



PRESIDENTIAL REPORT FOR 1991/2

In this report I shall again leave the discussion of society statistics in the far more capable hands of the director and shall instead deal with some of the more important scientific papers on molluscs, relevant to southern Africa, that have been received since my last report.

BOZZETTI, L & LUSSI, M. 1991. A new species from South Africa: *Colubraria eugenei* sp. n. *La Conchiglia* **22** (261): 51-53. [Markus Lussi has kindly lodged the holotype in the Natal Museum].

HOUART, R. 1991. Note on the variability of *Haustellum purdeyae* (Radwin & D'Attilio, 1976). *La Conchiglia* **22** (259): 8-10.

HOUART, R. 1991. Description of thirteen new species of Muricidae from Australia and the New Caledonian region, with range extensions to South Africa. *J. Malac. Soc. Aust.* **12**: 35-55. [*Pterynotus fulgens* Houart, 1988, *Muricopsis auratus* Kuroda & Habe, 1971, and *Siphonochelus tillierae* Houart, 1986, are recorded from our waters].

HOUART, R. 1991. Description of four new species of Muricidae from southern Africa with range extensions and a review of the subgenus *Poropteron* Jousseaume, 1880. *Apex* **6** (3-4): 59-76. [*Pteropura* (*Poropteron*) *multicornis*, *P. (P.) transkeiana*, *Muricopsis valae* (named in honour of member Val van der Walt) and *M. mbotyiensis* are described as new; other species of *Poropteron* are *P.*

uncinaria (Lamarck, 1822) (synonym *capensis* Sowerby, 1841), *P. graagae* (Coen, 1947) (synonyms *mitriformis* Sowerby, 1841 and *mitraeformis* Sowerby, 1879, names preoccupied, and *incurvispina* Kilburn, 1970), and *P. debruini* Lorenz, 1989. *Pteropurpura joostei* Lorenz, 1990 is regarded as a true *Pteropurpura*. *Typhis montforti* (A. Adams, 1863) and *Muricopsis tokubetii* (Nakamigawa & Habe, 1964) are recorded for the first time. The Natal Museum has no material of *Pteropurpura joostei*!!).

HERBERT, D.G. 1991. A revision of the genus *Agagus* Jousseaume, 1894. *J. nat. Hist.* **25**: 883-900. [*Gibbula townsendi* Sowerby, 1895, and *G. perspectiva* Sowerby, 1900, are synonyms of *Agagus agagus* Jousseaume, 1894, described from the Red Sea. A new species, *Agagus stellamaris*, is described from East Africa and Zululand].

HERBERT, D.G. 1991. New records from southern Africa and Mozambique. Part 1. *Ann. Natal Mus.* **32**: 305-318. [The following species are recorded from southern Africa or Mozambique for the first time. *Clanculus flosculus* (Fischer, 1880), *Tricolia variabilis* (Pease, 1861), *T. ios* Robertson, 1985, *Phyllocoma concoluta* (Broderip, 1833), *Amathina tricarinata* (Linnaeus, 1758), *Thyca astericola* (Adams & Reeve, 1850), *Patella flexuosa* (Quoy & Gaimard, 1834), *Rhinoclavis diadema* (Houbrick, 1878), *Colina macrostoma* (Hinds, 1843), *Natica violacea* Sowerby, 1825].

HERBERT, D.G. & KILBURN, R.N. 1991. The occurrence of *Pisulina* (Neritidae) and *Neritopsis* (Neritopsidae) in southern Africa. *Ann. Natal Mus.* **32**: 319-323. [*Pisulina adamsiana* G. & H. Nevill, 1869, and *Neritopsis radula* (Linnaeus, 1758) are shown to occur as far south as Zululand].

KANTOR, Y.I. 1991. On the morphology and relationships of some oliviform gastropods. *Ruthenica* **1** (1-2): 17-52. [Genus *Melapium* is placed in its own family, the Melapiidae, and the family Pseudolividae is recognised as distinct from the Olividae].

KILBURN, R.N. 1991. Turridae of southern Africa and Mozambique. Part 5. Subfamily Taraninae. *Ann. Natal Mus.* **32**: 325-339. [Three species occur in deep water off South Africa: *Taranis miranda* (Thiele, 1925), and new species *T. inkasa* and *T. columbella*].

MARTIN, P & POPPE, G.T. 1991. A new *Trivia* species from South Africa. *La Conchiglia* **22**(259): 2-3. [*Trivia massieri* is named after member Werner Massier, from specimens dived in Hout Bay. Specimens needed by Natal Museum!!].

SALISBURY, R. 1992. Description of a new South African *Cancilla*. *La Conchiglia* **23**(262): 12-16. [Description of *Cancilla meyeriana*, named in honour of members Michael and Dawn Meyer].

R.N. KILBURN
PRESIDENT

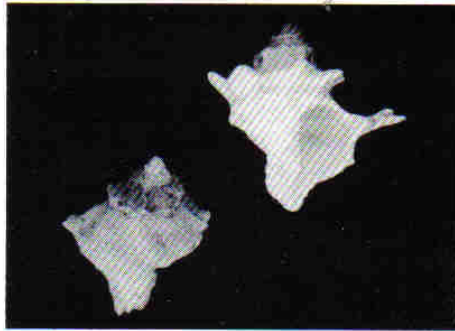
FEATURE SHELL

by

M. Lussi

(15 Longwoods Drive, Durban North, 4051)

Latiaxis sp.



The two shells illustrated appear to be conspecific on visual inspection. The specimen (dorsal view) was dived off Durban in about 35 metres and measures 15,1mm. The other (ventral view) was found beached at Mzamba, northern Transkei and measures 16,3mm. Main body colour is yellowish-pink with a pinkish-orange apex and a pinkish columella. The shoulder keel bears erect scales which are well developed. These two specimens are the only ones known to the author.

Can anybody help with identification?

It is hoped that this new feature will inform readers of interesting, rare and unnamed finds or recently-named species which occur off the South African coastline. If you would like to share your finds with other readers please submit a short account of your shell together with a monochrome photograph to the editor. If you cannot obtain a photo please send the shell to the author of this column who will gladly photograph it and return it safely to its owner.

The success of this column will depend on your participation!

A New Species of Trivia from South Africa

by

Philippe Martin and Guido T. Poppe
TRIVIA MASSIERI Martin & Poppe, 1991



Trivia massieri can be compared with *T. verhoefti* Gosliner & Liltved, 1982 and with *T. millardi* Cate, 1979. It is distinguished from these two species by its pronounced dorsal groove; furthermore, the columellar teeth do not extend onto the fossula as in the other two species. The fossula of *T. massieri* is identical to that of *T. millardi* and is therefore regular, while the fossula of *T. verhoefti* is irregular and not straight.

Dived from Hout Bay, Cape Town, at a depth of about 40m. Named in honour of Werner Massier of Natal, S.A.

EDITORIAL

Members have told me that they like issues with lots of pictures of shells and like to hear about all the new finds etc etc. BUT - an editor cannot suck things out of the air! If members do not tell me of these new finds or exciting finds and do not let me have pictures of unusual shells etc. I cannot print them! I do not want this to be an 'Olive magazine' and if it ever is, it certainly would not be my fault! This is YOUR magazine so contribute to it. Articles should be short, interesting to all, and photographs should be clear, in black and white. If you are interested in researching anything let me know and I will suggest something for you to do, if you yourself do not have anything specific to write about. I will have photographs taken for you for your article at no expense.

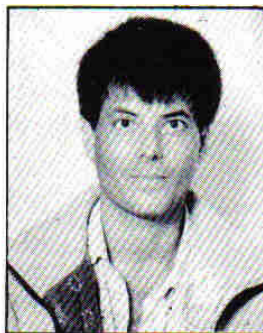
I have started a "Feature Shell" item and I hope this will motivate you.

Olive Peel

PERSONALIA

Markus Lussi's interest in shells began as a boy on the island of Mauritius where he was born in March 1955. His life's ambition is to assemble a complete reference collection of South African molluscs including land and fresh water species. To his credit an *Oocorys* species has been named after him and he is the co-author of *Colubraria eugenel*.

For the past four years he has been the Distribution Secretary for the Conchological Society of Southern Africa, and is also a member of the



Durban and Pietermaritzburg branches of the Society.

Markus was schooled in Mauritius and Switzerland before moving to South Africa in 1969 where he matriculated in 1972.

He later majored in Analytical Chemistry

and has held posts as an industrial chemist at AECI, Umbogintwini, and at the University of Natal, Durban.

His interests, besides shell collecting, include swimming, jogging, squash and gardening.

Blue-green alga attacks mussels: threat to rock lobster resource?

by

S C Webb and J L Korrübel 11, Zoology Department, University of Cape Town.

Most people would not be surprised to learn that mussels commonly eat algae, but Fig 1 shows the effects of an alga that eats its way through mussel shells. *Mastigocoleus* is the name of the culprit. It is corroding the shells of some intertidal mussels in the Western Cape as far apart as Saldanha Bay and Simonstown. Specimens of brown, black, and blue mussels, and a limpet species from False Bay have been found affected.

The phenomenon could be significant to the rock lobster fishery which is suffering a sharp down-turn as a result of poor rock lobster growth in the last two moultings. It is possible that poor growth is due to lack of food. Mussels are a major constituent of the rock lobster's diet, and a reduction in the mussel population through *Mastigocoleus* infestation could impact on the rock lobster resource.

Mastigocoleus is a blue-green alga. Essentially this means a green bacterium which forms stringy colonies.



Fig 1: Blue mussels (*Mytilus galloprovincialis*) showing shell damage caused by *Mastigocoleus*, x0.54.

The effect of *Mastigocoleus*

Scanning electron microscopy revealed the shell to be honeycombed with tunnels cut by secretions from the growing filament tips. Its filaments bore into mussel shells and weaken them to the point of fracture. Shell strength may commonly be reduced by 30% to 50% and this will render the mussels more vulnerable to predators. Indeed, severely infested mussels may easily be crushed between forefinger and thumb when picked from the rocks. Although the alga

has been documented elsewhere, this is the first report from the South African coast. The nearest previous report came from Sierra Leone.

Our findings on the pathological effects of the alga are particularly interesting because previous reports have been unanimous that direct damage resulting from algal penetration of bivalve shells is usually negligible. Moreover, infestation with this species has never before been found pathological. This phenomenon is not unique, however, as some red algae, fungi, green algae and even sponges have taken to the endolithic lifestyle of boring into rocks and mollusc shells.

Ecological factors

Larger mussels have a higher probability of suffering from extensive infestation patches and shell damage. And infestation seems also to be related to a number of environmental factors: high population density, high tidal position, and high wave action are common conditions for infested populations. It seems that the infestation can take hold only when the shell has already been abraded. Usually, a mussel has a thin varnish-like protein layer on its shell and this periostracum layer probably is sufficient to protect the mineral shell underneath, but many older intertidal mussels have patches of bare shell. The patches coincide with the most common infestation area which is on the mid point of each shell half (Fig. 1). This is the area where one would expect most scouring and rubbing together of neighbouring shells.

The most common area for holes is actually further back, but this is probably because the adductor muscle lies here. Contraction of this shell closing muscle would place much greater strain on the area and hence any weakness here would allow the muscle to pull the shell in. Loose mussels found with holes are dead or dying so one can assume that shell breakage leads to mortality.

Mytilus galloprovincialis is most susceptible

The newly introduced blue mussel *Mytilus galloprovincialis* appears the most susceptible to infestation and some populations suffer greatly from shell perforation. *Mytilus* is a newcomer to South African shores, probably within the last 20 years. But it has established itself well, often to the apparent detriment of the indigenous brown and black mussels (*Perna perna* and *Choromytilus meridionalis* respectively). Before the advent of *Mastigocoleus*, the blue mussel had taken a dominant position on Cape Peninsula rocky shores. Thus, any fluctuation in its mortality might impact on the shore ecosystem.

The susceptibility of the blue mussel is particularly interesting as it is an important mariculture species to the industry based in the cold waters off the Cape west coast. Although intertidal populations have been significantly affected, an assessment of the health of these cultured mussels was reassuring. A sample of several hundred cultured mussels from an aquaculture enterprise in the Saldanha Bay area was found to

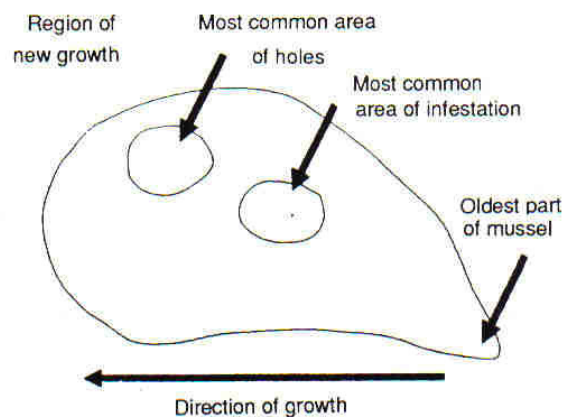


Fig 2: The commonest areas of infestation and holes

be entirely free of the alga with the exception of one small and insignificant infestation patch on one mussel. It seems that the fast growth, subtidal location and low exposure to wave action allows the mussels to stay in peak condition and free from abrasion and thus be better able to resist attack.

Conversely, wild growing mussels from high intertidal conditions with heavy wave action have slower growth as the mussel is out of the water often. Moreover, the shell suffers abrasion by waterborne sand and grit particles resulting in a more susceptible shell surface coupled with the mussel having less ability to grow and thus repair the shell.

It is interesting that the oldest part of the shell is rarely a focus of infestation and weakening but this can be attributed to the mussels having this part buried in the substratum or otherwise well shaded by crowding and there being insufficient light here for the alga to perform photosynthesis.

Treatments

Treatment procedures have previously been unnecessary and therefore are largely unexplored. If treatments to control this disease are ever needed then we have little to go on. Perhaps one line of investigation would be to look at ways of reducing the water holding capacity of the mussel beds at low tide to enhance drying. Dessication is a limiting condition for the distribution of intertidal blue green alga. Thus, thinning of the mussel beds (if compatible with their stability in the face of wave action) may assist drainage and so discourage algal growth.

Studies at greater depths

Studies so far have dealt only with intertidal and cultured subtidal mussels. Since reports suggest that the pathogen is capable of living as far down as 30m, an examination of subtidal mussels from the more exposed shores is now a matter of interest. Apart from giving us an idea of the extent of the damage to mussel populations, it will also enhance our understanding of the pathogen and its life cycle.

(Ack: South African Shipping News & Fishing Industry Review Vol.46, No.4, 1991)

ANNUAL GENERAL MEETING

Main items discussed at the 34th AGM held on Saturday 2nd May 1992 in Durban were:

- a) VAT on membership subscriptions: does not apply to the society.
- b) Library: it was decided that until the books can be transferred to Durban, the library would remain in the custody of the S.A. Museum in Cape Town.
- c) It was possible that subscriptions

would be increased owing to the enormous postage increase.

- d) The South Coast Group is to take part in an exciting project for a new Marine Centre on the south coast.
- e) The Constitution would be updated and all branches would be sent copies for comment.
- f) Dr Dai Herbert gave a most interesting and informative slide talk on a visit to Mauritius, Rodrigues and Reunion.

Shades of the Past

(Ack: Irradians, USA)

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Parlor Shells and Fine Cabinets.

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Passmore's Selected Parlor Shells.

These shells are brought from different parts of the world, and are of the finest variety.

The Children like them,

and by surrounding the little ones with things of intrinsic loveliness, you cultivate in them a love for the beautiful and the true.



The Invalid will like them,

bringing rest as they do to the weary eye and brain, for nature in one of her most poetic moods has given us the shell.

Every one will learn to like them, for the more you gaze upon their graceful shapes, and sparkling, glistening, changing colors, the more they fascinate you.

Any one who places a rare and beautiful cabinet of shells in his home or office, will have an ornament refined, attractive, and one that will be admired by all.

They are something entirely new, and will entertain your visitors whether at home or office, for there are few things, which when properly understood, present a greater variety of curious and pleasing effects than a perfect shell.

We have these selected shells in cabinets of mahogany, oak, and a different variety of wood, with French Plate Glass, and shelves covered with satin or velvet. A sample cabinet can be seen at

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SHELLING ON WAKE ISLAND

by

Edward A. Dunlap, M.D.

Over the past decade I have made eight trips to Wake Island of an average of five weeks each. This island is visitor-barred and no planes, ships or people are allowed to land there except by permission of the United States government for emergency situations. My presence has been to relieve the regular physician while he takes his annual leave.

Wake Island is famed in American history because of its heroic defense in the days following the Japanese attack on Pearl Harbour on Dec 7, 1941 when it held off a vastly superior invasion force for 16 days, and secondly it is the site of the meeting in 1950 between President Harry Truman and General Douglas MacArthur when the former fired the latter.

The island, which is an isolated coral atoll in the Pacific, is located approximately 2 300 miles west of Hawaii. The nearest land is the Marshall Islands, some 650 miles to the south. There are actually three islands making up Wake: Wilkes, Peale and Wake. They are connected by bridge or causeway. All are the remaining rim of an extinct volcano and are in a U-shaped pattern that is about 14 miles from end to end, enclosing a shallow lagoon with its opening between the arms being roughly two miles wide. Island widths range from a hundred feet to a mile. Beaches run the gamut from lovely sand to most inhospitable, ragged coral. Little to no lava rock shows.

The current function of the island is almost solely military plane refueling. The island is also a federal bird preserve. There never were native Wake Islanders because the island has no fresh water but for rain, and there is not enough soil to permit even subsistence agriculture.

And now what about the shelling? It is good both for beach-collecting and snorkeling. There has never been any significant SCUBA dive-collecting and that would be a gold mine. I have been unable to interest the few people who dive in collecting shells; they confine themselves to lobster-hunting, old wreck sites exploration and just looking! It frustrates me not to be able to dive. Snorkeling and wading have been productive but I know I am missing a lot. The usual run of the South Pacific shells is found but I have never found or seen any really rare varieties. It is not feasible to list all species I have found or seen but I hope the following random comments and observations will be of interest.

Burgess in his second book, *Cowries of the World*, indicates 32 varieties on his maps as being found on Wake, but some must be on a theoretical basis as I can find no articles listing them all. He personally collected 20 varieties some 20 years ago; Trout and Kakko from the same approximate time period listed eight; I have found or seen 23.

The breakdown is as follows (1 indicates a species found personally by Burgess; 2 identifies those listed by Trout and Kakko and 3 identifies the species I have found or seen found by others):

Cypraea annulus (1,2,3); *arabica*, *caputserpentis* (1,3); *carneola* (3); *cernica*, *childreni*, *chinensis*, *cicercula*, *clandestina*, *cribraria* (2); *depressa* (1,3); *erosa* (3); *fimbriata*, *helvola*, *isabella*, *limacina*, *lynx*, *maculifera* (1,3); *mappa* (3); *mauritiana*, *moneta*, *nucleus*, *poraria*, *schilderorum* (1,3); *scurra* (3); *staphylea* (2) *talpa*, *tigris*, *ventriculus*, *vitellus* (1,3); *walkeri* (1).

I find it interesting and peculiar that of the eight species listed by Trout and Kakko (in a private communication to Burgess) they name five that neither Burgess nor I have found. No *C. aurantium* have ever been reported from Wake but it is not to far north of the Marshalls where many have been taken; and the underwater topography of Wake in places duplicates that of the finding sites on Kwajalein. There has never been night diving on Wake out of fear of and respect for the large shark population. On the other hand, Gloria Pearson on Kwajalein has told me that *C. schilderorum* and *C. ventriculus* are rare there whereas they are common on Wake. I have found one 45.0mm *C. schilderorum* on Wake, currently a world record size. Beautiful large specimens of *C. mauritiana* were formerly common but the Thai work force has so raped them that they have almost disappeared. They take every mature and immature shell of any sort they find. Three years ago I encountered a Thai one night with 35 *C. mauritiana*, 31 of them immature. My efforts at education and conservation not only fall on deaf ears, but are resented. When I point out to them that they are destroying the breeding population their invariable reply has been, "If I don't take them, someone else will".

On the last two visits I have been very excited about finding what I thought could be a melanistic *C. lynx* but since the pigmentation exists in some immature shells I am probably in error. Burgess saw them and stated he considers them as

simply atypical forms. These were found restricted to one small area and were mixed in with ordinary forms.

A wide variety of cones exists and I have collected or seen: *Conus auricomus*, *chaldeus*, *catus*, *canonicus*, *coronatus*, *ebraeus* (the commonest cone on Wake), *flavidus*, *geographus*, *imperialis*, *leopardus*, *miles*, *musicus*, *obscurus*, *pulicarius*, *rattus*, *retifer*, *sponsalis*, *tessulatus* and *textile*. There are doubtless others.

Two nerites are common: *Nerita polita* and *N. plicata*. A few *N. maxima* are found. The *N. polita* come out of sand at night in the intertidal zone and crawl up on rocks; the *N. plicata* are found any hour of day or night lying exposed on rocks at the shoreline. About 10% of the *N. polita* have coloured bands or are solid colours of maroon, orange or, rarely, purple. The lagoon shoreline is crowded in some areas with *Clypeomorus morus* and its floor in most places is carpeted by various *Cerithiums*.

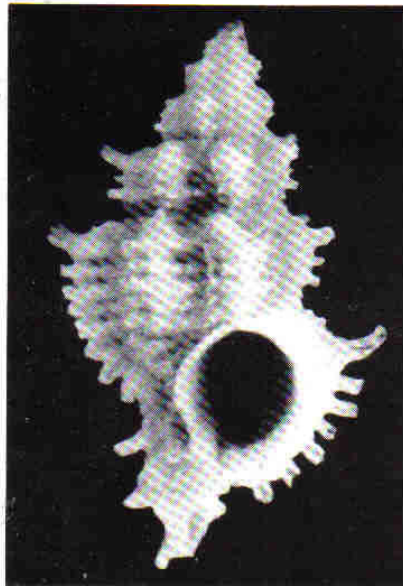
Relatively few bivalves exist: *Tridacna maxima* and *Periglypta reticulata* are common. On both lagoon-side and ocean-side beach fragments of lovely, large *Cryptopecten pallium* are frequent but I have never been able to find a live specimen. Dead *Fragum fragum* coat the lagoon shoreline in places but the only live ones I have taken were small and buried in sand at six to eight feet on the lagoon floor.

Miters are not common, but *Mitra mitra*, *ferruginea*, *stictica* and *litterata* are present. A large population of various Turbos provides housing for countless hermit crabs. The beautiful purple-red-mouthed *Laturus nodatus* is common. *Purpura persica* are easily found on shoreline rocks at night. I have never found nor have I seen any Olividae, the reasons for this are unknown to me. *Lambis lambis* are common and are found at depths of 30-50 feet; *L. scorpio* are not rare. In addition to all this above, a varied assortment of the following is also common: Cymatiidae, *Drupa*, Muricidae, Patellidae, Terebridae, *Thais*, and Tonnidae.

In summary, Wake Island is an interesting place in many respects and it offers the sheller a very rewarding and satisfactory experience.

(If you're lucky enough to be ship-wrecked there! -Editor)

WHATS NEW IN SHELLS AROUND SOUTHERN AFRICA



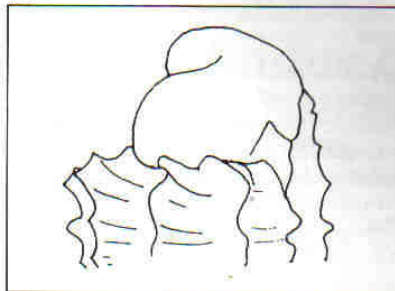
(a) *Muricopsis (Murexsul) tokubeii*
(Nakamigawa and Habe, 1964)

Until recently only reported from Japan and New Caledonia. Recently found off northern Zululand and Transkei.

Compiled by Olive Peel from a paper (with photographs): "Description of four new species of Muricidae from southern Africa with range extensions and a review of the subgenus *Poropteron* Jousseaume, 1880 (Ocenebrinae)" by Roland Houart (1991. *Apex* 6 (3-4): 59-76).

M.(M.) tokubeii
Zululand, 12.3mm

(a)



protoconch

(b) *Typhis (Typhina) montforti*
(A. Adams, 1863)

Previously only from Pacific Ocean, recently found off Port Durnford in northern Natal and Transkei.



T.(T.) montforti
Transkei, 5.2 mm.

Note rounded protoconch



(b)

protoconch

(c) *Pteropurpura (Poropteron) uncinaria* (Lamarck, 1822)

Pteropurpura capensis (Sowerby, 1841) is in fact *P. uncinaria* (Lamarck, 1822) so our records should be changed.

P. uncinaria shown on Plate 29 of Shells of Southern Africa by Deirdre Richards, 1981, figs. 225 and 225a = *P. (Poropteron) graagae* (Coen, 1947) and also Sea Shells of Southern Africa by Kilburn and Rippey, Plate 18, fig. 6. *P. uncinarius* should read *P. uncinaria*.



P. uncinaria
26 mm

(c)



P. uncinaria
holotype; 24.5mm.
(Photo G. Dajoz, courtesy H.K. Mienis)

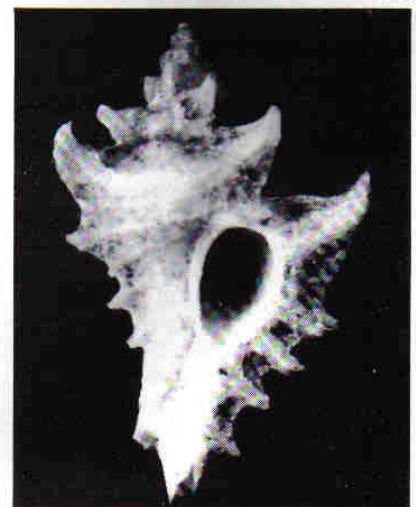
(d) *Pteropurpura (Pteropurpura) joostei* (Lorenz, 1990)

Named in honour of Arie Jooste of Cape Town.

Shell is light brown. Aperture is elliptical; siphonal canal long and sealed.

Cape Agulhas at a depth of 150m.

(d)



P.(P.) joostei
holotype; 19.8mm

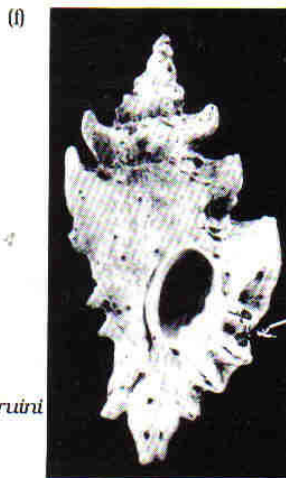


P.(P.) graagae
20mm

(e) ***Pteropura (Poropteron) graagae***
(Coen, 1947)

Similar to *P. uncinaria* but more elongated, suture deeper, shoulder more angular and spines more numerous. Range: South Africa from north of Durban to Port Alfred (eg. Tongaat, Chakas Rock, Isipingo, Park Rynie, Transkei, East London).

This is the correct name for the species also described as *mitraeformis* Sowerby, 1841, and *incurvispina*, Kilburn, 1970.

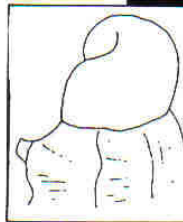
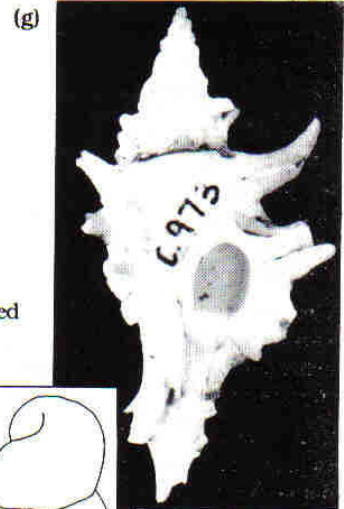


P.(P.) debruini
20.5mm

(f) ***Pteropura (Poropteron) debruini***
(Lorenz, 1989)

Named for Bruno de Bruin of Cape Town. Range: from Hout Bay, Cape to South West Africa.

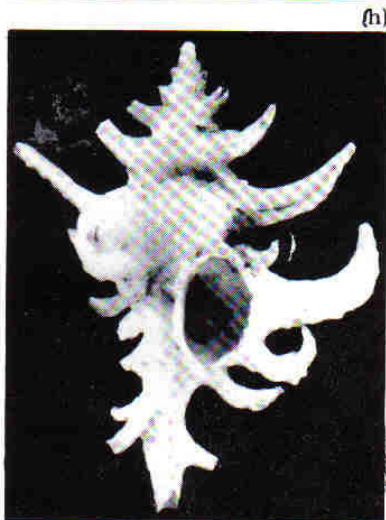
Whitish to brown. Spines joined by a webbed varicial expansion. Outer lip smooth with 3 or 4 denticles within.



P.(P.) transkeiana
paratype; 29mm
protoconch

(g) ***Pteropura (Poropteron) transkeiana***
Houart, 1991

Shell is stout, spinose. Spire high. Shoulder spine longest. Siphonal canal straight. From Transkei.

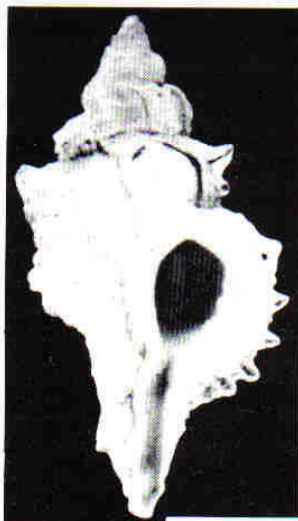


P.(P.) multicornis
paratype; 18.5mm

(h) ***Pteropura (Poropteron) multicornis***
Houart, 1991

High spire; whitish colour; small protoconch; smoothish surface; resembles *P. uncinaria* but siphonal canal is narrower.

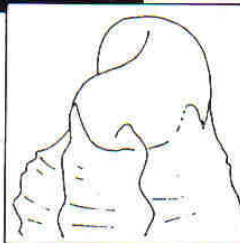
Range: East Cape off East London, Transkei, Durban, Umhlanga Rocks.



M.(M.) mbotyiensis
holotype; 17mm

(i) ***Muricopsis (Muricopsis) mbotyiensis***
Houart, 1991

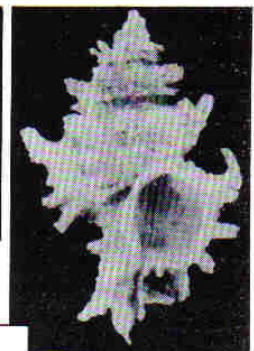
Stout; high spire; aperture rounder than in other *Muricopsis* species; uniformly light brown; broad outer lip. Found in Transkei off Mboyti.



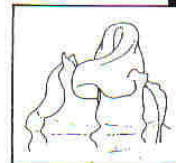
protoconch



M.(M.) valae



M.(M.) valae
holotype; 12.9mm



protoconch

(j) ***Muricopsis (Murexsul) valae***
Houart, 1991

Named in honour of Val van der Walt of Durban.

Light brown; aperture rounded; siphonal canal short, straight, open, with one short to medium-sized open spine.

Range: South Natal to Transkei.

Acknowledgement:

Thanks to Roland Houart who allowed me to use his paper including photographs, for this article.

***Barycypraea fultoni massieri*
Lorenz, 1991
(trawled off Mozambique)**

A new subspecies of *Barycypraea fultoni* characterized by its greatly inflated dorsal dome, its longer, denser and more numerous teeth, its anterior extremity and more produced fossula, marginal tubercles are often visible.

The holotype of *Barycypraea fultoni massieri* n. sp. is fully adult and was delivered to the author complete with the preserved animal.

The shell is very solid and heavy, elegantly pyriform, with a greatly inflated dorsal dome and slightly flattened base. There may be more or less distinct tubercles along the margins, which are not necessarily correlated with any marginal spotting. The posterior extremity is rostrated, forming a deep channel that bends upwards. Towards the dorsum a callous deposit strengthens the area under which the spire is completely hidden. The anterior extremity is made up of spoonlike projections on either side which are covered by a dome, hiding the terminal channel completely from dorsal view. This structure is rather elaborate, though not fragile. From the projections, a slightly corrugated margin is developed, more obvious when the shell is viewed ventrally. Altogether the anterior portion of the shell is distinctly tapered off the greatly inflated body. The aperture is very narrow throughout, it does not widen anteriorly.

There are 19 well produced columellar teeth and 29 labral ones. These extend slightly on both sides, becoming notably denser anteriorly. The terminal ridge runs into the shell, connected with the distinctly projecting, slightly wavy fossula.

The *Cypraea fultoni's*

Compiled by Olive Peel from a paper entitled: "Description of a new subspecies of *Barycypraea fultoni* (Sowerby, 1903) ..." by Felix Lorenz, Jr., Lauenburg, W.Germany

The shell has a very thick, milky nacre which is not smooth but finely granular, especially the posterior dorsal portion is covered with fine microscopic warts.

The shell has a dull appearance as if it was varnished. The base of the shell is a dirty white with a shade of orange towards the pale yellow brown teeth. The margins are still paler than the base, with distant, rather indistinct orange or brown spots which become darker or denser towards the dorsum and finally disappear under the greyish-brown zone which reaches to the projections of the anterior extremities and frames the dorsum.

The "maltese-cross"- markings are blurred, consisting of irregular, more or less parallel stripes of different shades of brown. When the markings are covered by callus, they may have a bluish-grey tint. Towards the posterior extremity they form slight depressions left and right. Mid-dorsally the embryonal zigzag-banding can be seen on a creamy white background.

Comparisons:

The most striking feature of the new subspecies, is the greatly inflated dorsal dome, always giving the shell a globular appearance, while the other two subspecies of *B. fultoni* are depressed. The new form differs from *B. f. fultoni* in the more numerous teeth, especially on columellar side, these are also longer and denser. In *Barycypraea f. massieri* n. sp. the anterior extremity is more elaborate-fragile, the fossula slightly more produced.

Barycypraea f. fultoni is usually shiny



Barycypraea fultoni massieri
Lorenz, 1991
Trawled off Mozambique



B.f. fultoni
(Sowerby, 1903)
Natal Coast



B.f. amorini (Raybaudi, 1990)
South of Quelimane,
Mozambique



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and smooth when fresh while the new subspecies has a granular surface in most cases. The basal spotting in the new race is very variable in intensity, but it more often seems to fade completely. The marginal spots forming tubercles is a feature only seen in *B. f. massieri*.

Differences between *B. f. amorini* and the new subspecies are apparent: while in *B. f. amorini* the base is plain greyish white and convex, it is flattened and often tinted darker than in *B. f. massieri*. The callous marginal processes in *B. f. amorini* separate it at once, also the deltoidal-depressed shape give a completely different impression than the inflated, pear-shaped *B. f. massieri*.

For a long time the classic *B. fultoni*

fultoni was available only from the stomach of Musselcracker fish caught off the Natal coast. Only once or twice was a living specimen of *B. fultoni fultoni* dredged at about 90m. A single specimen was found diving in 1990 at 55m on a low profile reef in Natal.

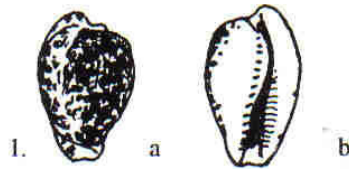
Some light was brought into the mystery around *B. fultoni* when the extensive populations of *Barycypraea* in Mozambican waters were discovered. Apparently, the genus *Barycypraea* is more widespread than formerly thought, having survived in an area of almost 2000km along the southeast African coast, in competition with modern genera such as *Lyncina* and *Erosaria*.

Barycypraea fultoni amorini is very distinct and outstanding. No other living

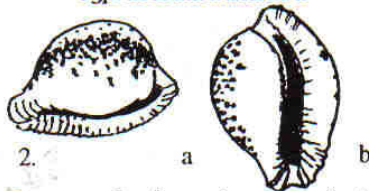
member of Cypraeidae shows a comparable development of marginal calluses along with such a striking pattern. It is similar to the extinct *Barycypraea caputviperae* Martin 1899, from the Neogene of Java in general outline, rather than the two races of *B. fultoni*.

Derivatio nominis: The new race is named in honour of Mr WERNER MASSIER of Margate, Natal, who first drew attention to the decisive differences in shell dimensions and number of teeth and who also supplied the type material.

(Ack: Schr. Malakozool. 4. 27-38, Taf. 5-6. Cismar/Ostholstein, 20.11.1991. ISSN 0936-2959)



Cypraeovula mikeharti



Cypraeovula algoensis permarginata

In recent years many new names have been introduced for various shell families from South Africa. Since I am also responsible for quite a few of these new taxa, collectors from S.A. have criticized that my articles have only been published here in Germany (although most are in the English language). Therefore I shall give a summary of the Cowries and Muricids that I have described from South Africa.

1. *Cypraeovula mikeharti* Lorenz, 1985 (Heldia 1 (3): 95-98)

superficially resembles *Cypraeovula algoensis*. The shell is slightly lighter in weight, and darker, brownish to purple (therefore it is often called "purple form of *algoensis*"). The spire is not covered by callus and the labral lip is barely visible from a dorsal view. The callus accumulation on the anterior extremity which characterizes *algoensis* is reduced to absent in *mikeharti*. The posterior labral teeth tend to disappear. The

NEW NAMES FOR SOME SOUTH AFRICAN COWRIES

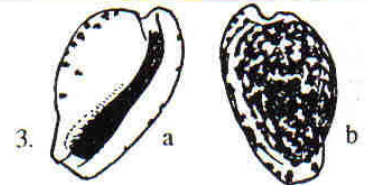
by
Felix Lorenz, jr.

species was named because of constant animal differences: the mantle in *algoensis* (even in very dark pink specimens) is always translucent pale greyish to orange while in *mikeharti* (even in pale shelled specimens) it is black.

The radulae differ considerably. *C. mikeharti* is common only in rather shallow water (5-15m) in Western False Bay where it lives under black sponges. The size ranges from 17 to 24mm. (no. 1 a,b)

2. *Cypraeovula algoensis permarginata* Lorenz, 1989 (Schr.z. Malakozoologie 2:1-38);

This is a deep water subspecies of *algoensis* which differs by the finer, confluent spotting and a different dentition, which tends to disappear on the columellar side and towards the aperture on the labral side while being more distinct towards the margins. The type material was found in crayfish traps at Cape St Francis and Algoa Bay. This taxon actually deserves the name "*algoensis*", as it is the only race of this species which really occurs at Algoa Bay. The internal anatomy of *permarginata* implies that it takes an intermediate position between *algoensis* and *edentula*. Few specimens have been found, and then only in deep water; no



Cypraeovula edentula nahoensis



4.
Cribrarula cribraria abaliena

shells wash up on beaches. It ranges between 17 and 26mm. (no. 2 a,b)

3. *Cypraeovula edentula nahoensis* Lorenz, 1989 (Schr.z. Malakozoologie 2:1-38);

This spectacular subspecies has recently been collected alive for the first time. Fresh shells have purple margins and a bright and dark dorsal colouration. This eastern race (from the Ciskei coast

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to *Gonubie*) differs from *edentula* by the darker, confluent dorsal pattern, and a more or less distinct dentition on both sides of the aperture towards the anterior end. The animal is similar in its external features to *edentula*, but has a different radula. This race ranges between 20 and 30mm. (no. 3 a,b)

4. *Cribrarula cribraria abaliena* Lorenz 1989 (Schr. z. Malakozoologie 2 1-38):

Actually this race is characteristic for the deeper water around Zanzibar Island, but a few shells have been found in the Richards Bay area, *ex pisce*. It differs from the classic *cribraria comma* (often found along the Southeast African coast) by being rhomboidal-depressed and bent up margins. The dorsum may be partially obscured by callus. The dorsal pattern is paler, with large lacunae. The name shall stress that this race is considered intermediate between *cribraria* and *esontropia (abaliena)* Lat: "estranged". the shells of *abaliena* are always smaller than typical *cribraria comma* (10-15mm), the radulae differ

considerably. (no.4)

5. *Staphylaea limacina clarissa* Lorenz 1989 (Schr. z. Malakozoologie 2: 1-38)

Named in honour of Mrs Clarissa Newman (Int. Council of Women, mother of Noggs Newman). This is what South African collectors know as *Staphylaea limacina* from South Africa. It differs from typical *limacina* by the midway shortening columellar teeth and minor anatomical details. Fresh shells resemble the Hawaiian *semiplota* as they have a similar dark staining of the marginal pitting. It ranges from the East London area to as far north as Tanzania, but it is most common along the Transkei wild coast.

6. *Staphylaea staphylaea nolani* Lorenz 1989 (Schr. z. Malakozoologie 2:1-38):

This subspecies seems to be endemic to the Transkei. It is much shorter than typical *staphylaea*, the margins are callous and reach onto the base, partly obscuring the dorsal pattern. The teeth are shorter than in *staphylaea* as they do not reach the margins midway. The

marginal pitting is commonly tinted with brown. This rare subspecies has rarely been collected alive and a preserved animal is needed to learn further about its status. It was named in honour of my friend Nolan Webb of Grahamstown.

Unfortunately the description of *Cypraeovula mikharti* is no longer available but a detailed discussion in English language, along with the other descriptions have been published in the new magazine, "Schriften zur Malakozoologie", of which the complete Volume is still available. I recommend anyone interested in Cowries and other marine families to subscribe to this magazine. For further information contact: Dr Vollrath Wiese, Hinter dem Kloster 42, 2433 Cismar Germany.

For my studies I am looking for all kinds of South African shells and I can offer worldwide Cowries and Cones in exchange. For further details on the abovementioned taxa and any questions on *Cypraea* contact Felix Lorenz, jr. Ginsterweg 6, 2058 Lauenburg, Germany.

SEDFIELD'S INTERESTING FOSSIL SHELLS

by
Johan Marais

Fossil shells reveal a world that vanished thousands of years ago at Sedgfield.

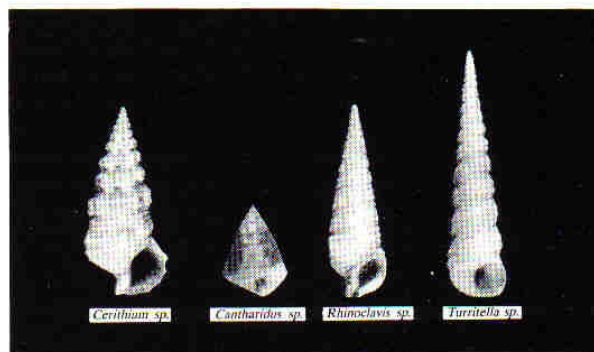
During the construction of the wooden stairs leading to the mouth of the Swartvlei lagoon, the hillside was disturbed and the underlying reddish brown sand was exposed. It was seen to contain a variety of sea shells. To the uninformed eye, these shells look like most other bleached shells one could find in the nearby rock pools. However, geologists know that these perfectly preserved shells are actually fossils belonging to a bygone era of some 125000 years ago, called the late Pleistocene. What can these fossil shells tell us about the prevailing conditions and life at Sedgfield many thousands of years ago?

Fossil shells are the skeletons of molluscs which lived in ancient times. Living molluscs have very specific

temperature requirements. Those adapted to the cold water along our West Coast and Cape South Coast do not occur in the warmer waters along the East Coast of Africa, while the warm-water species of Natal do not survive in the cold waters of the Cape. Strangely enough, the living relatives of most of the fossil shells at Sedgfield, such as the *Cerithium*, *Cantharidus* and *Rhinochlois* species, only occur in warm

tropical waters at present. The *Cerithium sp.* is still common in the Red Sea, Persian Gulf and India, but does not occur farther south than the Seychelles. The *Cantharidus sp.* can still be found in Tanzania and Mozambique, while the *Rhinochlois sp.* occurs in the warmer waters of Natal. Only the *Turritella sp.* is still living in the nearby Knysna lagoon. This suggests that Sedgfield once had a lush tropical climate. The fossil deposits at Sedgfield

occur some distance from, and about five to seven metres higher than, the present sea shore. These marine deposits, or "raised beaches" indicated the positions of ancient shorelines. The shoreline is determined by the sea-level which, in turn, is controlled by the amount of water released from the polar ice-caps during fluctuations in solar radiation.



The higher-than-present sea-level therefore also suggests climatic conditions considerably warmer than those we experience today. With a higher sea-level, Swartvlei must have been larger in those days than it is now and much of the present Sedgefield would have been under water. Geological records all point to the existence of such a period of extremely high global temperatures some 120 000 years ago.

During this warm period, tropical molluscs must have been common along the Cape South Coast. Excavations at sites such as Klasies river mouth, along the Tsitsikama coast, showed that prehistoric man also existed along the Cape South Coast in those days. One could well imagine these early human beings, with their stone implements hunting in the hills surrounding Sedgefield, while women and children gathered the abundant shellfish in the sea and nearby lagoon. In those days leopard, lion, clawless otter, water mongoose, hippo and brown hyena abounded in the area. The giant long-horned buffalo, blue antelope and many others, which are now extinct, still roamed the countryside.

The warm weather, however, did not last for long. The earth's climate became much cooler and the veld much more grassy than before. Ice-caps grew at the poles and on the continents of the Northern Hemisphere. The warm-water molluscs retreated to equatorial regions and were replaced in the open sea along the Cape South Coast by cold water species. Viable colonies of some of the warm water species remained in the relatively warm water lagoons such as Swartvlei, but eventually they, too, succumbed to the cold, and were preserved as fossils until this day.

During this period of glaciation, which probably lasted for almost 100 000 years, ice accumulated at the poles to such an extent that the sea level at Sedgefield dropped by about 100m and a large area, now covered by sea, was exposed and whipped up into sand dunes by the wind. The lake probably ran dry and the valley that is now Swartvlei was carved away to at least thirty metres below present sea-level by the rivers flowing out to the sea near the present Gericke Point. At the end of the ice age the sea level rose again and reached its present height some 4 000 years ago. The present lake was probably re-formed by

dune formation blocking the flow of the water down the valley. Wind-blown sand from the dunes slowly filled Swartvlei, and the mouth of the estuary migrated two kilometres eastward to its present position. Sediments from the inflowing rivers also accumulated in the lake, reducing the depth of the central basin of Swartvlei to its present ten metres.

Many interesting new species of molluscs have since made Swartvlei their home. All are perfectly adapted to the prevailing climatic conditions. But will the tropical species of ancient times return one day? The fossil shells of Sedgefield remind us that we live in an ever-changing world. Perhaps the "greenhouse effect", caused by industrial pollution and deforestation by modern man will swing the delicate balance of nature into an even warmer era than today, bringing back many of the tropical species of long ago. Or are we perhaps on the brink of another ice age? Only time will tell!

THE PLEISTOCENE OR GREAT ICE AGE

This geological period in the history of the earth supposedly began some two million years ago. It was characterized by the advance of the first continental ice sheets in North America and Europe and by a relatively cool climate in the Southern Hemisphere. Evidence exists for four glacial cycles of advances and retreats of the continental ice sheets during this era. Each cycle was accompanied by a change in the fauna and flora of the earth. The glaciations, which formed ice layers of 1,5 kilometres deep on the North American continent, usually lasted for periods of about 100 000 years and were separated by short interglacials of only 10 000 to 15 000 years. Some geologists suggest that the Pleistocene ended at the end of the last glaciation, some 10 000 years ago, but many regard the past 10 000 years as merely an interglacial period of warmer weather, preceding the next epoch of continental glaciation.

GROUP NEWS FROM BLOEMFONTEIN

1) A trip to Burgersdorp, Orange Free State

Four members of the Free State Group, namely Ds. Hugo van der Walt, Marius Jansen, Gladys Myburgh and Willemien Hattingh, left for a visit with Johël van der Berg. At Burgersdorp we were joined by Ellabie Grant and Dr Hanna Pienaar. Johël received us warmly and treated us to tea and scones. Afterwards we were invited to her 'shell room'. She probably has the largest collection of beach specimens in the Orange Free State. She has taken the trouble to arrange the various families and variations in an orderly fashion on long glass shelves. Indeed a praiseworthy achievement! We all agreed that this was really an impressive collection which must have required a lot of time and much research. It was definitely worth the effort of driving 520 kms to view it.

Before lunch Hugo conveyed the thanks of the Group to Johël and her husband, Ras, for

their hospitality and kindness and handed her a potted plant as a token of gratitude.

We had lunch in the beautiful garden where a Hoepoe bird entertained us with his beautiful song.

After a very enjoyable morning in the company of Johël, we took our departure.

2) At the group's **Annual General Meeting** held on the 7th March the following committee was elected:

Chairman: Ds Hugo van der Walt;
Vice Chairman: Mrs Gladys Myburgh;
Secretary: Mrs Marietjie Viviers;
Treasurer: Mr Marius Jansen



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John J. Brandyberry, 417 W. Bainbridge Street, Elizabethtown, PA 17022, USA - *Cypraea*, *Haliotis*, Land snails, *Trivia*.

Attard Yvan, 5 Rue des Merisiers, Eckbolsheim, 67200 Strasbourg, France. Tel: 88.77.29.18.

Gabor Tompai, Zoology, Strobl A.u.7. H.ep.ii.em.20, H-1087 BUDAPEST. Has freshwater, sea and land shells for exchange.

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NEW MEMBERS

We welcome the following new members:

Mr & Mrs G & S Cammock, 45 Brodie Crescent, South Hedland 6722, W AUSTRALIA; **Mrs V M Kapp**, 83 Tugela, 30 Sol Harris Crescent, DURBAN, 4001; **Mrs L Keulemans**, P O Box 354, BEDFORDVIEW 2008; **Mr A Pinto**, Alvarez Thomas 3023, Buenos Aires 1431, Argentina, SOUTH AMERICA; **Mr G T Poppe**, Bus 7, Mortsel 2640, BELGIUM; **Soc. Italiana di Malacologia**, Riccardo Giannuzzi-Savelli, C.P. 22 (Succ. 26), 90146, Palermo, ITALY; **Mrs D K Underwood**, 9022 Brighton Court, West Melbourne, Florida 32904, U S A; **Miss J R van Rensburg**, P O Box 118, HIBBERDENE, 4220; **Mr Rodney Tiedt**, 6, 4th Avenue, GONUBIE, 5256; **Poppe Guido**, Mortselveldenlaan 25, Bus 7 Mortsel 2640, BELGIUM; **Mr John Varnavas**, AHK-B-64, Dhekelia, Larnaca, CYPRUS; **Mrs Johanna Williams**, PO Box 3208, BLOEMFONTEIN, 9300, S. AFRICA; **Mrs Bernice du Plessis and family**, 323 van Heerden St, Capital Park, 0084, S. AFRICA; **Pierre du Toit**, 3 Azalea, St John Rd, St Andrews, BEDFORDVIEW, 2008, S. AFRICA; **Mrs Phyllis Jack**, P O Box 45, CRAMOND, 3420, S. AFRICA; **Mrs C.H. Mathee**, 30 Headingley Ave, WESTVILLE, 3630, S. AFRICA.

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HONORARY LIFE MEMBERSHIP

has been bestowed upon:
DAVID FREEMAN and **NOGGS
NEWMAN** for their contributions to the
Society. Their expertise has been a
great inspiration to young and old
collectors alike over the years. We
congratulate them and wish them well.

CHANGE OF ADDRESS

We wish Val van der Walt joy and
happiness in her massive move down the
south coast and pray that all the shells
arrive with their correct labels! Her new
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AFRICA.

IN MEMORIAM

We have lost three wonderful members and to those
they left behind, we send our heartfelt condolences:

MR JOCK BARNES - a retired architect and artist
died on Good Friday;

MR BRUCE BURSEY who was a farmer. We will
miss seeing his dredged shells;

MRS I IVENS of Pennington, Natal.

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