



Some notes on the family Trichotropidae in South Africa

by Brian Hayes* and Markus Lussi†

There is little information available on this obscure family of molluscs. They are commonly called "hairy shells" because of their bristly or fibrous periostracum. They generally inhabit deeper water and the few specimens that wash up onto the beach are usually smooth, having had their periostracum rubbed off. Shells are usually small, thin and turbinate. Spire is depressed or high. Body whorl is large with strongly keeled shoulder. They are characterized by a large ear-shaped aperture and flaring outer lip. Umbilicus and siphonal canal are small. Operculum is horny and spiral. Some species are hermaphroditic, most usually inhabit colder water. There are four species known by the authors from South Africa, and these are briefly discussed further below.

1. *Lippistes cornu* (Gmelin, 1791) These are small shells (7 to 15mm), commonly known as "rams horns". The whorls are tightly coiled. Shell colour is creamy-white. Periostracum is light brown when live but beach specimens usually have none. The number of spiral lirae is variable; from 5 up to 20. Turton described the form with 20 lirae, recorded from False Bay, as *multilineata*. The specimen in Fig-

ure 1 was found in beach-drift on the Natal south coast, but its range is from Table Bay to Natal. A few specimens have been found in on beaches in the Algoa Bay region.

2. *Separatista helicoides* (Gmelin, 1791) This specimen (Figure 2) almost resembles a top shell. It was found on a tube-worm under stones at Perrier Rocks in northern Natal. It measured 7.8 mm and was covered with a thick brown periostracum. The whorls are slightly stepped creating a definite suture. The protoconch is bulbous. There is a small umbilicus and the characteristic wide aperture.

3. *Megalomphalus mosselensis* Barnard, 1957 This extremely rare specimen (Figure 3) was found off Port Alfred in 18m of water using SCUBA. It was fresh dead when found and measured 14.6mm. Shell is cream with a slightly pink colouration. The body whorl is not tightly coiled, and the aperture is wide and fragile. The apical whorls are very tightly coiled, the spire is raised, and the protoconch small.

4. *Trichotropis zuluensis* (Barnard, 1963) Found live in sponge and rubble dredgings off Park Rynie, Natal at 150m depth. The cream to yellowish-brown specimens are up to 13 x 7.8mm and are covered with a bristle-like brown periostracum. Refer to Kensley p.92 or Barnard, K.H.: *Annals S.Afr. Mus.*, vol. XLVII (Pt1), 1963, p.78.

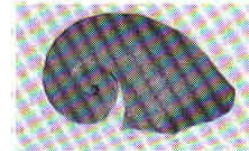


Figure 1. *Lippistes cornu* (Gmelin 1791)

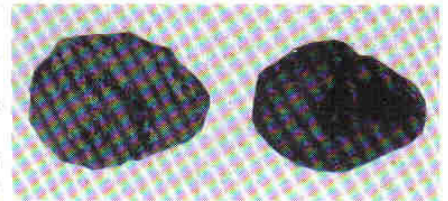


Figure 2. *Separatista helicoides* (Gmelin 1791) top- ventral view, bottom- dorsal view

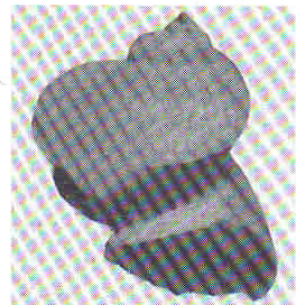


Figure 3. *Megalomphalus mosselensis* Barnard 1957.

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Die betekenis van Carolus Linnaeus (Carl von Linné) vir die skulpkunde en die skulpversamelaar

Ds Hugo van der Walt

Baie skulpversamelaars steur hulle nie veel aan "moeilike" en "ingewikkelde" sake, soos die klassifikasie (taksonomie) of die namegewing (nomenklatuur) van skulpe nie. En tog, dit sou chaoties gewees het op die gebied van die natuur- en skulpkunde, as sommige persone hulle nie maar wel bemoei het met bogenoemde sake nie.

Die "vader" van die moderne dubbelnaam klassifikasie (binominale stelsel), asook die Latynse nomenklatuur, is die Sweedse natuurkundige prof. dr. Carl von Linné.

Sy persoon

Linnaeus (of Linné, soos hy kortweg genoem word) is in 1707 in Steinbrohult in Suid-Swede gebore. Sy pa was 'n pastor in die plaaslike kerk en 'n amateur botanikus met die mooiste tuin in die omgewing. Van kleins af het Linnaeus sy pa gevra wat al die plante se name is. Vandaar sy liefde dan ook om natuurobjekte name te gee.

Op skool was Linnaeus maar 'n gemiddelde student. Tog skryf hy in 1727 by die universiteit van Lund in

om medisyne te studeer, want in die 18de eeu was baie medisyne nog van plante en kruiden gemaak. Nadat hy aan die Lund-universiteit gegraduateer het, het hy in 1732 'n tweede graad aan die Universiteit van Uppsala gewerf. Voordat hy 'n derde graad aan die Universiteit van Hardwijk in Nederland verwerf het, het hy 'n uitgebreide natuurkundige toer deur Noord-Swede en Lapland ondemeem.

Hierna het Linnaeus verskeie boeke oor natuurkundige onderwerpe geskryf wat oral aandag getrek het vanweë hulle wetenskaplike gehalte. Soos te wagte, word Linnaeus toe in 1741 as professor in Medisyne en Botanie aan die Universiteit van Uppsala aangestel. Hier sou hy werk tot met sy dood in 1778.

Sy werk

Reeds voor sy dertigste jaar het Linnaeus die grondslae gelê van sy lewenswerk in 'n geskryfde wat toe slegs sewe foliobladsyde beslaan het, nl. *Systema Naturae* (Die Stelsel van die Natuur). In hierdie werk, wat tussen 1735 en 1768 stadig uitgebrei is en twaalf edisies beleef het, het Linnaeus algaande alle lewende plante en diere aan hom bekend, probeer naamgee, orden en klassifiseer. Linnaeus was dan ook geseënd met 'n sterk gevoel vir orde en sistematiese. En uit hierdie *Systema Naturae* het algaande die grondslae van alle moderne sistematiek in die biologie

The significance of Carolus Linnaeus (Carl von Linné) for the conchologist and shell collector

by Rev Hugo van der Walt

(Abbreviated translation by the Ed.)

Many shell collectors do not concern themselves with difficult or complex issues such as the classification or taxonomy of shells. Still, the field of biology and shell collecting would be chaotic if some people had not concerned themselves with this issue. The father of the modern binomial system, as well as the Latin nomenclature is the Swedish naturalist Carl von Linné.

The man

Linnaeus (or Linné, as he is often called) was borne in Steinbrohult in south Sweden. His father was a pastor in the local church and an amateur botanist with the most beautiful garden in the area. L. used to ask his father the names of the plants even as a child.

L. was an average student at school, but even so he enrolled in 1727 at the university of Lund to study medicine, because in the 18th century most medicines were made from plants and herbs. After he graduated from the Lund university, he obtained a second degree from the university of Uppsala in 1732. He then went on an extended naturalist's tour through northern Sweden and Lapland before obtaining a third degree from the University of Hardwijk in the Netherlands. After this, L. wrote various books on biological subjects that attracted attention in various quarters on account of their scientific quality. As expected, L. was appointed as professor of medicine at the University of Uppsala. He worked here until his death in 1778.

His work

L. had already laid the foundation of his life work before his thirtieth year in a short, seven page paper entitled *Systema Naturae* (The Organization of Nature). He eventually attempted in this work to name and classify all the living plants and animals known to him. He was clearly blessed with a well-developed aptitude for order and organization.

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(en ook die skulpkunde) gegroei.

Linnaeus het sy studente aange- moedig om wêreldwyd ekspedisies te onderneem en dan eksemplare van biologiese natuurobjekte aan hom te stuur, sodat hulle geklassifi- seer en benoem kon word. Maklik het dit nie gegaan nie, want Linnaeus moes gou maak met sy standaardwerk as hy enigsins indruk wou maak op die weten- skaplike wêreld van sy tyd. Ander persone het ook pogings en voor- keure ten opsigte van klassifikasie en naamgewing ondersteun. Lin- naeus se stelsel moes homself dus bewys as die beste, bruikbaarste en akkuraatste. Dit het sy stelsel ook reggekry omdat dit gebaseer was op die ware struktuur en unieke eienskappe van die betrokke dier of plant. Die struktuur en eienskappe het dan 'n korrekte plek aan alle lewende kreature verskaf met betrekking tot mekaar in hulle onderskeie ordes. 'n Belangrike saak in sy klassifikasie was ook die gesigspunt dat om te klassifiseer as 'n aparte spesie, die betrokke spe- sie in staat moes wees om hom self voort te plant en 'n soortgelyke rep- lika te lewer.

Natuurlik het Linnaeus met laasge- noemde siening ook voortgebou op die werk van John Ray, wat ook die uniekheid van individuele natuurob- jekte beklemtoon het, teenoor die gangbare gebruik om organismes eers in groot groepe, en daarvan- daan weer in kleiner groepies te verdeel.

Eers in die tiende edisie van sy *Systema Naturae* in 1758 het Linnaeus sy skema uitgebrei na diere. So het hy dan ook in hierdie uitgawe van sy lewenswerk (mag- num opus) ongeveer 400 skulpe volgens sy binominale stelsel (dit wil sê op genus- en spesievlak) name gegee en geklassifiseer.

Sy betekenis

Die meeste van die name van plante en diere in Linnaeus se tyd was (populêre) lokaal gebonde naamgewinge. Sommige van die spesies wat sy studente van veraf plekke gebring het se name was onduidelike korrupsies van benam-

ing deur die plaaslike bevolking. Dit het daartoe aanleiding gegee dat persone verskillende name in ver- skillende plekke en lande aan die- selfde natuurobjek gegee het. Na- tuurlik het dit tot verwarring en chaos gelei en die vooruitgang van die wetenskap gestrem en belem- mer. Die wêreldwye (wetenskaplike en amateur) gemeenskap van natuurkundiges het 'n gemeenskap- like "taal" nodig gehad, om seker te wees hulle praat oor dieselfde blom of dier of skulp.

In hierdie behoefte het Linnaeus se binominale stelsel meesterlik voor- sien. Dit was dan ook 'n monumen- tale taak om duisend nuwe (soms saamgeflansde) Latynse naam- skeppinge vir alle natuurobjekte die lig te laat sien. Dat sy stelsel die toets van wetenskaplikheid en die toets van die tyd deurstaan het, spreek van die belang van sy poging!

Natuurlik het Linnaeus nie alle ken- nis en mag in pag gehad nie. Som- mige skulpe is byvoorbeeld net vanweë oppervlakkige waarneming geklassifiseer. Vandag word baie skulpe slegs uitgeken vanweë ver- skille ten opsigte van die radula, ens.

Selfs sekere skulpspesies wat Lin- naeus destyds in bepaalde genera geplaas het (bv. *Ostrea maximus*) moes deur latere werkers (na nuwe inligting) in ander, meer geskikte genera geplaas word, met die ver- wysing na die oorspronklike outeur dan in hakies, byvoorbeeld, *Pecten maximus* (L., 1758).

Op skulpkundige gebied het dit in elk geval nie aldag so maklik gegaan om sy wetenskaplike naam- gewinge toentertyd inslag te laat vind by veral amateur "skulp- kundiges" nie (soos vandag ook baie keer), want die populêre name wat byvoorbeeld Rumphius en Valentijn destyds aan alle skulpe gegee het, het diepgeseteld geleef in die volksmond. Die skulpver- samelaars en die sogenaamde "kabinet-eienaars" van daardie tyd het langtand gebyt aan die "nuwe" name en klassifikasie-stelsel van Linnaeus. Nogtans het sy stelsel

continued from page 2

The entire field of taxonomy in biology (and conchology) developed out of the *Systema Naturae*.

L. encouraged his students to undertake worldwide expeditions, and then to send him back biological specimens so that he could classify and name them. He realised that he had to be quick if he wanted to make an impression on the scientific world of his time. Other workers were also busy trying to establish their own schemes for classifying animals and plants, and L.'s system had to prove itself as the best, easiest to use, and the most accurate. His system was continually improved to ensure that it used genuine characteristics of the organism in its classification, and in doing so he ensured that each creature or plant was correctly classified in its relevant order. An important insight was that in order to qualify as a species, an organism had to be able to reproduce to yield a similar organism.

Actually, L. concerned himself mostly with plants at first, and only expanded his *Systema* to include animals with the tenth edition in 1758. This edition of his *magnum opus* also included about 400 species of mollusc.

His significance

L.'s system corrected the confusion that ensued when different com- munities or scientists gave different vernacular names to plants and animals. His binominal system provided a standard way of referring to organisms. Nevertheless, it was a massive job to give names to the thousands of plants and animals known even then, and it is a tribute to his efforts, as well as to the sound- ness of his scheme that it has stood the test of time!

Of course not everything L. did is still regarded as correct today. Many of the shells, for example, were classi- fied using rather superficial charac- teristics. Today, many species of mollusc are identified, for example, from their radulae. Other shells were placed in inappropriate genera. For example L.'s *Ostrea maximus* is now *Pecten maximus* (L., 1758). L.'s name is placed between brackets, although he was the first to describe this shell, because its genus has been altered by later workers.

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oorleef sodat wetenskaplikes en amateurs vandag 'n internasionale "taal" het om kommunikasie en wetenskaplikheid moontlik te maak en om verwarring en chaos uit te skakel. (Vandag moet weer net gewaak word teen te veel verwarrende onderverdelings.)

Linnaeus se grootheid lê dus nie daarin dat hy 'n reeks nuwe spesies "ontdek" het of hy self 'n belangrike ontdekking gemaak het wat nuwe lig op die geskape natuur gewerp het nie. Nee, sy betekenis lê daarin dat hy die hele wetenskaphuis vir sy tyd en vir geslagte der geslagte wat sou kom, georden het.

Soos Linnaeus self lakonies opgemerk het, "Deus creavit, Linnaeus deposuit" (God het geskep, Linnaeus het georden.)

Die eer het Linnaeus dan ook te beurt geval dat hy die enigste outeur is van wie slegs die eerste letter van sy van (nl. "L.") gebruik mag word as daar na 'n natuurobjek verwys word waaraan hy die naam gegee het.

Slotsom

Wat wetenskaplike (Latynse) naamgewing en klassifikasie betref versus populêre (plaaslike) naamgewing, is my persoonlike gevoel dat daar vir beide stelsels plek behoort te wees, sonder dat die een stelsel vir die ander 'n bedreiging hoef te wees. Gelukkig laat die meeste hedendaagse skulpkundige boeke wat 'n wêreldwye oorsig oor skulpe bied, ruimte vir hierdie standpunt. Immers, skulpkunde kan nie vooruitgaan sonder die massa amateurs wat strande kilometer vir kilometer deurkruis en baie keer

nuwe "fondse" aan wetenskaplikes oorhandig, wat die betrokke skulpe dan behoorlik beskryf en klassifiseer, en hul baie keer vernoem na die amateurs wat hul aanvanklik "ontdek" het.

Mag amateurs en wetenskaplikes hande vat en tesame hulle hoed lig vir die belangrike werk wat Linnaeus vir die wetenskap in die algemeen en vir die skulpkunde in die besonder verrig het.

Bronnelys/Bibliography

- Abbott, R.T. (1973). *Kingdom of the Seashell*, Hamlyn, London.
- Abbott, R.T. and Dance, S.P. (1982). *Compendium of Seashells*, E.P. Dutton, New York.
- Author unknown. *A Brief History of Linnaeus (or Carl Linné)*, unpublished.
- Author unknown (1978). Linnaeus bicentenary 1778-1978. *Strandloper*, no.192, pp.1-2.
- Boyd, J.T. (1987). Origins of taxonomic systematics, *Hawaiian Shell News*, Aug. 1987, p.9.
- Cameron, R. (1961). *Shells: Pleasure and Treasures*. G.P. Putmans, New York.
- Dance, S.P. (1986). *A History of Shell Collecting*, E.J.Brill, Leiden.
- Freeman, D. (1985). Let in the light on Latin. *Strandloper*, no.213, pp.4-6.
- Kilburn, R. and Rippey, E. (1982). *Seashells of Southern Africa*. Macmillan, Johannesburg.
- Saul, M. (1974). *Seashells: An Illustrated Guide to a Timeless and Fascinating World*, Hamlyn, London.
- Smith, L. (1987). Colloquial names of Jeffreys Bays shells. *Strandloper*, no. 221, p.4.

It was an uphill battle for L. to get his system accepted by the conchologists of his day. Amateur collectors especially had a variety of common names for shells, for example those established by Rumphius and Valentijn. The shell collectors and so-called "cabinet owners" of the day were not enthusiastic about the new names and classification system. Nevertheless, his system has prevailed, and today interested parties in all parts of the world have a common scheme for identifying living species. (However, L.'s scheme has to be defended these days against people wishing to introduce too many confusing sub-divisions.)

L.'s greatness lies therefore not in the fact that he "discovered" many new species, rather it is because he created an orderly classification scheme for the generations that have followed. This achievement is now also recognized by the convention that Linnaeus is the only author who may be denoted just by the first letter of his name when mentioning a species.

Conclusions

It is my personal opinion that there is room for both L.'s scientific (Latin) system and popular names in the vernacular. There is no need for either system to be a threat to the other. In any case, progress in conchology depends to a large extent on the many enthusiastic amateurs, who comb the beaches for "new" species that are consequently described by professional scientists.

Let amateurs and professionals alike congratulate Linnaeus on his excellent system which serves science in general and conchologists in particular so well!

Early uses for shells

by Isobel Lambert

Many uses have been made of shells. In the days of the Phoenicians *Murex* snails were used as a source of dye, which was later made use of by the Greeks and Romans too [see article by

Barbara Fouché in *Strandloper* number 237, February 1994 for more info on this subject- Ed.J. Top shells are found in temperate and tropical water, and there are many thousand species, but it is *Trochus niloticus*, one of the largest of the species that is the most useful. It is from this shell that shirt buttons used to be made. Most top shells are vegetarian, and some of the

largest species are eaten by man. A large specimen of *T. niloticus* takes six years to reach adult size - over 120 mm.

Commonly known as the green turban, *Turbo marmoratus*, which grows to 200 mm in size, was also used for making buttons. The Chinese are very clever in cutting the shell for inlay work in jewellery,

carved boxes and tables, ash trays, etc. which are most attractive.

From the queen conch, the 200 to 300 mm big *Strombus gigas*, comes conch chowder and steak. The shell is used as a trumpet by some islanders in the Carribean. Semi-precious pink pearls have been found inside the shells.

The little money cowrie, *Cypraea moneta*, was at one time used for money in Africa. They make pretty

little cuff links for men, and attractive earrings for women.

The Shell company derived its name from sea shells. The founder would buy sailor's sea shells from the Far East which would be mounted in boxes and sold from his shop near the Tower of London. On his death in 1870 the family bought their first oil tanker. The company's tankers were named after shells, the first being *Murex*.

The design of china and porcelain baskets, dishes, centre-pieces, basins, etc. were often influenced by shells. In 1905 Josiah Wedgwood's famous Queen's ware was inspired by the argonaut, another dinner service was based on the common cockle, while the bivalves were patterned into ware of the continental porcelain manufacturers. Silversmiths also used the shell motif in their creative arts.

Ons kry skulpe op seëls

deur Joh Groenewald

Suid-Afrika kry aanstaande jaar (1995) 'n stel van vier posseëls wat skulpe afbeeld. Dit behoort baie mooi seëls te wees, want dit is baie mooi skulpe. Die seël vir gewone briewe (volgende jaar se tarief sal seker 50c of meer wees) toon die *Afrivoluta pringlei*, die trotse embleem van die Skulpkonde Vereniging. Toe die SA Poskantoor Bpk se seëlkomitee in Junie 1994 finaal besluit het en na ontwerp gekyk het, was daar net vir drie seëls ontwerpe.

Gelukkig is daar 'n paar albumbladsye met pragtige skulpseëls van verskillende lande ter tafel gelê, alles items uit die versameling van Jeannie Willemse van Bailey's Muckleneuk, jarelange bestuurslid van die Skulpkonde Vereniging se Pretoriase tak. Hierdie seëls, plus fototjies van Suid-Afrikaanse skulpe wat Jeannie in seëlformaat uitgeknipt het, het die hoofde van die Poskantoor só beïndruk dat hulle besluit het op 'n volle stel van vier seëls.

Boonop het Jeannie se fototjies die *Cypraea fultoni* gered. Die seëlontwerp hiervoor het die onderkant van die kauri getoon, plus die bokant van die skulp, en op die koepel was daar nie enige patroon nie dog 'n blink glanskol! Jeannie se foto van *C. fultoni*, wat die pragtige gebroke Maltese kruis wys, het die deurslag gegee. Die komitee het dadelik gelas dat die kunstenaar die ontwerp oordoen.

Meer besonderhede oor Suid-Afrika se skulpseëls sal later aangekondig word.

Shell stamps for South Africa

by Joh Groenewald

Next year (1995) South Africa will have a set of four stamps showing shells. The stamp for ordinary letters will show *Afrivoluta pringlei*, the emblem of the Conchological Society. The stamp committee of the SA Post Office decided in June 1994 to have only three stamps, but were persuaded to include a fourth by the efforts of Jeannie Willemse, a long time member of the Pretoria Group of the Society. Jeannie not only showed the committee examples of foreign shell stamps but also carefully cut photos of South African shells into a stamp format. The heads of the Post Office were so impressed that they decided to add a fourth stamp to the theme. In addition, Jeannie's photos saved the *Cypraea fultoni* stamp, the original design of which showed a bright reflection where there should have been a pattern! Jeannie's photo of *C. fultoni*, with its beautiful Maltese cross convinced the committee to request a redesign of the stamp.

More details of South Africa's shell stamps will be announced later.

BOOK REVIEWS

by D.Freeman

Two Oceans - A Guide to the Marine Life of Southern Africa, by G.M.Branch, M.L.Branch, C.L. Griffiths and L.E.Beckley, published by David Philip, Cape Town, 1994.

For once the publisher's blurb does not exaggerate: "*Exuberant in colour and bursting with life, TWO OCEANS captures the diversity of southern Africa's rich marine heritage.*"

There are 360 pages, profusely illustrated with colour plates. The book is arranged in sections depicting the various classes of animal and plant life to be found in the sea and on shore around our coast.

Jellyfish, corals, hydroids, sponges, crustaceans, molluscs, fishes, birds, seaweeds, coastal plants, snakes and turtles, and sea mammals.

The pictures, in fact, are quite outstanding, and each page of photos faces the identifying text which includes a small map of the coastline showing where you might expect to find specimens of the species shown. The layout is practical and easy to use. There is

a scientific index, a bibliography, and a useful glossary of terms (which will even tell you what the rear end of a crustacean is called, if you ever want to know).

The authors and photographers, who are experts in their fields, have co-operated to produce one of the most worthwhile field guides to coastal life that we are likely to see. Unfortunately, it is a bit too big, at 16 by 24 cm, for even a large coat pocket and, at just under one kilogram, a bit too heavy to lug along on an extended walk.

The weight of the book, and the soft cover, might contribute to an early breakdown in the binding if it is not cared for. This is all part of the problem faced by book publishers caught between rising cost and affordability. Sponsorships by several individuals and institutions have nevertheless helped keep the retail price down to somewhere in the region of R89. Everyone concerned deserves to be congratulated on producing such a fine book.

Volutes by G.T.Poppe and Y.Goto, published by L'Informatore Piceno, Ancona, Italy, 1992.

There are 107 colour plates illustrating 247 species, with numerous black and white photos and line drawings in the text, and distribution maps for each species. There is also a bibliography and a full alphabetical index of scientific names. The photos are excellent, most of them taken by the authors from specimens in the Goto collection which contains some 2000 specimens of about 180 species and subspecies.

Since the publication of *The Living Volutes* by Weaver & DuPont in 1970, which covered 199 species, most specialist collectors would have found it virtually impossible to keep up with the flow of articles and papers on the Volutidae which have appeared in various scientific and popular publications world-wide. The need for a complete review,

reassessment and revision of the genera in this family eventually became too urgent to ignore, and it is very much to the credit of Messrs Poppe and Goto that they undertook this daunting task. I didn't bother to count the number of entries, but their bibliography, listing the references they used, covers eleven pages with two columns per page.

The introductory chapters set out the different approaches to classification used by various authorities, with the resultant contradictions and controversies that have inevitably arisen. The authors have analysed all the publications that have appeared since 1968. To help readers to understand the authors' conclusions, they have set out a most useful comparison of the different classifications followed by Weaver & DuPont (1970), Darragh (1988), and Bail (1991). Where they have been obliged to propose some changes in taxonomy at generic level, these revisions are fully discussed. As they are careful to state, their proposed changes are merely suggestions, without pretending absolutely to solve any of the existing problems. Their common-sense approach to the complexities of classification is reassuring, and they steer a careful path through the minefield of recent literature.

Collectors of South African volutes will be interested in the proposal to drop the genus *Volutocorbis* (in the subfamily Athletinae) and recognise one genus *Athleta* with two subgenera, *Athleta (sensu stricto)*, and *Ternivoluta*. Our various species would then become *Athleta (Athleta) abyssicola*, etc.

Weaver & DuPont (1970) based their classification mainly on radulae, and they recognised two genera in the subfamily, viz., *Volutocorbis* for the African species, and *Ternivoluta* for the Australian group.

Darragh (1988) based his conclusions on the fossil record of Australian Volutidae together with recent literature, and proposed one genus *Athleta* in the subfamily, to-

gether with two subgenera, *Athleta* and *Ternivoluta*. He also remarked that it seemed to be a matter of opinion whether one considers *Athleta* and *Volutocorbis* as separate genera or not.

Bail (1991) re-interpreted Darragh's simplification and retained subdivisions that have a logical and classification scientific value. He recognises one genus *Athleta*, with subgenera *Athleta*, *Volutocorbis* and *Ternivoluta*. He also noted that *Athleta* and *Volutocorbis* are different in that shells in the subgenus *Athleta* lack a very pronounced sculpture and also do not have the sub-sutural channel which is a feature of species such as our *abyssicola*.

However, Poppe and Goto have remarked that several African species such as *kilburni* and *semirugata* have a polished surface, and they have suggested, for the sake of simplicity and because *Athleta* Conrad, 1853, is an earlier generic name than *Volutocorbis* Dall, 1890, to drop the latter altogether.

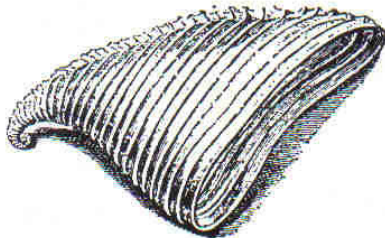
I would have expected the authors to have given a fuller listing of synonyms but, on the whole, the descriptions and illustrations together, with the many varieties and forms depicted, make the book very easy to use.

A small difficulty arises with occasional error of syntax and the misuse of words which are sometimes disconcerting, as are the few misprints which were overlooked in the proof-reading. The only misprint of a species name that I noticed was *Cymbiola rutila norisii* which should have been *norrisii*.

This book is in every way a worthy supplement to Weaver & DuPont's *Living Volutes*, and an essential addition to the library of any collector of volutes. The only price I have is in Dutch Guilders (fl.210 excluding postage, which is approximately US\$114) and the book is obtainable from Dr W. Backhuys, Seashells Treasures Books, P.O. Box 321, 2300 LEIDEN, The Netherlands.

Flotsam

A mystery shell



Did you know that the shell illustrated above, which can be up to 100 mm long, was once considered to be one of the four most valuable shells in the world? Can you guess what it is? Turn to page 12 for the answer.

Marginella peelae vs *Marginella beltmani*

Both of the above species have been described within the last two years, the first by Bozzetti, and the second a little later by Hart. Both come from the southern Cape. Brian Hayes, a member of our society, has compared the two in a well-illustrated article published in *World Shells*¹, to which the interested reader is referred for greater detail. In brief, he finds that the shells of both species intergrade in appearance, and that therefore they are the same species with the preferred name *M. peelae*.

References

1. Hayes, B. Comments on the identity of *Marginella beltmani* Hart, 1993 and *Marginella peelae* Bozzetti, 1993 from South Africa, *World Shells*, No.9, 1994, pp.67-69.

More on Olives

by David Freeman

The July 1994 issue of *Apex*, the quarterly journal of the Malacological Society of Belgium, contains three articles on the Olividae. Messrs C. van Osselaer and B. Tursch have made an interesting observation about the so-called "suture channel" of olive shells. Cross-sections of various olive shells showed that the true suture (which marks the junction of successive whorls) is hardly perceptible. The visible channel is a structural feature which is in fact quite separate from the suture, and is more accurately a protective sheath for the "posterior filament". This filament is a thread-like appendage of the animal's mantle. The authors propose that a more descriptive name would be "filament channel". The function of the posterior filament itself remains a mystery and studies on this subject are continuing. It has been assumed to have some sensory function, but observations have so far been inconclusive.

In another paper, Messrs Tursch, Duchamps and Greifeneder have investigated the status of 88 pre-Lamarckian names for *Oliva* species. The whole article makes fascinating reading, but we have space only to mention that two well-known names have to be replaced:

Oliva vidua (Röding, 1798) becomes *Oliva nigrita* (Karsten, 1789), and *Oliva tessellata* Lamark, 1811 becomes *Oliva olivacea* (Karsten, 1789).

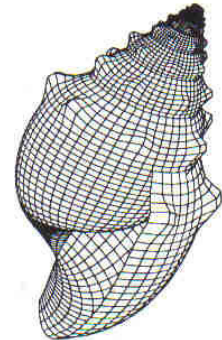
Babylonia papillaris (Sowerby, 1825)

This rare buccinid is endemic to the region of our coast between False Bay and the Transkei. Brian Hayes, of Port Elizabeth, reports¹ that a specimen has been found during a night dive in Algoa Bay at a depth of 10 m. It is thought that the species prefers sandy reefs, and

hides in the sand during the day.

Reference

1. Hayes, B. A rare buccinid found off South Africa : *Babylonia papillaris* (Sowerby, 1825), *La Conchiglia*, No.271, April/June 1994, p.36.



First ever conference on theoretical conchology

A conference dedicated to theoretical conchology is to be held between the 2 and 7th January 1995 in Australia. The Society will be represented there by the Editor of the *Strandloper*, who has been invited to present a paper on the mathematical modelling of mollusc shells. Other topics on what promises to be a fascinating programme include the development of patterns on shells, computer visualization of shells, underwater studies of live shells, and quite a bit of mathematics. Further information on the programme and other arrangements may be obtained from Prof. C. Illert, the Science-Art Research Centre, 2/3 Birch Crescent, East Corrimal, NSW 2518, AUSTRALIA. Phone/fax Int + 61-42-833 009.

In memory..

Notice of the passing away of the following members has been received:

Mrs A.J. Pienaar, Colesberg
Mrs L. Keulemans, Bedfordview
Mr J.J. Swart, Port Shepstone
Mr J (Jack) Becker, U.S.A.

The Executive of the Society offers its condolences to the families of these members.

US Honours for Pretoria Group member

(sent in by Laurie Smith)

The Pretoria Group has had junior members for the last 20 years. The first school boy member is now a marine biologist in Canada. Nowadays we have two school boy members, Stefan Veldsman and Riaan Combrinck. The juniors regularly participate in scientific expo's and both Stefan and Riaan have won medals in South Africa.

Riaan first won the South African leg of an inter-school competition and then took his project on South African cowries, trivias and marginellas to the competition's finals in the U.S.A. There, out of 1600 entries, he was the overall winner, taking home the gold medal. His entry included a display of the shells and a scientific paper with illustrations. We are very proud of him as there were entries from all over the world.

We should remember that our future members (and office bearers) could come from today's junior members. For example, both the President (Dr Dick Kilburn) and the Editor (Dr Mike Cortie) were once junior members of the Society. So, come on Groups, work on getting those junior members involved!

Riaan acknowledges the assistance of the following members, Amie Jooste, Lizeke Vandenberg, Anna Blom (Jeffereys Bay), Prof. Douw Steyn and Laurie Smith.

Well done Riaan!

The Cowry is back

Older members of the Society may remember the journal *The Cowry* published by Lt. Col. R.J.Griffiths between 1960 and 1968. A new series has been started under the direction of J.Zidek and R.Hope Black. Further information on *The Cowry n.s.* is available from the editor, J. Zidek, at P.O.Box 95, Socorro, NM 87801, U.S.A.



More from the Joan Weakley scrap book

*And then I pressed the shell
Close to my ear
And listened well,
And straightaway like a bell
Came low and clear
The slow, sad murmur
Of the distant seas,
Whipped by an icy breeze
Upon a shore
Wind-swept and desolate
.....
And then I loosed my ear..
O, it was sweet
To hear a cart go jolting down the
street.*

The Shell by James Stephens.

Mussel aquaculture

The CSIR has developed a locally-manufactured netting for growing mussels on. The product is intended primarily for commercial operations along the west coast of the Cape and is made of cotton. Each 'rope' is seeded with juveniles and then suspended from a raft for about six months. In this time the mussels can grow to between 65 and 90 mm in length. South Africa currently produces about 3000 tons per year of mussels.

CSIR develops mussel netting, *Technobrief*, vol.4(6), September 1994

Correction

The Mrs Lauren du Preez referred to in issue 238 page 8 in the text on the Pretoria Group, should have been Miss Lorene du Preez. *Jammer Lorene!*

The study of molluscan thanatacoenoses

(better known as beach collecting!)

An article by Krommenhoek in the first issue of *The Cowry n.s.* analyses beached cowry shells from the Seychelles, Sri Lanka and Indonesia. It seems that a more 'elegant' name for piles of beached shells are death-assemblages or thanatacoenoses. The author examines whether a locality's population of living cowries can be accurately estimated from its beached shells. Simple statistics are used to demonstrate that it can be. The author has obviously collected many tens of thousands of beached cowries over the years! He notes that only about 1% could be considered to be fresh and undamaged. He also points out that common intertidal cowries can be quite rare as beach shells, and that the proportions of species washed up differ markedly from place to place.

Krommenhoek, W. Beach-collecting cowries : possibilities and limitations, *The Cowry n.s.*, vol.1(1), 1994, pp.17-22.

Update on *Cypraea fultoni* and *C. algoensis*

compiled by the Editor

The latest issue of *World Shells* (available on subscription from World Shells, P.O.Box 561, Roma, ITALY) carries amongst its many articles a review of *Cypraea fultoni*¹, and another on *C. algoensis*², both, of course, endemic South African cowries of considerable interest to collectors. The interested reader is referred to the original articles for more information, however a few key points will be reported here for the benefit of the readers of the *Strandloper*.

The author of both articles, Dr L. Raybaudi Massilia, mentions that

Burgess⁴ and Liltved⁵, I will use the genus *Cypraea* for the present discussion.) Members may recall that a discussion regarding the first three of these variations appeared in a previous *Strandloper*⁶, and that they were presented there as subspecies of *fultoni*. Raybaudi reports that he has now examined over 250 specimens of all kinds and that the *mozambicana* form, the *typica* form, and the *amorimi* form intergrade. They are thus not sufficiently distinct from each other to qualify as valid subspecies. By implication then, these names have little taxonomic significance.

The specimen figured below (drawn from my own collection) reveals a further complication. It corresponds in appearance to a *mozambicana*



A specimen of *C. f. mozambicana* that was allegedly recovered from the stomach of a musselcracker speared off Mazeppa Bay, Transkei in 1990.

there are at least four variations of *C. fultoni*, namely a globose form from Mozambique, (*C. fultoni mozambicana*, or according to Lorenz, *C. fultoni massieri*) the typical Natal form (*C. fultoni typica*), the rather rare triangular form *C. fultoni amorimi*, also from Mozambique, and finally the very rare *C. fultoni miniatra* form, known so far only from the Transkei. (Actually, Raybaudi used the genus *Barycypraea* in his article but in keeping with the recommendations of our President³, as well as those of

yet was allegedly collected in the Transkei. If the locality given is genuine (and there was apparently at the time of its purchase no *a priori* reason to suppose that it was not) this would weaken even further the status of *mozambicana* as a valid sub-species.

What reason might a dealer or other seller have for misrepresenting the origin of a *fultoni*? The answer is simple; the prices obtained for the various forms differ markedly, and range between US-\$800 and \$6000. The *mozambicana*

form is the less valuable, although really splendid specimens of it could still fetch up to \$4000, whereas the shells from Natal are more highly prized. However, either way, the *amorimi* forms and the *miniatra* form are the most desirable of all, with gem specimens fetching prices at the upper end of the range previously mentioned. The prices currently fetched by *fultoni* are obviously rather less than the \$10000 to \$25000 occasionally paid for good specimens in the mid 80s. Raybaudi cautions that prices might rise again as the source of supply from Mozambique is apparently threatened by a decline in fishing off that country's coastline.

As far as *C. algoensis* is concerned, Raybaudi reports that the species is quite variable and that quite a large number of subspecies and forms have been proposed. After examination of a large selection of material he concludes that the *Cypraea ovula mikharti* species proposed in 1985 by Lorenz and Hubert (see, for example, *Strandloper* 233, 1992, p.9) is merely another of *C. algoensis*' variations. Raybaudi also notes that the other variations sometimes proposed as sub-species of *algoensis* grade into one another, once a sufficiently large number of specimens is examined, and are therefore, once again, merely forms of the shell, rather than actual sub-species.

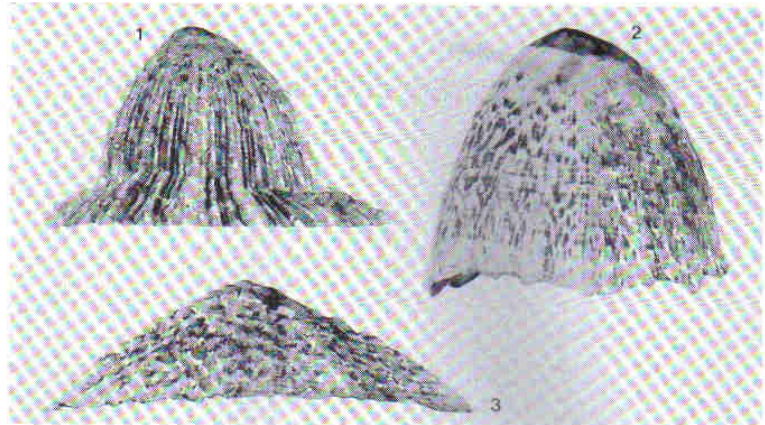
References

1. Raybaudi Massilia L. *Barycypraea fultoni* (Sowerby, 1903), and its varieties. *World Shells*, No.9, 1994, pp.34-41.
2. Raybaudi Massilia, L. *Luponia algoensis* (Gray, 1825), and its different forms, *World Shells*, No.9, 1994, pp.63-66. See also p.55.
3. Kilburn, R.N., *Strandloper* No.234, 1992, p.9.
4. Burgess, C.M. *Cowries of the World*, Gordon Verhoef Seacomber Publications, Cape Town, 1985.
5. Liltved, W.R. *Cowries and Their Relatives of Southern Africa*, Gordon Verhoef Seacomber Publications, Cape Town 1989.
6. Peel, O. The *Cypraea fultoni*'s, *Strandloper*, No.233, 1992, pp.8-9.

Mid-life crisis

by D.G.Herbert

It doesn't take a great deal of imagination or knowledge to realise that the limpet illustrated in Figure 1 must have undergone a dramatic change in its surroundings in order to produce the remarkable growth form. Occasional individuals of many species of limpet show a stepped growth profile where the angle of the shell changes somewhat sharply. This can result from a number of causes, but in the case of this specimen of *Patella granatina* Linnaeus, 1758, the change is particularly dramatic. The specimen was found in beach-drift at Melkbosstrand in the south-western Cape and was donated to the Natal Museum by Johan Marais. Like most other limpets, this species has a more or less permanent site, the home scar, which it occupies during periods of low tide, when it is inactive, but which it leaves during high tide in order to feed. Occasional individuals of this species may settle as youngsters on the shell of another limpet, perhaps of its own species, and make this their home. Such individuals seem to

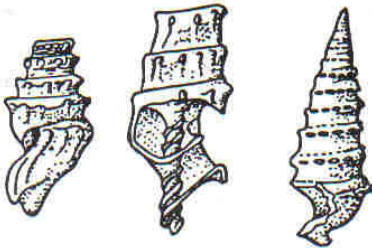


Figs. 1-3. *Patella granatina* Linnaeus, 1758. 1, abnormal growth form, Melkbosstrand, height 22.5 mm; 2, specimen living on another of the same species, Kommetjie, height 36.5 mm; 3, normal rock-dwelling form, Lüderitz, height 19mm.

develop an abnormally elevated shell when compared with those living directly on the rock face, as shown by the specimen collected by Dick Kilburn at Kommetjie on the Cape Peninsula (compare Figures 2 and 3).

It is likely that the specimen found by Johan started out life attached to another limpet. At the time marking the end of this conical phase, some kind of crisis occurred. It may have become physically detached from its home limpet and then forced to

make a new home scar on the rock itself or, perhaps more likely, the home limpet may have been eaten by a predator during a high tide feeding excursion, leaving our limpet homeless, the only option then available being to cling to the rock. Subsequent growth would then have been much less conical, typical of the more common rock-living individuals, resulting in an abrupt change in the growth profile, giving rise to the peculiarly shaped shell illustrated.



Exchange wanted

Dr B.Landau of International Health Centre, Av. Infante D. Henrique Lote 2 R/C, Areias Sao Joao, 8200 Albufeira, PORTUGAL wishes to exchange specimens and literature on Tertiary and Quaternary fossil gastropods.

Correction.

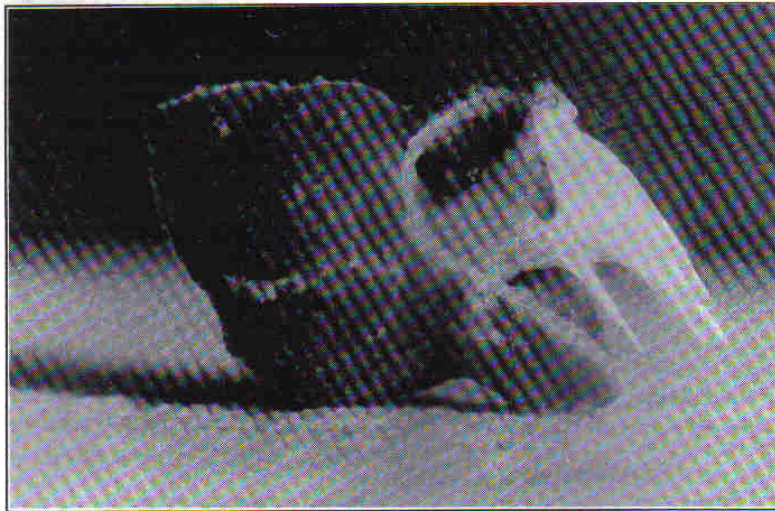
The telephone number of Mr Brian Hayes was given incorrectly in the previous issue of *Strandloper*. It is RSA 041-33-4521

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Strandloper

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28 Francois Ave,
Bordeaux
Randburg 2194
South Africa



**Discovery of living
Coralliophila rosacea
(E.A.Smith, 1902)**

**by Brian Hayes
P.O.Box 804, Port Elizabeth 6000**

I recently had the opportunity to examine and photograph a living specimen of *C. rosacea*. This little "coral shell" belongs to the family Coralliophilidae which has approximately 20 known species along the coast of South Africa. Although specimens can be found fairly commonly on the beach along its range (Still Bay to eastern Transkei), they are very rarely found in a living state, probably because they are very small and seek refuge in crevices or other sorts of shelter.

The specimen shown in the accompanying photograph was found off Algoa Bay at a depth of 15 meters underneath a piece of 'lace coral', which is a form of bryozoan. The pink-orange coloured shell was covered with a very fine 'furry' orange layer, which was probably some kind of hydroid, similar to the one that covers *Nucella squamosa*. The shell measured approximately 10 mm. The animal was milky-white in colour with the top side of the foot being covered by small white blotches which barely stand out

against the milky-white background. The operculum was horny and more or less shaped like a kidney.

As far as I know only a handful of these interesting little shells have been found alive. I would be interested to know if anyone else has found this species in any other habitat.

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Pteropod bonanza

compiled by the Editor from
information supplied by
Mrs A.M.Venter, Pretoria

Readers may recall the recent coverage accorded the 'glass shells' in *Strandloper* 236¹. Mrs A.M. Venter of the Pretoria Group now reports that she was lucky to find "hope van glas-skulpe" (piles of glass shells) just north of St Lucia Mouth during May 1992. The number of specimens she collected amongst the drift on the beach was quite remarkable and one presumes that some extraordinary combination of wind and tide was responsible. Specimens examined by the Editor included a number of fine *Cavolinia tridentata* (Forsskål, 1775), including one that was a striking 15 mm in size. Also present in large numbers was the needle-shaped *Creseis acicula* (Rang, 1828). However, here and there amongst the hundreds of little shells was a rather different looking species, distinguished by a black mouth. One of these is figured here and was photographed on a scanning electron microscope. Reference to Olive Peel's article¹, Dr Kilburn's book² and a recent article

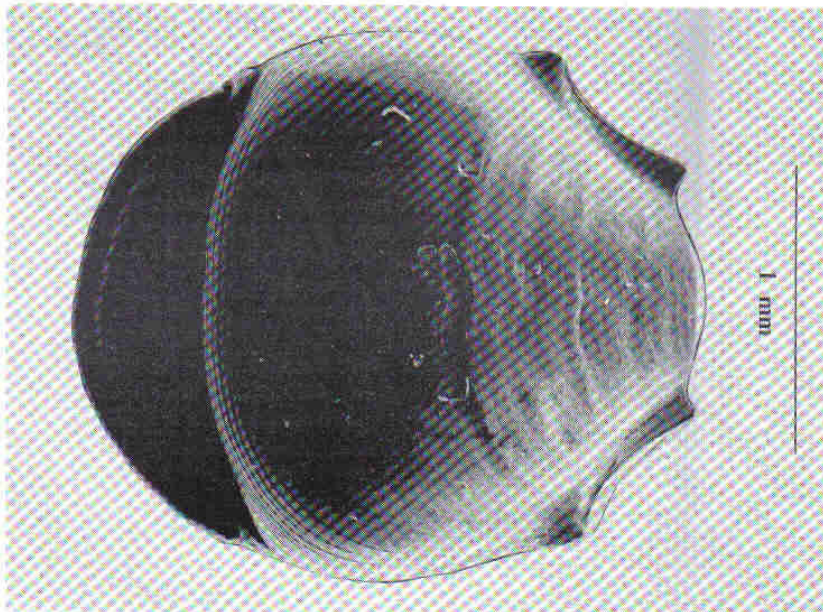
in *La Conchiglia*³ suggests that the species is *Diacria quadridentata* (Blainville, 1821). It is reported to also live in the Mediterranean, the Red Sea, and both sides of the United States of America.

References

1. Peel, O. Pteropods, *Strandloper*, no. 236, 1993, pp.4-5.
2. Kilburn, R. and Rippey, E. *Sea Shells of Southern Africa*, Macmillan South Africa, 1982.
3. Barash, A. and Zenziper, Z. Notes on Opisthobranchia from the Red Sea, *La Conchiglia*, No.271, April/June 1994, p.57-61.

Answer to puzzle on page 7

The mystery shell illustrated on page 7 is *Carinaria cristata* L., also known as the Glassy Nautilus. A single specimen was sold for a staggering £20 in 1801. It is also a member of the heteropod family Carinariidae. Further information on this curious shell may be found in S. Peter Dance's book *Shell Collecting - An Illustrated History*, Faber and Faber, London, 1966.



A fine specimen of *Diacria quadridentata* (Blainville 1821) selected from Mrs Venter's shells.

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