943.

C. M. Burgess added the subspecies:  
*percomis* Iredale, 1931.

This had been named from a dead shell that had originally been thought to be a possible subspecies of *Cypraea (Ravitrona) cernica* Sowerby, 1870.

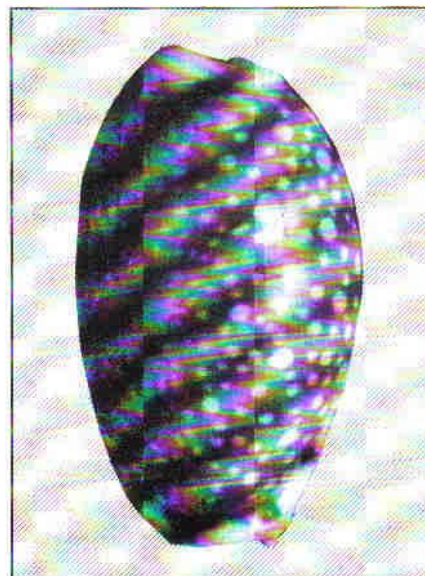
In 1975, and again in 1979, Jerry Walls opted for the name *C. labrolineata* with *flaveola*, *helenae*,

and *nashi* as synonyms.

In 1978, Wagner & Abbott's *Standard Catalogue of Shells*, 3rd edition, restored the Linnaean species (under the subgenus *Erosaria* of Troschel, 1863) as *Cypraea (Erosaria) flaveola* (Linne, 1758).

They listed as synonyms: *helenae*, *labrolineata*, *nashi* and *maccullochi*.

In the June 1995 issue of Raybaudi's *World Shells* we are reminded that *Erosaria flaveola* (Linne 1758) is presently accepted as the correct name of this species. Raybaudi states that this was the considered opinion of Schilder who had personally examined the Linnaean types. If we agree, we must downgrade *labrolineata* to the status of a synonym. It is still arguable whether to accept *Erosaria* as a full genus or as a subgenus of *Cypraea*.



**RARE SHELLS  
RAYBAUDI  
FAX 6-5430104  
ITALY**

## Drifting in a channel

by Michel Carrier

Reprinted from *Rossiniana*, the journal of the Conchological Society of New Caledonia, no.58, December 1993, pp.6-7. A subscription is available for around US\$50 per year. Fax 09687-27-7969 for more information. The article has been slightly condensed.

During the last three weeks, at our weekly Wednesday night meetings, two distinguished guests were present: Prof. Pineau of the O.R.S.T.O.M. and the Dr Algirdas Stankevicius, commonly known as 'Algus', director of the Conchological Museum and the Marine Research Centre of Klaipeda, Lithuania. As Algus showed his desire of getting some South Pacific shells, and also getting involved with a specialised scuba dive, he was directed towards a stubborn diver, the author of this article.

Although having all the qualifications to introduce Algus to specialized diving, I was not able to communicate with him, not because of our incompatibility of mood, but because he speaks Lithuanian, Russian and English, and I speak French, Spanish and German !! None the less, departure for the dive was set for August 2nd at 6.30 pm at my boat. The conditions were ideal: no moon and rising tide. One small problem - the wind would not diminish.

Since Algus had never scuba dived

beyond a depth of 40 m, it was out of the question to schedule a '60 to 75 m' on the outer reef; thus I decided to introduce him to my second speciality which involves the technique developed by the late Gerald Millot.... 'drifting the channel'.

Professor Pineau translated my instructions to Dr Algus. This method involved first the positioning of the boat in the Ilot Maître Channel. Second was to study the drift which would lead us over the desired zone, then to drop the anchor without letting it touch the bottom which is at 18 to 22 m, and flip into the water, go down the anchor chain, drifting under the boat holding the ropes attached to the anchor and if possible to fill up our netted bags with selected shells. This is done while hoping that a cargo ship would not come through this busy channel while we were diving, or at least that they would be able to avoid us if they saw our boat.

Before our dive I asked Pineau if he thought it worthwhile to mention the big hammerhead shark that seemed to enjoy itself in the channel; this shark had charged violently and 'tasted' (bumped?) my usual dive partner last month. Since Pineau felt that it was not worthwhile, I hoped Algus would forgive me for not letting him enjoy this additional pleasing thrill. I lent my buddy a diving tank, a regulator with a pressure gauge and strong spotlight, and then we went drifting the channel....

Immediately after diving into the dark water I noticed that we had a fast drift and that our collections would be limited to an area two to three metres in width. Well stabilised, in the warmth of my suit and relaxed, I tried to spot the nice prizes while keeping an eye, and above all an ear, on my body. He seemed to be breathing fast which is common for a first night dive.

The crushed coral bottom was covered with small algae. Occasionally I saw life through the silver glare in front of our beam: becomes, red snapper and even a few tazars, a few funny crabs with claws in the air, numerous sleeping fish, many stonefish (zut, I also forgot to mention that to Algus!), and a big lobster (the cowrie type) away from his hole.

After half an hour we arrived at the gorgon forest, where I had been told that if we looked carefully we could find some *Volva*. Unfortunately I was going so fast that I did not have time to discover one. Five minutes later I signalled to my buddy: we were getting close to the remains of the old water pipes of the 'Escapade'. These curved like an enormous snake, three meters from the bottom where they could be safely avoided. After another ten minutes had passed, my diving computer showed that we were entering the time of the decompression stage. I signalled to start the climb. After another three minutes of security I was going towards the stern of my yacht using a special hand rail. This hand rail is the only small improvement I added to Gerald Millot's technique and ensures that, in the case of bad weather, divers could safely pass from the bow to the stern of the boat without the risk of being taken away by the current.

Aboard we examined our prizes. There were no exceptional shells, no *Conus swainsoni*, *circumactus*, *bullatus*, no *Strombus vomer*, and no



## ROCKS & GEMS

FOR SPECIMEN SHELLS,  
ROCKS AND MINERALS  
MAIL ORDER & SHOP



✉ 26 London House Arcade, 356 West Street, Durban 4001, South Africa  
TEL: 031-304-9267 or FAX: 031-301-1975 for free list

# Shells used in cameo carving

by Barbara Fouché

## The Helmet Shells - Family Cassidae

The first materials used by Italian craftsmen to fashion cameos were the Red or Bull Mouth Helmet, *Cypraeacassis rufa* (Linnaeus, 1758). Italian craftsmen came to England to work and one of the best, Ronca, became cameo-maker to Queen Victoria. Some of the most exquisite shell cameos ever made were Ronca's handiwork, and are highly prized by their present owners. To this day, a certain site in Zululand is said to be a good source of these shells, which wash ashore from a ship wrecked en route to Italy. This species is otherwise very rare in Southern African waters.

The secret of cameo carving simply consists in knowing that the inner strata of porcelainous shells is differently coloured from the exterior.

*continued from page 4*

*Cypraea cernica tomlini*. Albus showed me a few *Cypraea walkeri bregeriana*, one *subviridis*, few *Murex*, and other species which had more interest to him than me.

For myself I chose three *Voluta deliciosa* (with animal and operculum) and two cones of the same name but with different varieties locally named 'optimus'. One maroon-coloured specimen showed two ugly studs, a cone of the type *vayssetianus*. Since the scientific one of us was more interested than the collector in the imperfect specimen, Albus wanted to keep it, but I decided to throw it overboard in order to procreate a generation which would be, I hoped, more perfect than it. The other one was red-orange and was perfect.

The vari-coloured layers of helmet shells lend themselves well to this art. They can yield a cameo of beautiful orange on a creamy background, or palest pink contrasting with white or rich brown on beige.

The most easily distinguished cameo is carved from the King or Sardonyx Helmet, *Cassis tuberosa* (Linnaeus, 1758). Cameos from this source reveal the under layers of onyx black present in the original shell, against which the creamy white carving stands out in relief. Victorian convention dictated that during the gradual transition from deepest mourning to more normal attire, the first, and for some time, the only article of jewellery permitted to ladies was a black and white cameo brooch.

Other shells of this family used for cameo carving are the Horned or Giant Helmet, *Cassis cornuta* (Linnaeus, 1758), and the Emperor or Queen Helmet *Cassis madagascariensis* (Lamarck, 1822).

The family Cassidae, to which the helmet shells belong, are sand dwellers, and usually bury themselves when they have nothing better to do! Slow-moving predators, they feed on sea-urchins and pansy shells (sand-dollars), evidently first squirting neurotoxic saliva over their prey to paralyse the spines. The victim is then held down with the thick-soled foot, while a hole is rasped in its shell (test) with the radula, in some the test may be crushed by the weight of the cassis, in others the proboscis is inserted through the anus of the prey. Sexes are separate and the female is frequently larger than the male.

## The Conchs - Family Strombidae

The Queen Conch, *Strombus gigas*

(Linnaeus, 1758), from which exquisite pink and white cameos have been made, is not only highly ornamental. In the West Indies the animal is a significant source of protein. Canning industries are founded on an adequate supply, and there are numerous recipes for this delicious mollusc (conch chowder, conch steak etc). In Barbados it furnishes a favourite repast for the natives whilst in Santa Cruz they have used the shells for paving the streets! Ground up it is used in the manufacture of fine porcelain. This truly magnificent mollusc also produces pearls, hues of which vary widely between pink and orange. Softer than oyster pearls, they sadly also fade with time. Most interesting is the fact that within the shell, in close association with the Conch, lives a little fish, *Apogon ichthys*, the Cardinal fish. When the conch body projects, the fish may swim around for a time in its 'front yard', but as soon as the conch body retracts back into the shell, the fish hurries in, and allows itself to be locked up with its strange roommate. The shell is also used as a trumpet in the West Indies.

## The Giant Clam - Family Tridacnidae

In the British Museum there is a simple cameo cut in the shell of a large bivalve of the genus *Tridacna*, which was made in the 6th or 7th century B.C. A shell cameo of such antiquity is rare indeed.

## The Tiger Cowrie - *Cypraea tigris*

A humbler form of cameo carving was executed on shells of *Cypraea tigris* Linnaeus, 1758. In bric-a-brac stores it is still sometimes possible to pick these up embellished with the Lord's prayer.

# Some Special Shells

by Lizeke van den Berg

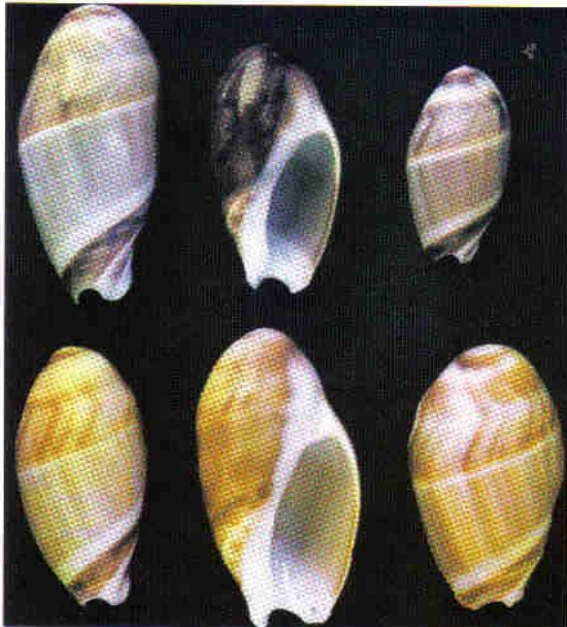


Figure 1. *Amalda obtusa* from Jeffreys Bay, top row - crabbed specimens, collected at 30 metres depth, bottom row - beach specimens.



Figure 2. *Amalda contusa*, top left - dredged at 128 m off Natal, top right - *ex pisce* off Durban, middle left - trawled off Tugela mouth, middle right - scuba off Natal, bottom left - sand pumping, Addington Beach, Durban, bottom right - dredged off Port Elizabeth.

## Beautiful *Amalda*

The genus *Amalda* H & A Adams, 1853, belongs to the family Olividae. The *Amaldas* of South Africa are medium to small and live in the infratidal to deep water zone. When freshly collected the suture is masked by enamel, which gives them a lovely glossy surface. The anterior end of the basal whorl bears a thick enamel deposit called a basal callus that is, however, often flanked above by a spiral groove, which may form a tiny tooth on the edge of the outer lip. The shells illustrated are *Amalda obtusa* (Swainson, 1825), *Amalda contusa* (Reeve, 1864), *Amalda optima*, (Sowerby, 1892) and *Amalda trachyzonus* Kilburn, 1975.

## An often overlooked family

In South Africa we find the family Crepidulidae with two genera - *Crepidula* Lamark, 1799, and - *Calyptrea* Lamark, 1799.

Three species of *Calyptrea* found washed up on our coast are shown in Figure 5. All three are more or less circular with their apex in the centre and a septum that crosses only as far as the columella. *Calyptrea chinensis* (Linne 1758) is a thin shell with a smooth surface. It has very lovely colour variations, from yellowish brown or violet, to white. The maximum diam-



Figure 3. Comparison, from left, of *Amalda obtusa*, *A. contusa*, *A. optima* and *A. trachyzonus*.

eter is 29 mm. *Calyptraea helicoidea*, Sowerby 1883, is the largest of the three. It is a much stronger shell with very coarse radial ribs on the dorsal surface. The colour is cream to brown. Both *C. chinensis* and *C. helicoidea* may be found in good condition on the beach. *Calyptraea barnardi* Kilburn, 1980, is a rare species intermediate in size between the other two. It is light sandy brown in colour with minute prickly scales. Although it can be found on the beach it is probably quite often overlooked. The lower of the two specimens in the photograph was taken by a diver at 40 metres.

**Simple but rare**

Three species of the genus *Gyrineum* Link, 1807 are shown in Figure 6. All are compressed from dorsal to ventral side with heavy varices which are continuous from whorl to whorl. *Gyrineum pusillum* (Broderip, 1832) is the most common. It has a cancellate structure, strong spiral ridges crossed by axial ribs, with elongated granules at the intersections. The apertural margins are purple, and there is sometimes a purple line on the right side of the shell, going from apex to aperture. It is found along the Kwazulu-Natal and old Transkei coastlines, with live specimens occasionally being found intertidally. *Gyrineum cuspidataeformis* (Kira, 1956) has a shape similar to *G. pusillum* but lacks the fine cancellate sculpture. It has stronger and fewer

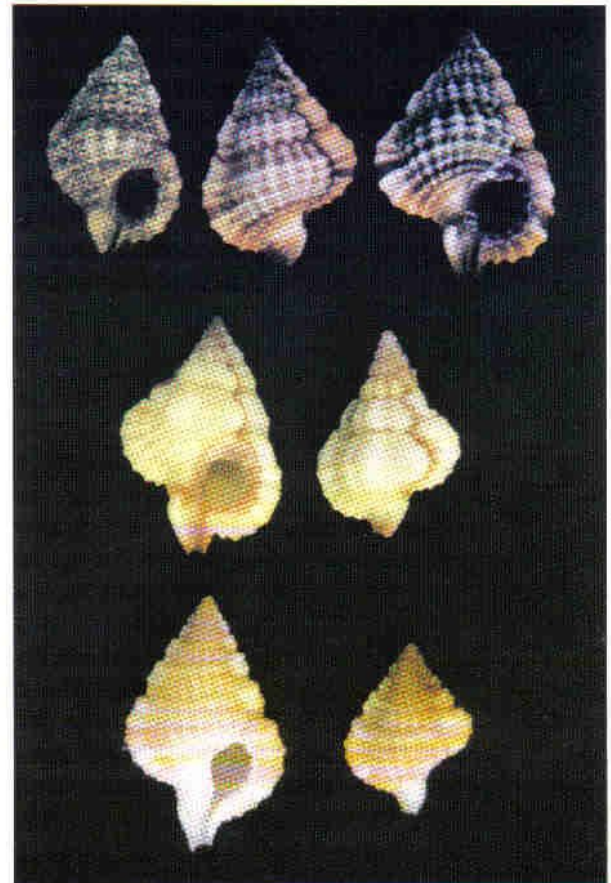


Figure 6. All shells from Kwazulu-Natal, Top row- *Gyrineum pusillum*, second row- *Gyrineum cuspidataeformis*, bottom row- *Gyrineum hirasei*.

Figure 4. *Amalda trachyzonus* (left) compared to *Amalda contusa* (right)



**Acknowledgements**

Many thanks go to Mike for taking the photographs of my shells and Markus for checking the text. My article is a team effort, thank you.

**Reference**

Kilburn, R. and Rippey, E. Sea Shells of Southern Africa, Macmillan South Africa, 1982.

axial ribs. The apertural margins are lilac with a lilac line along the base of the varices on the right dorsal side, going from apex to base. However, Dr Kilburn advises that the shell is now considered to be just a form of *G. pusillum*. The third species, *Gyrineum hirasei* Kuroda and Habe, 1961, has the same shape and pattern as *G. pusillum* but is pale yellowish brown with thin white spiral bands on the whorls. In addition, the siphonal canal tends to be longer. Both specimens shown were dredged off Natal in 150 metres.



Figure 5. Left- *Calyptraea helicoidea*, centre- *Calyptraea barnardi*, right- *Calyptraea chinensis*.

# Flotsam

## *Marginella mosaica* (Sowerby, 1846)

The shells of this very desirable little *Marginella* occasionally wash up on the beach between Cape Agulhas and the eastern Transkei<sup>1</sup> but such specimens are nearly always worn and faded. However member Bruno de Bruin has recently illustrated a number of magnificent live-taken specimens in the magazine *La Conchiglia*<sup>2</sup>. The shells were found on sand in depths of 25 to 45 m in Algoa Bay and off Gonubie near East London. The shells from the two locations have strikingly different patterns, with the Algoa Bay shells being covered with spiral bands of little dark brown rectangles, whereas the Gonubie shells generally have wavy or zig-zag dark-brown axial markings. De Bruin reports that the animals seem very similar and makes a plea for avoiding splitting the Marginellidae excessively. Curiously, this sentiment has been echoed last year in the journal *Xenophora*<sup>3</sup>, with more than a touch of a suggestion that South African authors might do well to slow down and compare notes and shells with each other before rushing into print.

### References

1. Kilburn, R. and Rippey, E. *Sea Shells of Southern Africa*, Macmillan South Africa, Johannesburg, 1982.
2. De Bruin, B. Two different forms of *Marginella mosaica* (Sowerby, 1846) along the south-east coast of South Africa, *La Conchiglia*, No. 274, 1995, pp.52-54.
3. Boyer, F. Marginellas: On the rise, *Xenophora*, no. 71, 1995, pp.14-22.

### ••••• *Marginella's in the Strandloper* •••••

- Members interested in the South African representatives of this family
- may find the articles in *Strandlopers* 178, 206, 207 and 210 to be of use.
- These issues may be ordered from the Society at R20 (Southern Africa)
- or US\$10 (further afield) for the set. The price includes surface postage.

## Looking after the future

There has been much discussion in the popular and scientific literature overseas on the conservation of invertebrates, and this topic has now been raised locally in the *South African Journal of Science*<sup>1</sup>. Some regional authorities around the world have introduced controls on the collection of fauna such as molluscs and insects. In some cases the legislation has gotten rather out of hand. For example I understand that it is illegal to collect insects without a permit in certain European countries. Of course, it remains OK to squash them underfoot, illustrating the peculiarity of the law. Indeed, we can not claim much greater enlightenment in South Africa where it is illegal for a private person to collect fossils or other historical material (specimens from strandloper mounds for example), but quite alright to bulldoze roads through such material, burn it for lime or crush it for diamonds. Or in other example, in KwaZulu-Natal it is acceptable (with a few exceptions) to catch all the fish you like with rod and line, and then kill them for food or bait, but not OK to place the fish in a salt water aquarium without a permit!

This kind of legislation appears to be persecution of the "little person". The butterfly or shell collector or the marine aquarist is seen as a soft target, who can be used as a useful scapegoat to deflect criticism of the regional authority from certain sectors. However, fishermen and developers are collectively a far more powerful lobby than collectors and put up much more of a fight! It is probably true to say that depredation for food, pollution and, in some cases, habitat loss, are the worst pressures effecting marine life. Add to this possible

future climate change and you might agree with me that the scientific collector is a flea in a circus. Of course, irresponsible commercial collecting is not all that different to collection for food. Therefore, if you are the type of collector who acquires your shells by purchase, I recommend that you choose your dealer with care. Avoid pretty Indo-Pacific shells without provenance like the plague!!! They have been ripped off the reef by plunderers and are of very little scientific, commercial or collecting value. Professional dealers, on the other hand, should be able to supply plausible collection data and identifications with the shells they offer for sale.

The organisation Conchologists of America was apparently been gripped with some debate on the above topics last year, and has gone so far to issue a resolution declaring that it believes that scientific collecting is not undesirable. In fact without scientific collecting it would be impossible to make informed decisions about mollusc populations. Interested readers can follow the arguments for and against live shelling in the June and September 1995 issues of the *American Conchologist*.

### Reference

- Oberprieler, R. and Bellamy, C.L. Now is the time to regulate the collecting of invertebrates in South Africa! *S. Afr. J. Science*, vol.91, June 1995, pp.280-283.

## Buccinids of the Red Sea

Collectors of the Buccinidae might find it worthwhile to get hold of the Jan-Mar 1995 issue of *La Conchiglia* in which there is an article on Buccinidae of the Red Sea.

### Reference

1. Singer, S.B. and Mienis, H.K. Shells from the Red Sea. Family: Buccinidae, *La Conchiglia*, No.274, 1995, pp.22-29.



### ***Conus pennaceus* Born, 1778- a confusing shell**

The very variable shell of this species and its relatives has caused much discussion over the years. It is generally uncommon and ranges across the Indian Ocean, and, with no example in between, Hawaii. Some South African collectors who have visited Mozambique or the Mascarenes may have been lucky enough to find examples. However, quite a diversity of different-looking shells have been classified or reclassified at one time or the other as the same as, or different to, *C. pennaceus*. For example, Marsh and Rippingale had *C. omaria* Bruguière and *C. praelatus* Bruguière distinct from *C. pennaceus*, and *C. magnificus* Reeve and *C. episcopus* Bruguière as forms of *C. omaria*<sup>1</sup>. Walls, however, considered *C. omaria* and *C. praelatus* to be forms of *C. pennaceus* while most *C. episcopus* were actually a form of *C. magnificus*,

a genuine species<sup>2</sup>.

There has been considerable subsequent discussion on the subject, now summarized in an article by Gabriella Massilia<sup>3</sup>. Readers may be intrigued to learn that she considers the rather different looking *C. lohri* Kilburn 1972 to be a form of *C. pennaceus bazarutensis*. However, since *C. p. bazarutensis* only lives on Bazaruto island and *C. lohri* occurs right down to Natal, this seems unlikely.

#### **References**

1. Marsh, J.A. and Rippingale, O.H. *Cone Shells of the World*, The Jacaranda Press, Brisbane, 1964.
2. Wall, J.G. *Cone Shells. A Synopsis of the Living Conidae*, T.F.H. Publications, Hong Kong, undated.
3. Massilia, G.R. Crumbling a single species, lumping good species: the case of *C. echo* Lauer, 1988, *La Conchiglia*, No. 274, 1995, pp.30-42.

### **A new species of *Hydatina***

Fans of the beautiful but fragile, shells of the genus *Hydatina*, and the no less beautiful animal of this genus may be interested to know that a new species has been added to the five previously recognised<sup>1</sup>. Four of the species can be found along our own coastline. These are *Hydatina physis* (Linnaeus, 1758), *H. albocincta* (Van der Hoeven, 1839), *H. zonata* (Lightfoot, 1786) (previously *H. velum*), and *H. amplustre* (Linnaeus, 1758).

The new species, *H. exquisita* Voskuil 1995, has very striking pink and brown spiral bands but is otherwise about the size and shape of *H. amplustre*. At the moment it is known only from the Marquesas Islands in the Pacific. The remaining species, *H. vesicaria* (Lightfoot, 1756) is rather plain and is only found in the tropical Atlantic. Voskuil reports that *Hydatina* feeds on bristle worms, which it seizes with its large proboscis. It is mentioned that *H. amplustre* is reputed to also feed on other molluscs.

Members wishing to obtain or examine specimens of *H. physis* or the less common *H. zonata* should look along the Kwazulu-Natal south coast, perhaps in winter through to spring. I have found *H. zonata* and *H. physis* in sandy tidal swimming pools or rock pools respectively in this region. Look for old bait, for example a fish tail thrown in by a fisherman. If you are very lucky *H. zonata* might be on it, presumably feeding. On the other hand, the *H. physis* that I have found have been in natural intertidal pools, or in gullies. They certainly mate in July in this part of the world and I have often found two of them at it, at it, engaged in a rather private and intense experience of their own.

#### **Reference**

1. Voskuil, R.P.A. The living species of the genus *Hydatina* Schumacher, 1817, (Mollusca: Gastropoda: Opisthobranchia: Hydatinidae) with the description of a new species, *Vita Marina*, vol.43(1-2), 1995, pp.29-38.

### **New tools for lumpers and splitters**

Most of us differentiate our species by examination of the shell, in particular its shape and colours. Of course there are other clues we can use, such as the locality from which the shell came, which can help eliminate unlikely candidates. On the other hand, professional malacologists are prone to use the characteristics of the animal itself. Details of the anatomy are compared and contrasted with other species and in this way the taxonomic relationships of a given mollusc deduced.

It was only a matter of time before the newest techniques of chemistry were harnessed to analyse the actual genes of the animals. The chemical description of the DNA provides an alternative and quite objective new way to sort out the relationships between species. As an example of the application of this technique, Korean researchers have investigated the relationship between various local planorbid freshwater snails<sup>1</sup> by means of a comparison of their mitochondrial DNA.

An advantage of the technique is that the results can be expressed numerically. For example the material extracted from *Hippeutis cantori* (Benson) and *Gyraulus convexiusculus* (Hutton) differed by 12.7%, whereas that of *Segmentina hemisphaerula* (Benson) differed from the other two by more than 55%. Clearly, irrespective of any similarities in shell shape, *S. hemisphaerula* is somewhat different from the former two species. I have heard that work of this nature is also been carried out in South Africa on *Burnupena* but have yet to obtain first-hand details.

#### **Reference**

1. Chung, P.R. *et al.* Mitochondrial DNA variations among three species of Korean planorbid snails: *Gyraulus convexiusculus*, *Hippeutis cantori* and *Segmentina hemisphaerula*, *Korean J. Malacol.*, vol.10(1), 1994, pp.27-37.

## Review of the genus *Fulvia* Gray, 1853 and validation of *Fulvia natalensis* (Krauss, 1848)

by D. Freeman

The December 1994 issue of the Belgian quarterly, APEX, carries a review by Jacques Vidal of the Museum National d'Histoire Naturelle of Paris, of the cardiid genus *Fulvia* Gray, 1853 which should interest local readers.

Bivalve collectors are probably familiar with the fragile cockle from our southern shores (False Bay to Port Elizabeth) which was variously named as *Papyridea papyracea*, and *Fulvia papyracea* (Bruguiere, 1789). It was illustrated by Dierdre Richards in 1981 (in an Afrikaans edition in 1987) (see Plate 53, no. 467) and by Kilburn and Rippey in 1982 (see Plate 40, no.11).

The name *Cardium natalense* Krauss, 1848 (revised to *Fulvia natalensis* (Krauss, 1848) was considered by Kilburn to be a synonym of *Fulvia papyracea*. Vidal has now further clarified the relationships between the various species. In particular, the Cape "*papyracea*" should be called *F. natalensis* (although, according to Dr Kilburn it does not actually range that far north) while the East African "*papyracea*", which does actually range to Mozambique and Natal, is actually *F. fragilis* (Forsskål, 1775). Furthermore, he records *Fulvia dulcis* (Deshayes, 1863) for the first time from our shores.

He gives a quite detailed analysis of the diagnostic features. The following are the most important differences:

### *Fulvia papyracea* (Bruguiere, 1789):

Relatively large, up to 45 mm; shell shape almost perfectly equilateral;

lunule large; ribbing very weak in medial third of shell; hinge regularly curved; some granulation always present between anterior ribs; external colour generally whitish to pale brown; interior whitish with brownish purple concentric stripes and purple posteriorly.

Although *Fulvia papyracea* is a name that has been most used (and misused) for the various species of the genus *Fulvia*, it happens to be a rather rare species with a limited area of distribution - India, Malaya, Philippines, Indonesia and Singapore.

### *Fulvia natalensis* (Krauss, 1848):

Medium to large, up to 43 mm in diameter; shell shape noticeably inequilateral and only slightly gaping; lunule very small; ribbing regular on whole shell; hinge not angled; no granulation; external colour light brown to beige with a greenish yellow periostracum; interior dark blood red. This shell is illustrated on page 12 of the *Strandloper*. Distribution - Mozambique to False Bay; notably the old Macarthur swimming pool at Port Elizabeth and at Knysna.

It should be mentioned that most beach collected specimens are much smaller than the maximum size stated above. Small (10 to 15 mm) fresh dead specimens of pairs of valves are not uncommon on mud banks at Knysna. A good average size for Port Elizabeth would have been around 25 to 30 mm in the days before municipal zeal for cleaning the pool interfered with the resident molluscs.

### *Fulvia aperta* (Bruguiere, 1789):

Large, up to 48 mm; moderately inflated; shell shape inequilateral with pronounced posterior gaping; lunule large; ribbing weak on medial third of shell; hinge angled anteriorly; granulation between anterior ribs; external colour variably pale beige or with concentric zones of purple red or brown; umbo often purple; internal colours similar by transparency. Distribution - Mauritius, Thailand, Malaya, Indonesia, Borneo, Philippines, Australia, New Caledonia and Solomon Islands.

## Colour variation in *Coralliophila rosacea* (E.A. Smith 1902)

by Brian Hayes\*

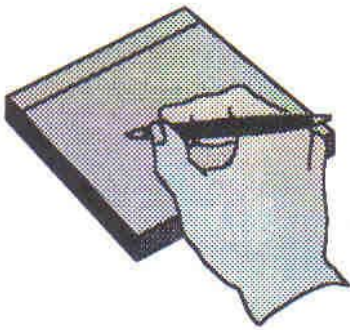
There are approximately twenty different species of the family Coralliophilidae known from South Africa. Most of these inhabit deep water reefs. Only three of four can be collected on the beach, intertidally or by using SCUBA. One of these is *C. rosacea*, obviously named for its rosy-pink coloration which is the colour form most often found washed up on the beach. In Jeffereys Bay, where beach specimens are fairly common, they are called 'corals' by the local residents.

Some species of mollusc are one colour when they are fresh, but after being beach-rolled the outer layer wears off and they change colour, sometimes to pink or mauve. It has been thought that beach specimens of *C. rosacea* were white when they are fresh and pink when they are worn. This is in fact not the case at all. Over the last few years I have been able to obtain living specimens from shallow and deep water reefs. The colour forms of these fresh specimens vary greatly. The accompanying photo (on page 12) shows just how much colour variation occurs. The predominant colour forms are pink and orange and the more uncommon forms are yellow and white. Size variation of the specimens shown is from 12.7 to 23.3 mm. All the specimens, except one which was dived at 35 m off Cape St Francis, come from deep water reefs (about 100 to 150 m).

I wish to thank Mrs Dawn Brink of Durban for making most of this material available for photography and study.

\* Algoa Bay Specimen Shells,  
P.O.Box 804, Port Elizabeth 6000,  
South Africa.

## Letters to the Editor-



### Dr Dai Herbert of the Natal Museum writes:

I am currently investigating a small Cape limpet *Acmaea roseoradiata* E.A. Smith, 1901, with a Japanese colleague, Takenori Sasaki, and am in need of live-collected material preserved in alcohol for anatomical studies. It would seem that the species has very rarely been collected alive, but I suspect that this is due to it being overlooked rather than to it being scarce. In fact, I suspect that in its favoured habitat the species is probably common.

I would like to ask the assistance of members of the Conchological Society and any readers of the *Strandloper* in trying to obtain this material. The species is known from Port Alfred to Table Bay and, judging from the habitat of similar species elsewhere, is likely to be found amongst the whitish to pink encrusting coralline algae ('lithothamnion') from the lower shore to 25 m and perhaps more. A

good place to look might be amongst such encrusting algae associated with the holdfasts of kelp, but this is just a hunch. If samples of these algae are placed in sea water in a white bowl and left to stand (almost until stagnant), the microscopic molluscs will start to emerge and climb up to the surface where they can be picked out. An

### Ms Benice Victor writes:

In February 1995 I took my nine year old son on his first hiking trial at the Berg En Bos in Thabazimbi. As we were walking along the dry river bed he picked up various dead clam shells that were lying around. One of these was closed and measured about 15 cm by 8 cm. It was very heavy and I thought that it was full of mud. After arriving home and letting it lie in a bucket with the other shells for a few days, we had to empty the bucket to house a huge crab that we had caught in the Apies river for observation purposes. The clam was transferred to the kitchen sink but kept on climbing out, and was obviously not dead at all. I then put it into an empty ice cream container. We had many enjoyable moments watching it breathe through two little black pipes on the left hand side and watched it move about on its orange foot. I filled the bowl with some sand. We also gave

it some green algae to keep the water oxygenated. I donated this clam to the Pretoria aquarium last month. It had to be kept in quarantine for three weeks before going into its new home. Since then I have found out that it has been taken home by one of the staff to live in a tank with five other clams. They are considered to be undesirable in a fish tank due to their tiny larvae (glochidia) attaching themselves to fishes' gills as part of their normal development and dispersal process. When I took this clam to show Laurie Smith at one of our conchological meetings, he said that it was the finest specimen of a freshwater clam that he had seen.

**Eds. note:** The shell in question seemed from the photograph supplied to be a specimen of *Aspatharia wahlbergi*, a sub-tropical species ranging down into the Transvaal. See also *Strandlopers* 123 and 208 for more information on this species.

alternative method is to rinse the algae in freshwater, which causes the molluscs to withdraw and fall off, though I'm not sure that this will work with limpets - it may make them cling on harder.

*Acmaea roseoradiata* is one of our smallest shallow water limpets (max length 6.0 mm) and has a low, smooth, very fragile shell that is whitish, patterned with pale pinkish radi-

ating rays. There is no other similar species in the southern Cape with which it may be confused and so identification should be relatively easy. I would be very grateful to any readers who would be prepared to try their hand at helping with this project. If any one does find some specimens of the limpet, could they please preserve them in 70% alcohol, pack them up carefully and send them to me (Natal Museum, P. Bag 9070, Pietermaritzburg 3200),

### SEA GIFTS

Tel: (0441) 733052

Fax: (0441) 743171

Worldwide specimen shells.

Very large range of all the popular families.


Rarities such as *Cypraea iutsui*, *gloriosa*, *valentia*, *sakurai*, *Voluta sculpturata*, *blazei*, *ponsonbyi*, *magister*, *Marginella bicatenata*, *serpentina*, *Conus pictus*, sinistrals in *Conus*, *Ancilla* & *Marginella* etc. Free list available on request.

11 Bos Street

Denneoord

George 6529

South Africa.



## ALGOA BAY SPECIMEN SHELLS

**BRIAN HAYES**

- \* Largest variety of S. African shells offered at the best prices.
- \* Large world-wide stock - many rarities offered !
- \* We buy - sell - trade top-quality specimen shells !
- \* Write for free price-list. We offer quality and reliability.
- \* WE BUY : Collections and rare shells - contact us first !
- \* Special offers for new collectors - please enquire !

\* P.O BOX 804, PORT ELIZABETH, 6000, SOUTH AFRICA  
\* Tel / Fax : +27-41-334521



*Coralliophila rosacea* (E.A. Smith 1902). See article by Brian Hayes on page 10.



*Fulvia natalensis* (Krauss, 1848). See article by David Freeman on page 10.

## Conchological Society of Southern Africa

Founded 1958

### Correspondence to:

7 Jan Booysen Str., Annlin,  
PRETORIA 0182, South Africa

### Membership (incl. *Strandloper*)

- ordinary members R50
- overseas members US\$25
- pensioners&scholars R25

### Office bearers

- President: Dr R.N.Kilburn
- Vice-President: Mrs L.v.den Berg
- Director: Dr M.Cortie
- Treasurer: Mr W.P.Kruger
- Secretary: Mr L.Smith
- Editor: *Strandloper*: Dr M.Cortie

### Regional contact names

#### DURBAN

Mrs A.Carcenac, 6 Highveld Dr.  
Westville 3630. 031-86-1040

#### PORT ELIZABETH

Mr B.Hayes, 10 Munro St., Millard  
Grange, Port Elizabeth 6001  
041-33-4521

#### EAST LONDON

Mr N.Newman, 42 Irvine Rd., Bonnie  
Doon, East London 5241.  
0431-35-2825

#### PIETERMARITZBURG

Mr K. Borland, 29A Ashmore Rd.  
Chase Valley Heights, Pietermaritz-  
burg 3201

#### BLOEMFONTEIN

Ds. H van der Walt, 191 Church  
St., Oranjesig, Bloemfontein 9301.  
051-47-5825

#### PRETORIA

Mr L.Smith, 7 Jan Booysen Rd,  
Annlin, Pretoria 0182. 012-57-5543

#### SOUTHERN NATAL

Mr G.Wallace, PO Box 513, Port  
Shepstone 4240. 0391-51-100

#### CAPE TOWN

Mr V.Millard, PO Box 27208, Rhine  
Rd., Cape Town 8050.  
021-61-4613

### In memory

Well-known North American conchologist Walter E. Sage III passed away in July 1995. Mr Sage was active in the affairs of the *American Conchologist* and wrote many popular articles on shells.

### Did you know?

**There is a restaurant with a similar name to our newsletter in Langebaan. *Die Strandloper* advertises itself as a sea food restaurant on the beach**