

The Strandloper

BULLETIN OF THE CONCHOLOGICAL SOCIETY OF SOUTHERN AFRICA



Strandloper 253

March 1998

Page 1

Micromagic

a collaborative contribution

- Kobie du Preez** : stereo microscope macrophotos
Iris Klingbiel : scanning electron microscope photos
Mike Cortie : text and ordinary macrophotos

There are at least 80000 species of mollusc, and that is taking a 'lumping' rather than a splitting 'approach'. With that many species to collect you could be excused for wondering how best to develop your hobby. Some intrepid collectors set out to acquire as many species as possible. However, many other collectors have decided to specialise in some family or aspect of shells. Some of these specializations were mentioned in the article by Guido Poppe in *Strandloper* 251. Popular examples of collecting specializations include collecting only Cypraeidae or some other 'glamorous' family, or, quite often, only collecting shells from a certain region, for example the Mediterranean Sea. Another quite popular specialization is collecting 'microshells'. According to one definition, these could be any shell under 8 mm in length. However, even if you restricted your collecting efforts to shells under 3 mm in length there would still be many thousands of candidates!

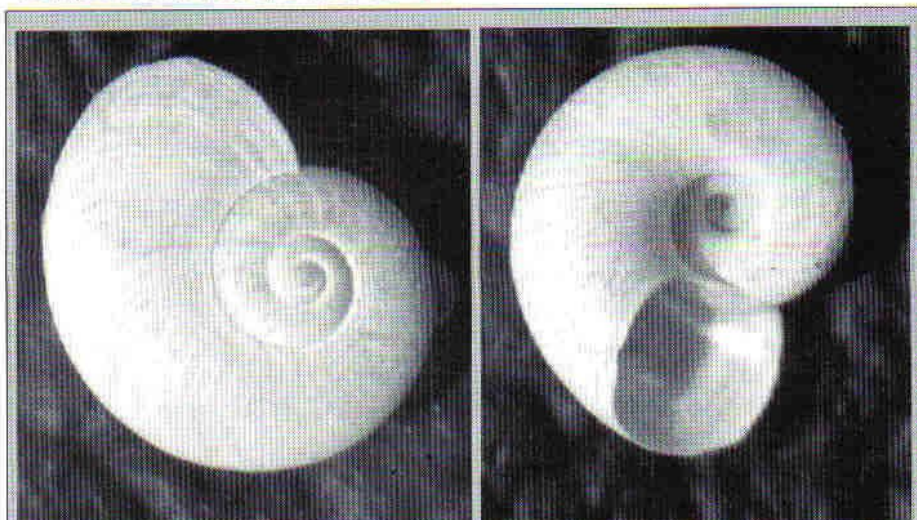
Microshells are easy to store (a shoebox will hold several hundred species) but hard to identify. Never-

theless, if you do want to identify and enjoy your microshells then a detailed photograph or drawing will be found to be an important aid. Unfortunately, these little shells are notoriously difficult to photograph. Nevertheless, in this article we will offer some preliminary thoughts on how best to go about it. Basically, there are currently three popular methods : a camera with macro-lens and rings or bellows, a low-power microscope with camera

adaptor, and a scanning electron microscope (SEM). Examples of photographs taken with each of these techniques will be shown.

Macro-lens

A 35 mm camera equipped with a 1:1 macro-lens can manage good photographs of shells of down to 20 mm in size. However, getting the exposure, depth of field and background right is



Tornus ?planus (A. Adams), family Tornidae, from shell grit at Kilifi, Kenya.
Magnification here : 11x

Actual size 

not trivial. These factors become even more problematic if you add rings or bellows to increase the magnification. Do remember to use a tripod or stand to keep your camera steady and use the self-timer or a cable-release to activate the shutter. We suggest that if you do try this out for yourselves, you should keep careful notes of the settings for each exposure. It may be necessary to shield the viewfinder from light during a long exposure. Experiment in a scientific fashion until you find a consistently successful 'recipe'. The practical lower limit in our experience is about a 5 mm shell. Three examples are of such photographs are presented here on page 6.

Low-power microscope with camera adaptor

A basic stereo microscope can be bought for two or three thousand rand, however models that make provision for the mounting of a camera cost at least double that. A super-duper stereo microscope unit from a leading manufacturer can cost in excess of thirty thousand rand!

In all cases, the camera body is fitted directly to the microscope, and no lens is used. Both focus and exposure are extremely tricky. However, the end result can be very good. Some of Kobie du Preez's macrophotographs are shown on page 6 and 7. These images satisfy almost all scientific or aesthetic requirements, and can be obtained of shells of between 1 and 5 mm in size.

Scanning electron microscope (SEM).

This device works by scanning a specimen with a very tightly focused electron beam. The sample must be in a vacuum and it must be an electrical conductor. Biological or mineral samples are usually coated with a ultra thin vapour-deposited layer of gold or carbon in order to make them conductive. The technique yields the best depth of field and resolution of the three described here and is suitable for shells of 2 mm or smaller. How-

ever, there is no colour information, nor can it be applied to live molluscs. Also, there is no way to remove the gold or carbon coatings afterwards.

Ownership of a scanning electron microscope lies beyond the reach of virtually all private individuals. However, many large research organizations have such instruments and some are prepared to take photographs for you. The best scheme is to discuss your requirements first with the facility manager. Ask him or her what diameter their 'stubs' (sample holders) are and whether you may borrow one. Then carefully stick your microshells down onto such a stub in your own time (or, if you cannot persuade him to part with one, onto a disk of heavy duty aluminium foil of the same diameter). Use graphite paint or some other glue that he suggests. These folk will not thank you if you use sticky tape or Prestik - it will contaminate their instruments terribly, so check with them first! Then, when you have a stub or disk well-covered with samples, each nicely separated from its neighbours, take it back to the facility and ask them to gold coat it, and then to photograph each shell for you. Budget about R800 for the entire exercise.

The macrophotographs

Page 3

M 1. From the garden (near Pelindaba, Gauteng) of Society Vice-President Lizieke van den Berg, where they exist in their millions. Looks like *Pupilla fontana*, a species found widely over south and east Africa. (SEM)
Magnification here: 32x
Actual size: ●

M 2. Found in the garden of Lizieke van den Berg. Could be an introduced species of *Oxychilus*. Has a brown colour. (SEM)
Magnification here: 27x
Actual size: ●

M 3 and 4. A tiny brown-coloured snail, found clinging to the underside of dead leaves in the garden of

Lizieke van den Berg. Looks like one of the many indigenous species of *Trachycystis* (SEM).
Magnification here: 30x & 35x
Actual size: ●

M5 (also on page 7). A very tiny shell, probably one of the Rissoellidae, from Mtoni, Kenya.
Magnification here: 35x
Actual size: ●

M6. *Epitonium ?lyra* (Sowerby 1844), A gem of a little shell from Kilifi, Kenya. Magnification here: 15x
Actual size: ●

M7. *Acteocina fusiformis* A. Adams 1854, one of the shelled opisthobranchs. Mtoni, Kenya.
Magnification here: 25x
Actual size: ●

Page 6

M 8. A selection of beach-collected *Primovula beckeri*, from near Port Alfred in the Eastern Cape. Photographed with macro-lens and rings.
Magnification here: 5 x
Actual sizes: ●




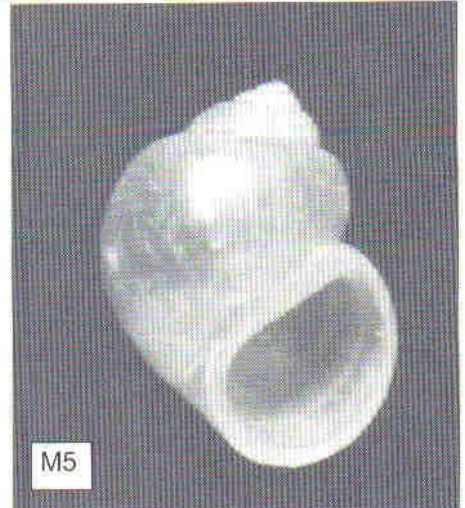
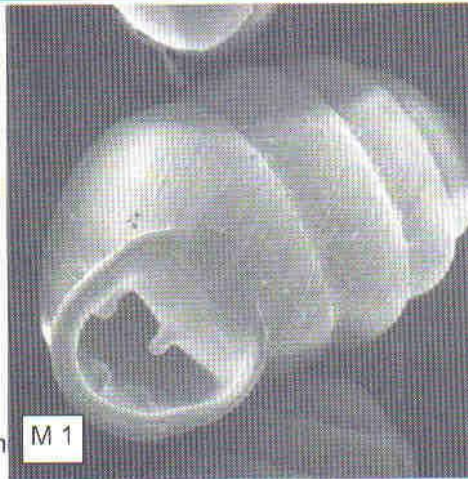
M 9. From Kilifi, Kenya. Collected in shell grit by Kobie du Preez and photographed by her with a low-power microscope. Could be *Truncatella guerinii* A&J Villa 1841.
Magnification here: 13x
Actual size: ●


M 10. Little *Gulella* landsnail, found in leaf litter of indigenous bush inland of Eshowe, Kwazulu-Natal. Photographed with hand held macro-lens.
Magnification here: 5x
Actual size: ●

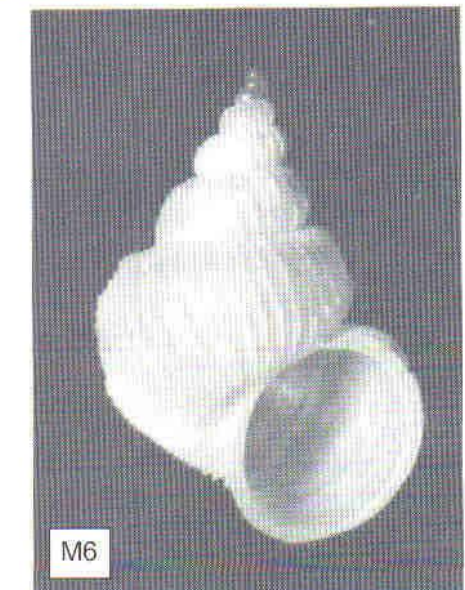
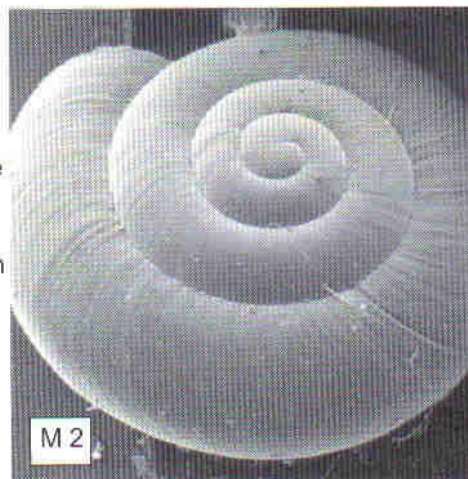
M 11. From Mtoni, Kenya. Collected in shell grit by Kobie du Preez and photographed by her with a low-power microscope. Could be a pyramidellid or one of the Melanellidae, both being families of tiny, parasitic molluscs
Magnification here: 22x
Actual size: ●


M 12. From Kilifi, Kenya. Collected

in shell grit by Kobie du Preez and photographed by her with a low-power microscope. Looks like *Laemodonta monilifera* (H&E Adams 1854), one of the Ellobiidae, a largely estuarine family. Magnification here : 15x
Actual size : 




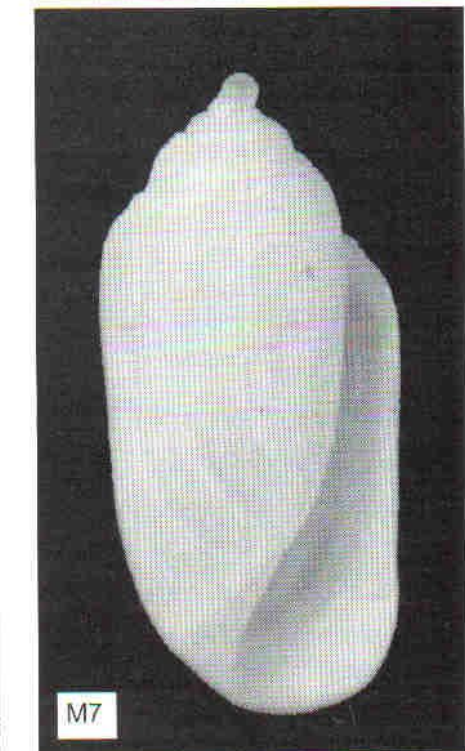
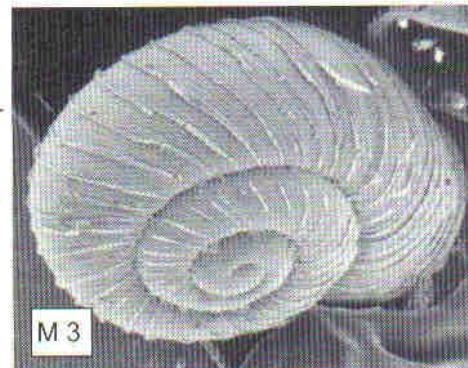
M13. *Volvarina zonata* (Kiener 1841), a small marginellid from Millers Point, near Cape Town. Collected in shell grit by Kobie du Preez and photographed by her with a low-power microscope. Magnification here : 15x
Actual size : 





M14. The tiny trochid *Herbertina cognata* Marshall 1988. The genus is named after Dr Dai Herbert of the Natal Museum. These specimens are from the collection of Laurie Smith and were collected in crayfish pots off Algoa Bay at depths of about 100 m. Photographed using macro-lens and rings. Magnification here : 9x
Actual size : 

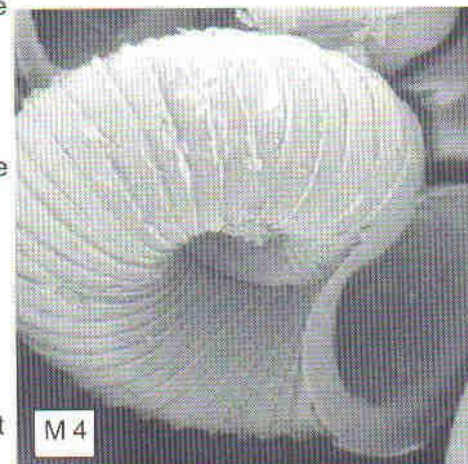
Page 7


M15 & M16. Probably members of the Truncatellidae. Both from shell grit, Kilifi, Kenya. Magnification here : 17x & 11x resp.
Actual size of M15: 



M17. A delicate pyramidellid, possibly *Odostomia eutropia* Melville 1899, from beach drift at Mtoni, Kenya. Magnification here : 20x
Actual size : 

M18. An unidentified member of the Triphoridae from Mtoni, Kenya. Magnification here : 17x
Actual size : 



M19. An unidentified member of the Dialidae, a little-known family of micro-snails, from Mtoni, Kenya. Magnification here : 25x
Actual size : 

M20. A beautiful little wentletrap, possibly *Epitonium simplex* (Sowerby 1898), from beach drift at Mtoni, Kenya. Magnification : 14x
Actual size : 

continued on page 12

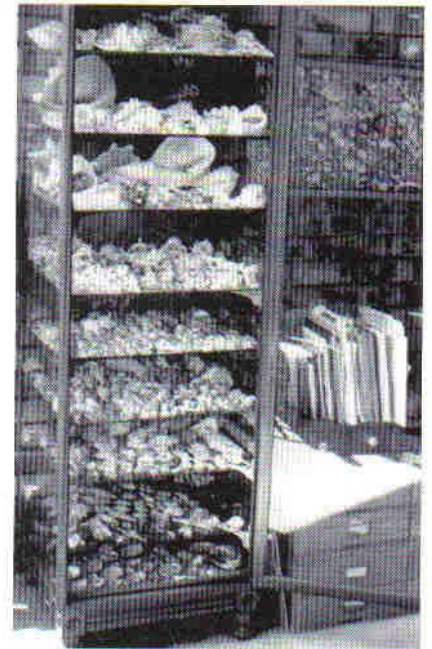


Sketchbook drawings 1997
Broken shells from Port Elizabeth, P.S.W.

C. Pye

Shells and other beautiful things

Some of us keep our shells in shoe boxes, others in museum-like drawers. And then there are some lucky people who have glass cabinets stuffed with all manner of treasures from the sea. I recently received a letter from Mrs J. Lantermans (previously Mrs Hartman). In it she enclosed some photographs of her shell cabinets, taken last December. Mrs Lantermans is 75 years old and has been collecting for 17 years. She obviously has an eye for all manner of interesting marine creatures, not just molluscs!



Flotsam

The Great Shell Show

The Border Club are organising another shell show at the East London Museum. The show will be held over the weekend of 7th to 10th August. Persons wishing to display, visit or participate are welcome; there are categories for everyone. Please contact Ms Mary Bursey at the East London Museum, 0431-43-0686 for details or fax her on 0431-43-3127.



Port Elizabeth

Cyp.
capensis

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Strandloper

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

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Fermdale, 2160
South Africa

or e-mail me at
mikec@mintek.ac.za

East African Cowries

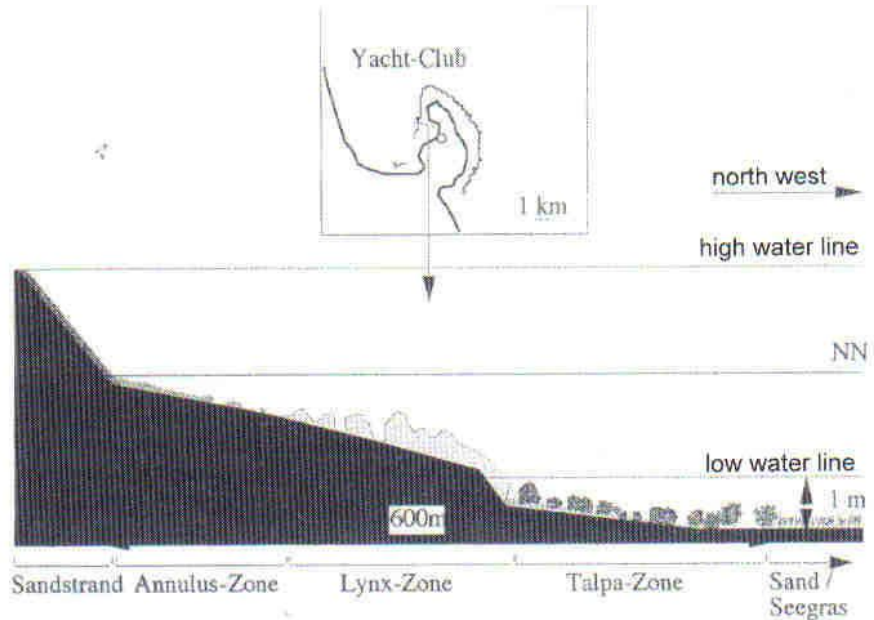
Everybody loves cowries, with their shiny shells, comfortable shape, and pretty patterns. So it follows that there is no shortage of books and articles on these shells. However, a recent article¹ (in German) by Felix Lorenz makes for more interesting study than most.

The article deals comprehensively with the living and fossil Cypraeidae of the shallow water region of the northern and central Tanzanian coastline. Lorenz recognizes about 70 species or subspecies from the area, of which 20 are very uncommonly seen. The radulae of most species are illustrated.

A particularly attractive feature is the various transects of typical coastal features showing the ecological zones and the species typically found there. One of these is redrawn here, with English labelling, for interest. I believe that this article will be of immense value to professional and amateur aficionados of this family.

Reference

Lorenz, F. Kauris von Ostafrika, *Schriften zur Malakozologie*, vol. 11, 1998, pp. 1-150. (This journal is published by Haus der Natur - Cismar, Bäderstrasse 26, D-23743 Grömitz-Cismar, GERMANY)



Annulus zone

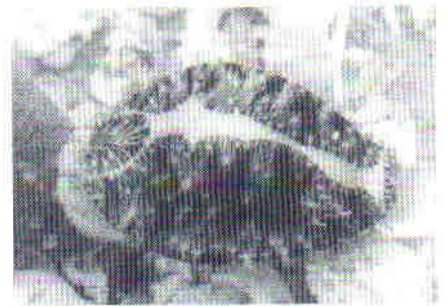
annulus, isabella, carneola, caurica, moneta, erosa, tigris, histrio, kieneri, felina, clandestina, lynx

Lynx zone

lynx, carneola, annulus, leviathan, helvola, isabella, erosa, caurica, vitellus, fimbriata, chinensis, teres, tigris, staphylaea, punctata, caputserpens

Talpa zone

lynx, talpa, carneola, leviathan, isabella, helvola, erosa, fimbriata, kieneri, teres, chinensis, punctata, clandestina, limacina, staphylaea



Cypraea (Erosaria) moneta

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Achatina vestita -

Wanted !

Dead or Alive

Dr Dai Herbert of the Natal Museum is currently conducting research on the land snail *Achatina vestita* (see *Strandloper* 247, page 5). This snail is found in the indigenous coastal forests of northern KwaZulu-Natal as well as those of the former Transkei. Dr Herbert is investigating the relationship between these two populations and is very anxious to acquire live or freshly preserved specimens of these snails. See page 8 of this issue for advice on how best to preserve the whole mollusc (animal plus shell).

Shells on stamps

It is reported that Namibia will be issuing more stamps with shells on them on the 14th May 1998. The 'standard' postage stamp will have a *Patella granatina*, the N\$1.10 stamp a *Cymatium cutaeum africanum*, the N\$1.50 stamp a *Conus mozambicus*, and the N\$6.00 stamp a *Venus verrucosa*.

Exchanges wanted

Mr Zvi Orlin, of 2 Yavne St., 26382 Kiryat Motzkin, ISRAEL would like to communicate with South African collectors. He is currently working on a check list of Red Sea molluscs.

Micromagic continued from page 3



M 8



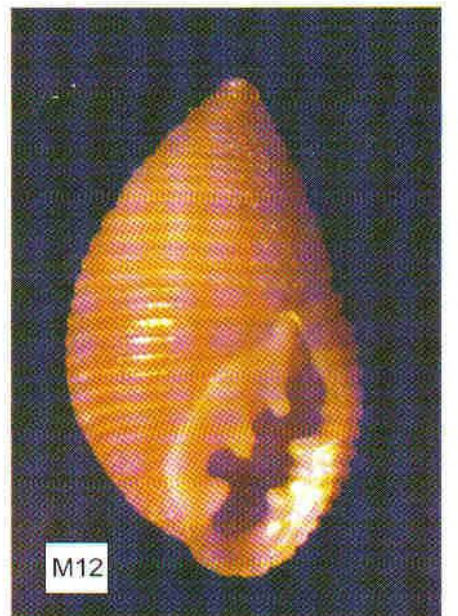
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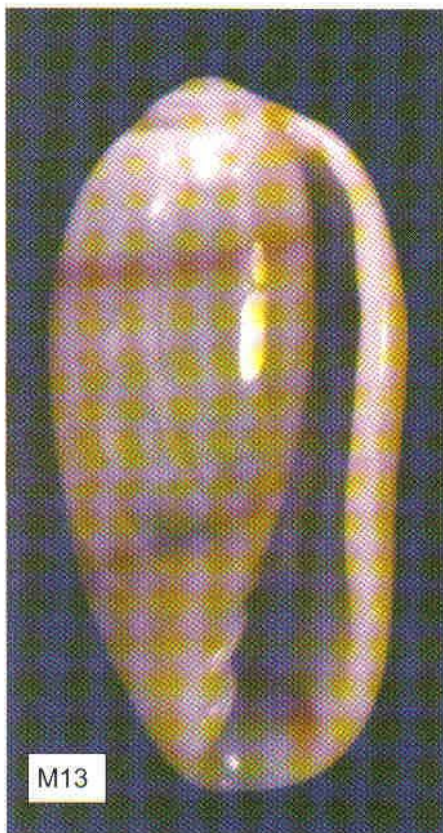
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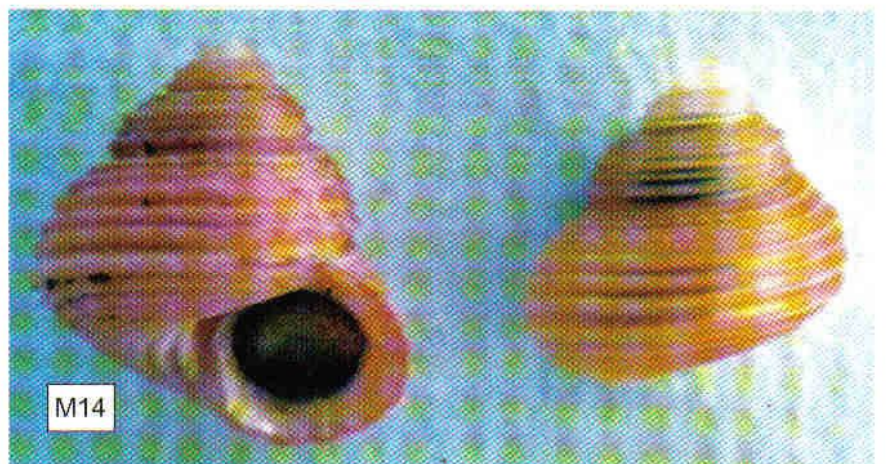
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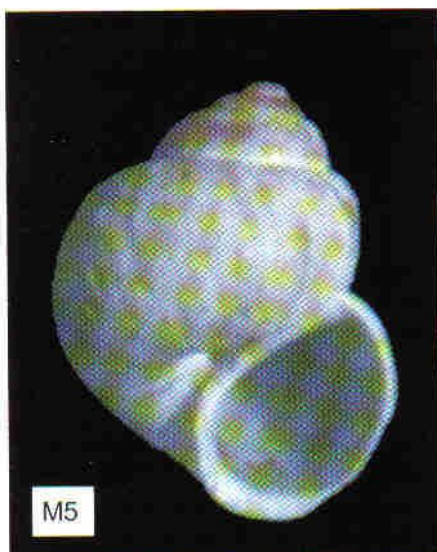
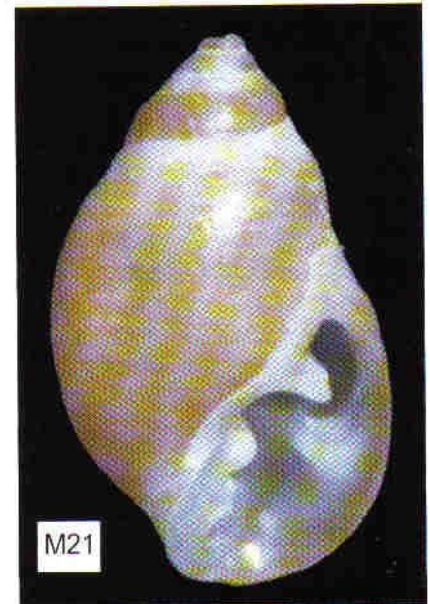
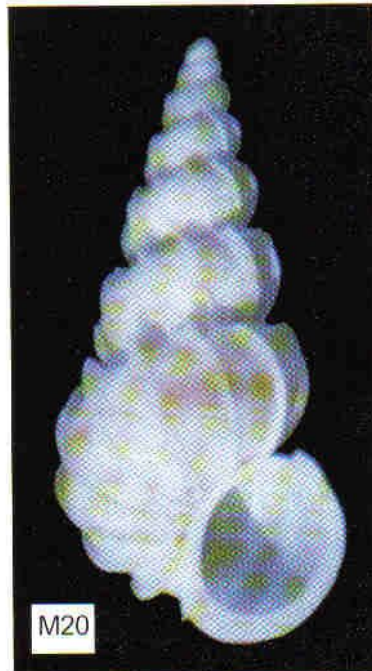
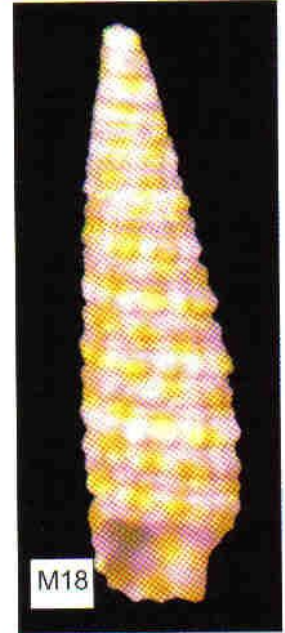
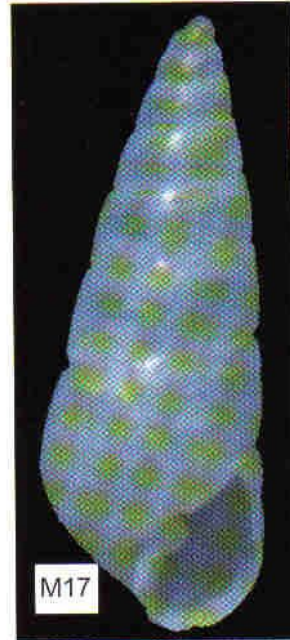
M12



M13



M14



Preserving the whole mollusc

From the CONCH-L discussion group on the Internet

posted by Marto F. Krisberg [mario@DIGITAL.NET]

On March 12, 1998 I asked the CONCH-L discussion group for advice regarding how best to desiccate and preserve microshells. The answers addressed desiccation and preservation for dissection or DNA analysis. This is a summary of the responses to serve as a guide.

Desiccation

Isopropanol or ethanol can be used with equal success. Ethanol is most commonly used in labs. Ethanol has a greater affinity for water, and because of its smaller molecular size, theoretically it may penetrate and dehydrate tissues somewhat faster. Whichever is used, the concentration of alcohol is most important. 75% concentration will do the job, but the higher the better. The higher the alcohol concentration, the more readily the water is removed from the animal, which as a consequence is desiccated more thoroughly, and dries faster.

Alcoholic beverages can be used. However, the 'proof' of the beverage is twice the percentage of the alcohol content. Therefore, 140 proof rum has an alcohol concentration of 70%. Something with at least the strength of a distilled spirit is necessary.

The ideal method is to use 10 times the volume of 100% alcohol as the volume of the animal. This approach compensates for the dilution that occurs as water is drawn out of the ani-

mal. Therefore, if you use a 75% concentration rubbing alcohol the quantity should be increased by approximately 1/3. A good approach to assuring as thorough desiccation as possible would be to replace the alcohol after a day or two; especially if the alcohol becomes discoloured. Because, remember that as water is drawn out of the animal the concentration of alcohol is being diluted. Since the percentage desiccation cannot exceed the percentage concentration of the alcohol, in order to achieve 70% desiccation with a 70% alcohol you will have to replace the alcohol several times until the dilution effect is eliminated. The remaining 30% of water is eliminated via drying.

Denatured alcohols have denaturants added that will damage the

calcium carbonate in the shell. Avoid denatured alcohol if possible. Potable alcohols do not have denaturants added.

Preservation for Dissection

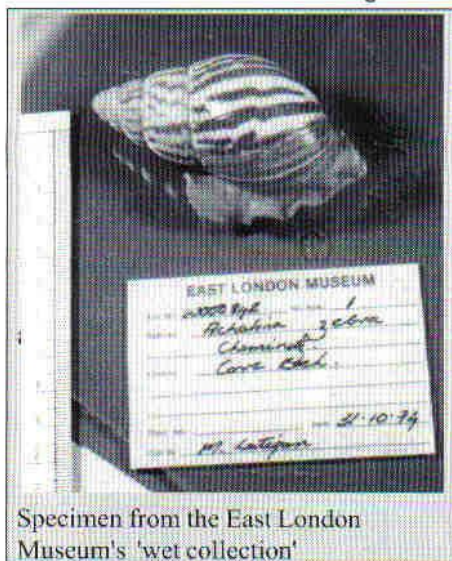
Preservation for dissection is best accomplished by storing in 70% ethanol. Isopropanol will harden the animal to the point that it can't be dissected. Ethanol in concentrations over 80% will also harden the animal.

Preservation for DNA Study

Preservation for DNA study is aimed at stopping enzymes that destroy DNA. Alcohol denatures enzymes that destroy DNA, but does not similarly denature the DNA. The faster and better the alcohol does its job the less harm to the DNA. Therefore, the optimal fluid to use is 90-100% ethanol (and it wouldn't hurt to change the fluid once). However, in a pinch use the best you can get and change the fluid a few times. Dr. Rosenberg indicates that methanol can also be used to preserve for DNA studies. Note: Be careful. Ethanol sold in drug stores is often denatured. Avoid using denatured alcohols.

Some Comments on the Use of Hydrogen Peroxide

Hydrogen peroxide does have useful applications. However, it is not a desiccant and should not be used for this purpose. It is an oxidant and can do a good job of deodorizing by destroying odoriferous compounds. Since it can also dissolve some of the soft tissues of molluscs, it may make it easier to flush out microshells. Hydrogen peroxide is a bleaching agent, and like bleach it can harm the pigments in shells. If it is used, soaking should be restricted to no more than a few hours and the shell should be thoroughly rinsed afterwards.



Specimen from the East London Museum's 'wet collection'

Definitions

1. Desiccation - to dry up; dehydrate.
2. Isopropyl alcohol (isopropanol) - C_3H_7OH , usually used as rubbing alcohol.
3. Ethyl alcohol (ethanol) (alcohol) - C_2H_5OH .
4. Hydrogen peroxide - H_2O_2 , an oxidizing and bleaching agent.
5. Oxidize - to dehydrogenate; to remove hydrogen from. Good at deodorizing, but does not desiccate.
6. Denature - to modify the molecular structure of (as in proteins or DNA) or diminish some of the original properties.
7. Methanol - CH_3OH

The Story of the 'Slooie'

by Kobie du Preez

Nostalgia

My grandpa had a farm in the Swartwater district north of Pogietersrus in the Northern Province. The Limpopo river on the farm formed part of the border with Botswana. We used to visit during the July and December school holidays and it was always a highlight in our lives as it was the only form of holiday we knew. We would get up at first light, eat rusks and be on our way. Although it isn't really far, my mum would make sandwiches and black coffee in a flask (milk would turn sour). After every 100 km or so we would get 'hungry' and beg him to stop. He would pull off and we would eat our provisions for the journey. The coffee was horrible, but an essential part of the holiday ... and we drank it as if it were the only liquid available on earth!

My grandma had a beautiful garden, although it is a very dry region and the soil poor and full of gravel. There was lots of calcium-rich rock around. Water for household purposes was obtained from a wind pump system. The water for the house was warmed with a 'donkey' (an outdoor oven). Power for the lights in the house was gener-

ated with a diesel generator. Food was prepared on a coal stove.

We had a great time on the farm, and occasionally Grandpa would take us to the river. Crocodiles were abundant, so it was definitely OUT to play and swim in the river. We picked up empty fresh-water mussels to play in the sand at the house. They made nice scoops in the preparing of our mud cakes. There was a large dam to store water for the garden, and Grandpa carried river sand into the garden and around the dam. All the ingredients were there for mud cakes ... water, soil to make mud, utensils, an oven to bake our confectionery and very enthusiastic kids.

We had to amuse ourselves those days, and we always took refuge in Grandma's garden. We were absolutely amazed by the animals which were so different as the animal on our little 19 ha farm near Brits in the North West Province. Most amazing of all were the huge snails we found..... It was great fun finding them and we held competitions to see who could find the most. Most of the times one

of the grownups would tell us to release them after a while, and not to hurt them. Grandma said they were not destructive in her garden, and therefore not to be killed. One day the ex-husband macho-man of one of my aunts threw salt on a snail, and we found it most cruel to let something suffer in such way. He was not impressed with our total disgust and with a laugh crushed it with his shoe. How cruel can some people be....?

The find at the dam.

During the July holiday of 1977 we went to visit as usual. Fact was that my dad couldn't miss the opportunity to hunt something for the pot! My dad's folks lived with us, and as they got older they couldn't be left home alone. So my mum and some of the sisters stayed to look after them.

It was with great anticipation that we set out into the garden on our usual snail-hunt, only to find none. Disappointment wasn't the word but we soon found something else to do.... playing in the sand.

We were then most astonished to find

some snails after all. First we thought it was empty shells, filled with sand to make them so heavy. Soon we found that it was not sand, but that the animals had sealed themselves to hibernate....and we thought that only bears in America hibernated!!! What a find!! We put them in our mud cake buckets and tried to dissolve the epiphragms, then we tried to break them, anything just to get response... but to no avail. Later we lost interest and kept ten snails to take home for Mum to share our discovery.

"Slooi"

Back home the curiosity didn't last long and the snails were soon forgotten outside under a tree. Fortunately for kids they have mums, and our mum put them in a safe place and looked regularly to see if they were still alive.

Eventually summer came, the snails woke from their hibernation and were soon again the focus of our attention. Of the original 10, only 3 survived the harassment ... 4 died of their injuries with the breaking of the epiphragms, 2 were killed by our dog and someone drove over one with a car. The remaining 3 snails took to our garden. The soil is also poor with lots of gravel, and the water has a very high alkalinity with lots of calcium. The farm lies at the foot of the Langberg, 8 km north of Brits. It is quite steep and my mum made terraces for the flower and fruit garden. It is this part where the snails are mostly found. They flourished, began to multiply..... multiply ... multiply ...

One of my sisters bragged about our pets at school and one was aptly named "Slooi" by her. He had a distinct growth mark on the shell, where something damaged the shell. He was around for quite a while, my mum has even a picture in her family album of Slooi and some offspring in 1984 ! All the snails were named Slooi after a while....

My parents sold the farm in January 1995. I was in hospital at the time and was not there when they actually left. They live very near me at the moment

and have adapted to their new home in the big city.

Did we learn anything from Slooi?

In 1982 during my matric year I found a nest with more than 100 newly hatched snails. Some were still busy hatching. My mum encouraged me to put them in a shoe box and take them to school for the next Biology class. We thought that my Biology teacher would like to know about our snails. He didn't even want to listen to the background and killed them. "Snails are pests, you know. I am trying to eradicate them from my garden and you want to look how they grow..." Sad.... Sad.... Sad.... My confidence was shattered. I think one should feel sorry for such narrow mindedness.

As a very keen gardener and one of those privileged with green fingers, my mum found many interesting things. On many occasions she found nests with eggs. One day she found two snails mating, and on another occasion she found a snail preparing its nest and laying little bright yellow eggs about the size of a dried pea.

There was one thing that puzzled us and still need an explanation ... We never saw anything that preyed upon the slooi's, yet we found empty shells with little holes in. My mum and dad found something interesting in a book, which could be an explanation, but the fact must be verified. In their books

'Snake versus Man" and 'Slange', they found a snail-eating snake with a distribution overlapping the area where they live. We have not yet seen such a snake, so we do not know if it is there, and can they eat a mature *Achatina*?

Conchological society - *Achatina immaculata*

I had a lot of seashells and one day I decided to sort them and make a display. I bought Deirdre Richard's book and soon found that there were shells which I couldn't identify. Someone told me about the Conchological Society and there I also learnt that Slooi has a proper name: *Achatina immaculata*, and I realized the implication of our innocent distribution of a species to a new location.

I decided that we needed to do a survey on the new distribution and as Mike Cortie knows more about *Achatina immaculata* than me, I thought it best to involve him in the survey. It was quite difficult to set a date for the hunt, as we are all in the rat race ... Eventually I could set a date where Mike, myself and the new owners of the farm had an open day

The snail hunt

The snailing party arrived at the farm gates a little after sunrise, and consisted at first of myself, Mike Cortie, and three children. However, we were immediately joined by two more chil-

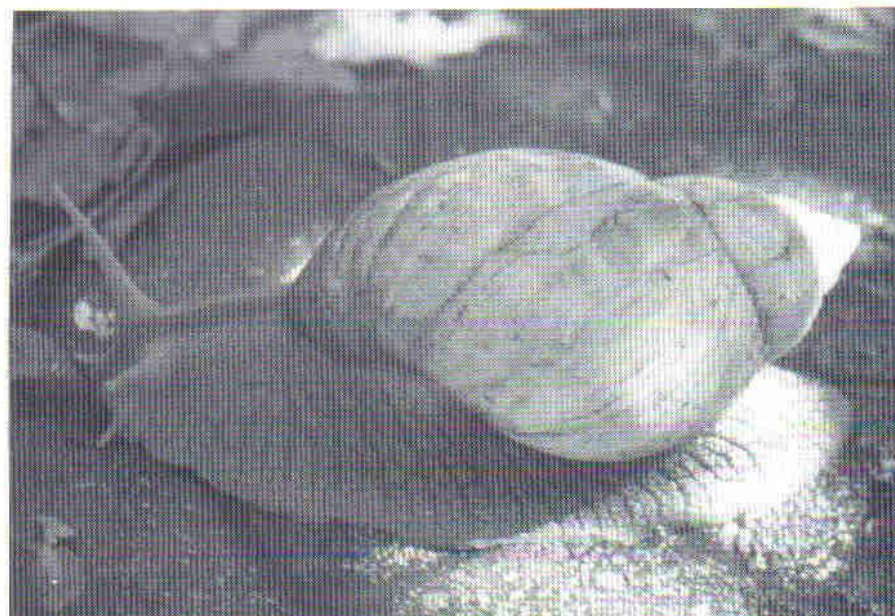


dren who were determined not to be left out of the fun. The snails turned up in their dozens in a cool, shady mango orchard. A few were buried in loose leaves and sand but many others were still crawling about in full view. A nest containing several dozen baby snails also turned up. We set about bringing all the snails we could find to Mike, who measured them with a vernier calliper, before we released them again. Mike also selected ten of the baby snails and three of the adults for his terrarium.

The present occupiers of the farm told us that the snails had not yet been found on the farmlands, perhaps because there were sometimes severe frosts there. We wondered whether they had managed to spread the other way, up the mountain behind the farm. So off we went, into quite dense and prickly bush. Alas, there were stinging nettles and hornets aplenty but no snails to be seen! Eventually we decided to halt the ascent on account of lots of comment from the children regarding thorns, nettles and hornets. An excellent picnic on the side of the mountain restored their spirits before we descended again.

The future

We did not manage yet to find out whether the snails have spread left and right along the foot hills of the mountain so I hope that another visit can be made next summer. At present the ten baby snails that Mike collected are alive and well in a terrarium and have grown fantastically. Mike says they have VORACIOUS appetites and eat all the fish flakes and lettuce he puts down. As for the three big ones? They were supposed to do their stuff and produce babies. Unfortunately, there has been no sign of egg laying yet. However, Stephan Veldsman, also of the Pretoria Group, has some *Achatina immaculata*'s of his own, collected in the Eastern Transvaal I think, and he reports that his have laid and produced live babies. After hearing this, Mike put a container of river sand into the terrarium too, just in case they need this to lay their eggs in. Time will tell!



Acknowledgements


Ma (Anne Pretorius), baie dankie vir Ma se bydrae vir die artikel. Dankie vir die voorbeeld om die natuur nie net te aanskou nie, maar ook te bestudeer en iets meer daaruit te leer.


Mum (Anne Petorius), thank you for your contribution for the article. Thank you for the example that you set to study nature and learn from it, not only to look at it.


Aan Mnr. en Mev. Mol wat huidiglik die plaas in Brits besit - Baie dankie dat u ons gasvry ontvang het, sodoende het u en die kinders 'n bydrae gelewer tot die Wetenskap en Skulptkunde.


To Mr. & Mrs. Mol (now the owners of my folks' farm), and your children - Thank you very much for allowing us to do our snail hunt. We appreciate your hospitality and thereby your contribution to the world of Science and Conchology.


Micromagic cont. from page 3


M21. Could be *Laemodonta sykesii* (Melville 1897). Shell from Kilifi, Kenya. Magnification : 12x
Actual size : 

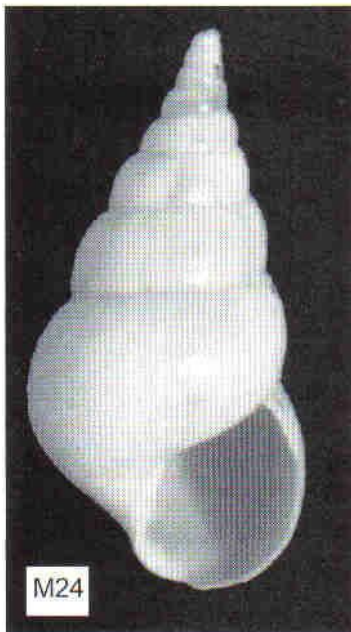
M22. Looks like *Finella natalensis* (E.A. Smith 1899), from Mtoni, Kenya. Magnification here : 20x
Actual size : 

M23. A small trochid from Mtoni, Kenya. Seems to be *Cantharidus suarezensis* (P. Fischer 1878). Magnification : 11x
Actual size : 

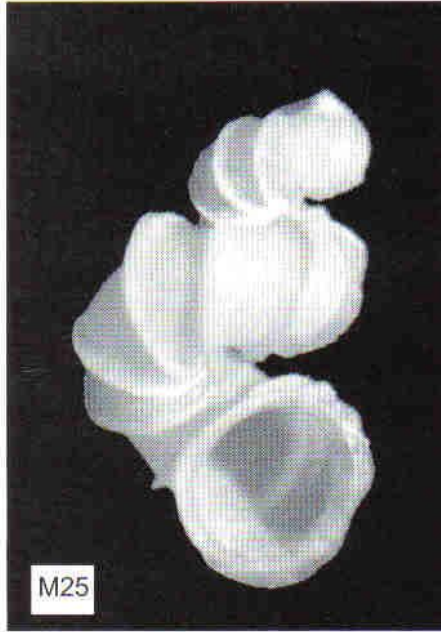
M24. This graceful little shell has so far not been identified by the authors. It comes from Mtoni, Kenya, and is white. Magnification : 30x
Actual size : 

M25. Possibly *Cycloscala hyalina* (Sowerby 1844), one of the Epitoniidae. From Mtoni, Kenya. Magnification here : 33x
Actual size : 

M26. *Smaragdia souverbiana* (Montrouzier 1863), a tiny brightly coloured nerite, from Mtoni, Kenya. Magnification here : 16x
Actual size : 



M24



M25



M26

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