



Three Cones from Transkei, South Africa

by

Stephan Veldsman

Summary

A new *Conus* species *Dendroconus immelmani* (Korn, 1998) (Figs. 1 and 2) from South Africa's southeast coast and two other species of *Conus*, *Dendroconus natalis* (Sowerby, 1857) (Fig. 3) and *Dendroconus gilchristi* (Sowerby, 1903) (Fig. 4), are compared in this article. It is concluded that they are three separate species.

Introduction

In December 1997 I obtained two preserved and one live specimen of *Dendroconus immelmani* and one of *Dendroconus natalis*. The specimens were from the same locality and were collected at depths of 25-40 metres. A thorough investigation of the live *Dendroconus immelmani* took place over a period of four weeks. Investigation of the radula by means of an electron microscope and a light microscope was carried out during the beginning of 1998 and the results were presented at the International Science fair in Coimbra, Portugal, during August 1998.

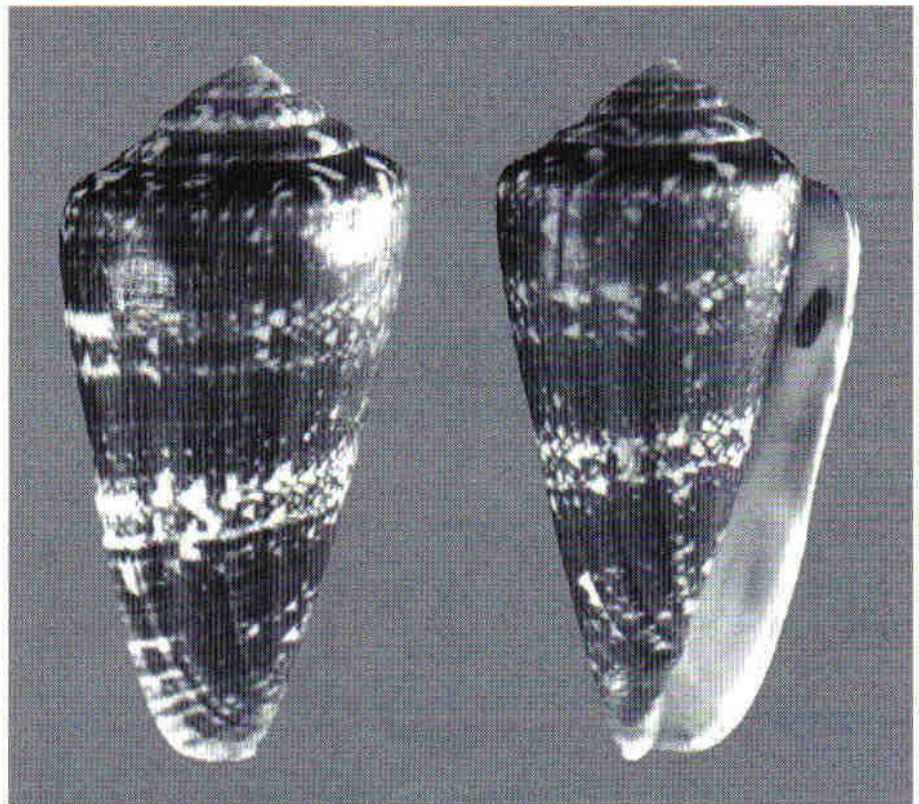


Figure 1. *Dendroconus immelmani*, L=88.5 mm. Colour: rich brown on white

All three of these Cones can be placed under the genus *Dendroconus* Swainson, 1840 and subgenus *Ketyconus* da Motta, 1991.

Four adult shells and two sub-adult shells (Figs. 5 and 6) of *Dendroconus immelmani* have been used for comparison. The radula of two animals

were used and a living animal was studied in an aquarium. For further information the reader is referred to Korn, 1998. The animal of *Dendroconus natalis* from the same locality as *Dendroconus immelmani* was investigated and a radula slide from the Jenner collection was used for investigation (Fig. 7). Barnard, 1958 illustrated the



Figure 2. *Dendroconus immelmani*, from left to right, L=65.9 mm, 92.9 mm and 72.0 mm. Colour: dark brown flecked with white



Figure 3. *Dendroconus natalis*, left L=37.1 mm, right L=48.1 mm. Colour: orangey-brown on white



Figure 4. *Dendroconus gilchristi*, from left to right L=43.1 mm, L=42.0 mm, L=43.2 mm. Colour, left & right: chocolate brown on white, centre: light brown on light orange

radulae of *Dendroconus gilchristi* and *Dendroconus natalis* in detail and this was used for comparison.

Locality and Range

The species *Dendroconus natalis* and *Dendroconus gilchristi* are endemic to South Africa and occur from southern KwaZulu-Natal along the Transkei coast southwards to approximately East London. Kilburn and Rippey, 1982 mention that *Dendroconus natalis* ranges from Durban to East London with stray shells reaching Port Alfred. Despite the name *Dendroconus natalis* is it uncommon, to rare, along the KwaZulu- Natal coast. All the *Dendroconus immelmani* specimens investigated and collected to date were from one locality along the Transkei coast.

Habitats and habits

The shells of the three species illustrated in this article were dived from a depth of 25-40 m on coral reefs. Studying the living *Dendroconus immelmani* in captivity (Figs. 8a and 8b), it was observed, that the snail would eat what was available. It even ate worms when there was nothing else to eat. Several attempts were made to catch one of the small fishes, but without any success. It preferred to eat other molluscs, especially other cones. It also ate molluscs almost its own size, for instance *Charonia lampas pustulata* (Euthyme, 1889) and *Ranella australasia gemmifera* (Euthyme, 1889). A slow motion replay of a video showing the *Ranella* snail being attacked indicates a quick contraction of the body when the radula of the *Dendroconus immelmani* penetrates it. The prey snail immediately relaxes after penetration of the radula. Within 12 hours the *Ranella* was eaten by the cone. The cone normally prefers to look for its prey in the evening.

One morning when I thought that the *Dendroconus immelmani* was going to eat the last *Ranella australis gemmifera* in the aquarium, the *Ranella* decided to eat the *Dendro-*

conus immelmani instead and my studies and observation on the behaviour of the living cone ended!

Description

Dendroconus immelmani is a moderately large cone, by comparison with *Dendroconus natalis* and *Dendroconus gilchristi* which are much smaller cones. The shell morphometry, after Röckel, Korn and Kohn, 1995 is used and described in Table 1. All three these species have more or less a turgid shape. Using the classification of da Motta, 1991 all the species can be classified as *Dendroconus*.

The spire of *Dendroconus immelmani* is concave, but at the apex it changes to a more convex shape. The whorls are slightly stepped with a concave to almost straight form. *Dendroconus natalis* and *Dendroconus gilchristi* have almost the same shape of spire. The spire is slightly concave with almost no prominent protoconch while in the *Dendroconus immelmani* there is a prominent protoconch, except in very old shells where it has been eroded away. The whorls of *Dendroconus natalis* and *Dendroconus gilchristi* are also slightly stepped and more convex to a straight shape (Lauer, 1986). The colour of the foot of the snail of *Dendroconus immelmani* is almost yellow with a black blotch.

Kilburn and Rippey, 1982 indicated that *Dendroconus natalis* varies much in colour and pattern. Heavily reticulated shells may appear very different to sparsely marked specimens in which the tent pattern is replaced by a double zone of blotches. The latter variant is commonly but erroneously referred to as form *gilchristi* Sowerby, 1903, that name was actually given to a deep water form of *natalis* which is larger and more strongly conical with a nipple like apex and a colour pattern that is frequently disposed into axial waves.

The shoulder of all three these species are almost round. The origin of the lip is also closely related. It has a slightly receding shape. The columellar fold of *Dendroconus immelmani* is al-

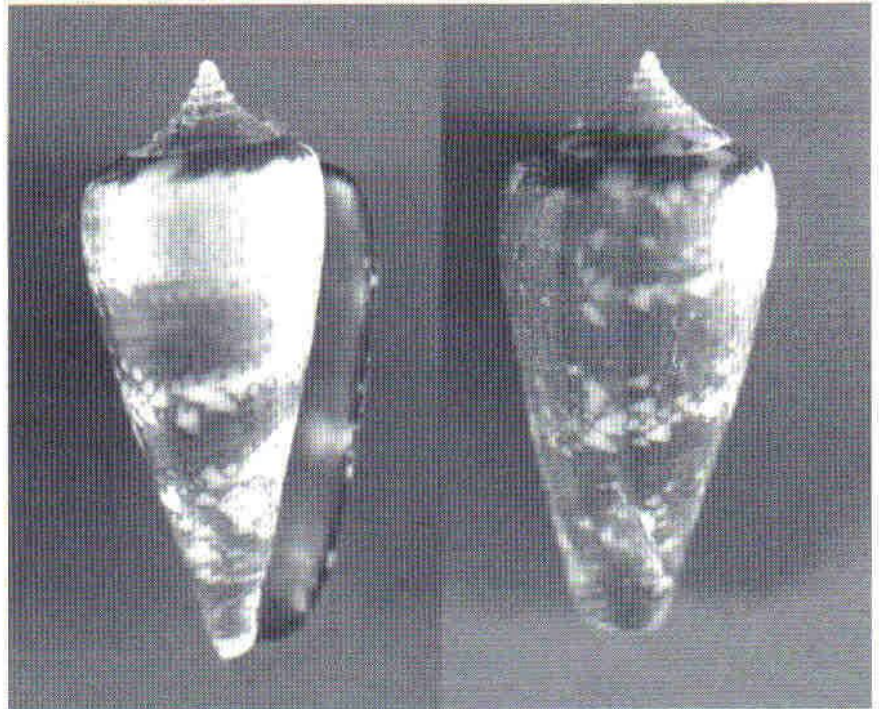


Figure 5. *Dendroconus immelmani*, L=36.1 mm. Colour : chocolate brown with reddish tinge

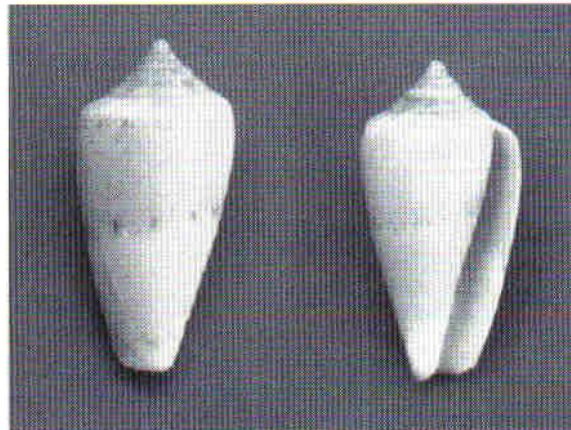


Figure 6. *Dendroconus immelmani*, sub-adult specimen, L=21.0 mm. Colour : pale orange-pink with a few brown flecks

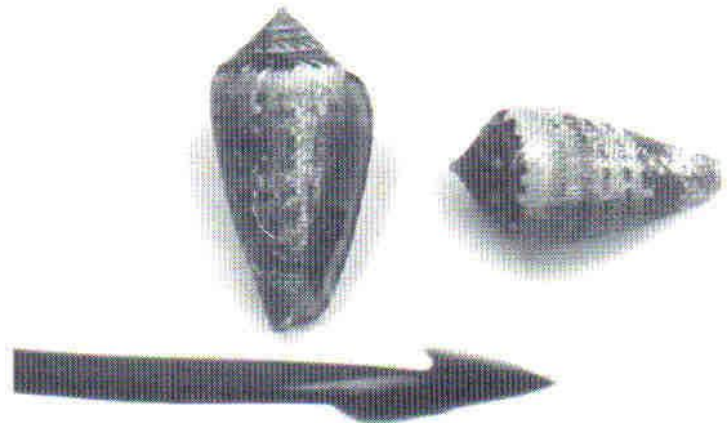


Figure 7. *Dendroconus natalis*, L=30.5 mm (left) and L=27.0 mm (right) with highly magnified image of radula

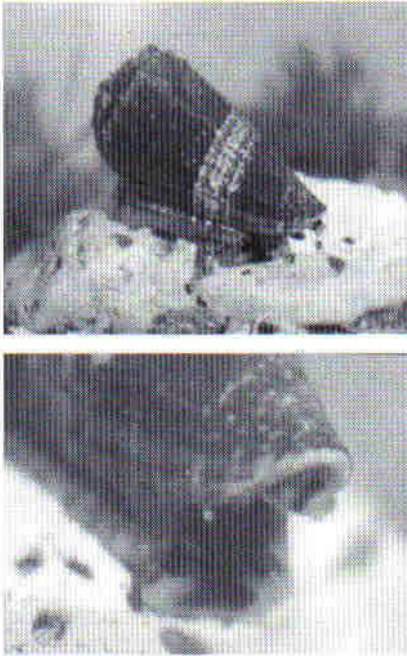


Figure 8. Two views of the live *Dendroconus immelmani*

most straight. *Dendroconus natalis* has a straighter columellar fold where *Dendroconus gilchristi* is slightly bent (Fig. 9).

The colour of the three species is in most instances very similar, but *Dendroconus immelmani* has a distinct pattern. It has a brown colour all over the shell with a tented pattern. The colour pattern of *Dendroconus natalis* and *Dendroconus gilchristi* is sometimes the same. In most cases *Dendroconus gilchristi* has less pattern than *Dendroconus natalis* although pale specimens may occur. Smith, 1992 indicates that diving off the Transkei coast, he has never found a plain *gilchristi* specimen with reduced or no pattern. Even in the pale shells there is a pale pink tent pattern over the entire shell. *Dendroconus immelmani* can also be compared with *Leptoconus amadis* (Gmelin, 1791) (Korn, 1998).

Radular teeth

There is a remarkable difference in the shape of the radula between *Dendroconus immelmani* (Fig. 10) and *Dendroconus natalis* (Fig. 11) (see also Fig. 12). Korn 1998 described the



Figure 9. Comparison of the aperture shape of *Dendroconus natalis* (left) and *Dendroconus gilchristi* (right)

Table 1. Shell morphometry

Name	L	AH	MD	SH	RSH	PMD	RD
immelmani	71.95	63.45	37.00	8.50	0.12	4.35	0.58
immelmani	92.90	83.15	48.10	9.75	0.14	4.93	0.60
immelmani juvenile	36.10	30.10	17.90	6.00	0.17	2.98	0.60
immelmani juvenile	21.00	17.50	10.00	3.50	0.17	2.80	0.57
natalis	42.10	37.35	22.50	4.75	0.11	4.74	0.60
natalis	30.50	25.00	15.05	5.50	0.18	2.70	0.60
natalis	37.10	31.80	19.10	5.30	0.14	3.60	0.60
gilchristi	46.00	40.00	23.85	6.00	0.13	3.98	0.60
gilchristi	54.10	48.40	29.95	5.7	0.11	5.25	0.60
gilchristi	42.00	35.10	21.45	6.90	0.16	3.11	0.61

measurements and ratios of the species *Dendroconus immelmani* and *Dendroconus natalis*. The blade of *Dendroconus gilchristi* looks almost similar to that of *Dendroconus immelmani*, but the basal knob is different between the two species.

Abbreviations

- L = Length of the shell
- AH = The aperture length
- SH = The spire length (L - AH)
- MD = The maximum diameter
- RSH = Relative height of spire (SH / L)
- PMD = Position of maximum diameter (MD / SH)
- RD = Relative diameter of last whorl (MD / AH)

All measurements in mm.

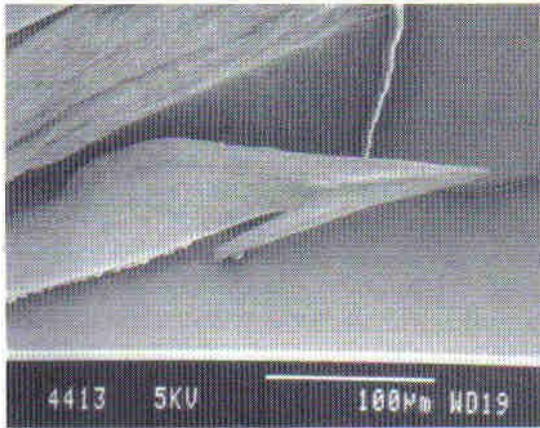


Fig.10. Radula of *Dendroconus immelmani*

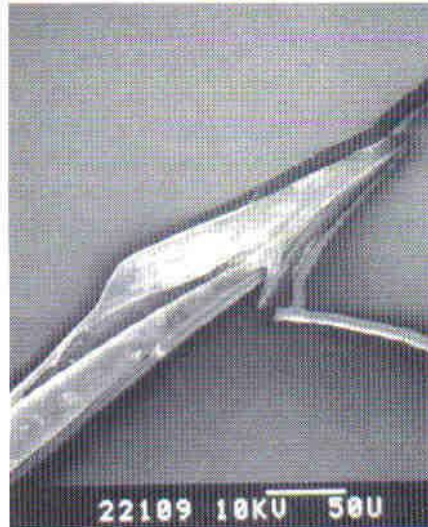


Figure 11. Radula of *Dendroconus natalis*

Acknowledgements

I would like to thank Mr. A. Jooste for his professional advise and for the loan of material, and Prof. Coetsee from the EM-unit at the University of Pretoria for assisting with the electron microscope work. Mrs. M. Evans for proof reading the article.

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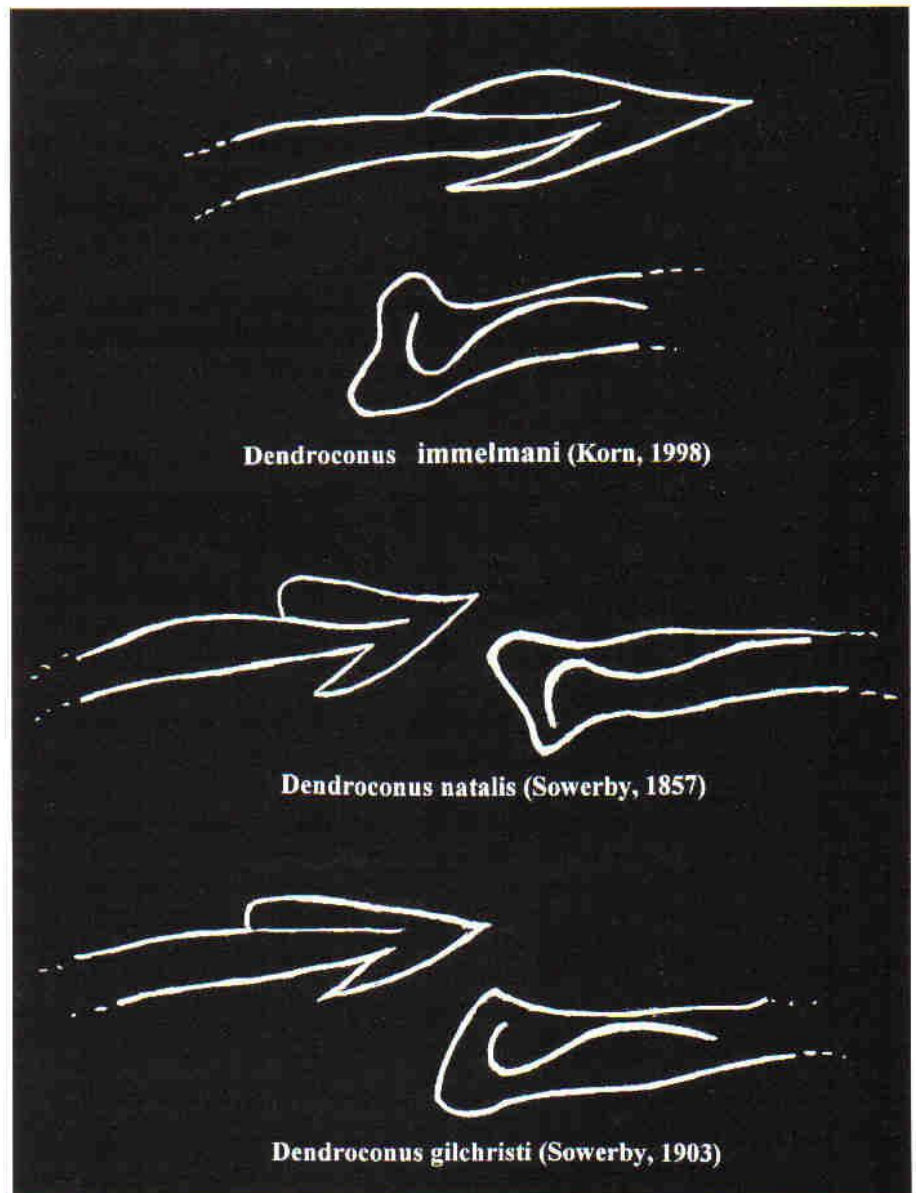


Figure 12. Radula of the three species compared



Shells from drawings 1996.
Broken shells from Fort Macquarie, N.S.W.

Flotsam

Third Border Group Shell Show

The Border Shell Club is presenting their third Great Shell Show on 13th, 14th and 15th August. They invite all other Society members to visit them during the Show and especially, to contribute a entry or two. Entries may be submitted in various Sections including Junior, Systematic, Thematic, Ecological, Non-marine, and Arts & Crafts. Rumour has it that the entries may be judged by Dr Dick Kilburn, the Society's President/Patron, who is a professional malacologist at the Natal Museum. Accommodation for visitors can possibly be arranged. Please contact Ivan Hartwell at 043-703-7203 (W) or 043-743-5902 (H), or Nancy Tietz, the Group Secretary at 0431-43-7818. Ivan's email address is ivan.hartwell@za.nestle.com.

Exchanges wanted

Mr Joaquin Lopez Soriano, of Facultat de Biologica, Universitat de Barcelona, Diagonal 645, 08071 Barcelona, SPAIN, wishes to exchange common Mediterranean sea shells for any South African species.

How many species of mollusc are there?

A recent paper by M.J. Gibbons and others¹ advances statistics on South Africa's biodiversity. Although the country occupies only 0.8% of the Earth's land area, it has living on its land mass 8% of the world's vascular plant species, 2% of the amphibians and 7% of the reptile, bird and mammal species. Many of these are endemic, making us the "third-most biologically rich country in the world".

In the paper, Gibbons and co-workers attempted to survey the situation with regard to our coastal water habitats. They consider that South Africa has 3062 species of marine mollusc. This is made up of 2262 species of gastropod, and 560 species of bivalve with the remaining species being distributed between the Polyplacophora (chitons - 29), Cephalopoda (octopus & kin - 195) and Scaphopoda (tusk shells - 16). On average, just over half of these species are currently considered endemic to South Africa. Endemism is particularly high within the Scaphopoda and Polyplacophora.

Worldwide, the authors consider that there are about 96 850 species of mollusc. This is divided up into 75 150 species of gastropod, about 20 000 species of bivalve, about 700 species each of Cephalopoda and Polyplacophora, and a mere 350 species of Scaphopoda.

From the figures provided it is easy to see that over 3% of the planet's mollusc species dwell on and near our shores. So most of us still have rather a lot of collecting to do!

Reference

1. M.J. Gibbons *et al.* The taxonomic richness of South Africa's marine fauna : a crisis at hand, *S. Afric. J. of Science*, vol.95, 1999, pp.9-14.

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UPDATE ON PERMITS

Mrs S. Adams of Sea Fisheries has confirmed with an email sent on 18th March 1999 at 07:43 that the R50 Post Office 'mollusc permit' will serve for the recreational collection of live shells by shore shelling and snorkeling. Please note that the permit does not cover commercial collection and it specifically disallows the use of SCUBA. I have taken up the latter two issues with Sea Fisheries, and they are reportedly considering how to handle these two situations. No permit is required for beach shells (unless you plan to collect by the truckload!)

Strandloper

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

Dr M.B. Cortie,
P.O. Box 1664,
Ferndale, 2160
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How's your figure-ground discrimination?

Many shell collectors are absolute boffs at spotting a shell from several metres away- whether it was a *Cypraea teres* on a Wild Coast beach, a volute in somebody's bathroom display or a snail shell at the side of a footpath! Are you one of these? Test yourself. The 'whirly-word' chart below contains the text of sixteen conchological terms. See how many you can find. The correct answers, and a table explaining the significance of your scores will be found on page 8. Thanks to David Cortie for this contribution.

q	t	r	y	e	g	b	j	b	t	i	r	s	y	h
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r	w	t	e	a	t	a	d	k	t	t	p	d	w	n
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M. Lussi and G. Smith's "Marginellidae in South Africa. Part 1 - Genus *Volvarina*"


reviewed by Mike Cortie

The Marginellidae have lately been the focus of some energetic efforts by international taxonomists, and even the best informed collector could be forgiven for being unsure about the 'most current' species names.

This problem, at least with regards to the Southern African species of *Volvarina*, has now been admirably addressed in a softcover booklet published privately by Messrs. Lussi and Smith. The booklet has 16 pages, is comprehensively illustrated with colour ink-jet printouts, and deals in some detail with the nine local species. The treatment is thoroughly scientific throughout, and the booklet includes an identification key, and a list of references. Newly described species are included. It is apparently the intention of the authors not to stop at *Volvarina*, and booklets covering other

genera of the Marginellidae are envisaged for the future.

Order your copy directly from Markus Lussi for R55 (Southern Africa) or US\$28 (overseas) including airmail postage. Markus's postal address is 15 Longwoods Drive, Durban North 4051, South Africa, or you may email him at catsrus@mweb.co.za.



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Gift from the sea

The writer Anne Morrow Lindbergh may be known to some readers, but the Editor had not made an acquaintance with the output of this skilled wordsmith until his wife thrust a book with the above title under his nose. The book is certainly not about collecting sea shells, but the following passage may strike a chord:

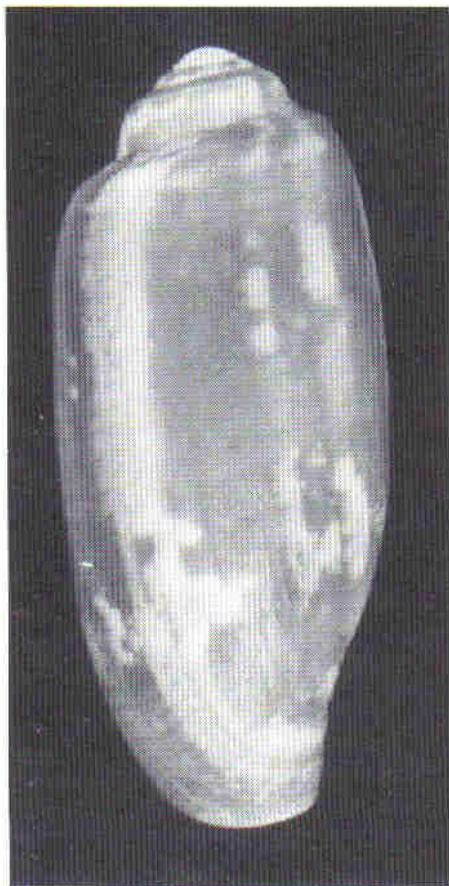
" I am packing to leave my island. What have I for my efforts, for my ruminations on the beach? What answers or solutions have I found for my life? I have a few shells in my pocket, a few clues, only a few.

When I think back to my first days here, I realize how greedily I collected. My pockets bulged with wet shells, the damp sand clinging to their crevices. The beach was covered with beautiful shells and I could not let one go by unnoticed. I couldn't even walk head up looking out to sea, for fear of missing something precious at my feet. The collector walks with blinders on; he sees nothing but the prize. In fact, the acquisitive instinct is incompatible with true appreciation of beauty. But after all the pockets were stretched and damp, and the bookcase shelves filled and the window ledges covered, I began to drop my acquisitiveness. I began to discard from my possessions, to select.

One cannot collect all the beautiful shells on the beach. One can collect only a few, and they are more beautiful if they are few. One moon shell is more impressive than three. There is only one moon in the sky. One double-sunrise is an event; six are a succession, like a week of schooldays. Gradually one discards and keeps just the perfect specimen; not necessarily a rare shell, but a perfect one of its kind. One sets it apart by itself, ringed around by space - like the island....."

Source : A.M. Lindberg, *Gift From the Sea*, Pantheon Books, New York, 1983.

A *CONUS obscurus* FROM TRAFALGAR, KNZ



Roy Aiken, of Benoni, Gauteng, has in his possession an unusual cone that was recently found by a friend on the beach at Trafalgar, on the south coast of KwaZulu-Natal. It has a bulbous shape, reminding one strongly of *C. geographicus*, but has the orange-pink colouration of a typical east coast *C. tinianus*. The closest match seems to be *Conus obscurus* Sowerby 1833, an IndoPacific species mentioned in the Steyn and Lussi book¹ as being rare along the KwaZulu-Natal coastline. The specimen figured is bright orange and has a length of 42 mm. This is at the top end of the size range cited by Walls².

References

1. Steyn, D.G. and Lussi, M. *Marine Shells of South Africa*, Ekogilde, Hartebeespoort, South Africa, 1998.
2. Walls, J.G. *Cone Shells - A Synopsis of the Living Conidae*, T.F.H. Publications, Hong Kong, no date, circa 1978.

Skulpe trek aandag by buiteleweskou

Die driedaagse buiteleweskou Saifex in Gauteng het vanjaar iets besonder mooi gehad: 'n sprankelende uitstalling van die Skulpkondervereniging, wat heelwat gunstige aandag getrek het.

Die uitstalling, van 26 tot 28 Maart 1999 langs die meer in die stadskern van Centurion, het met die tema "Excover Africa" gefokus op vierwieltrekvoertuie, doelgemaakte boskamp-sleepwaens, duikafrigting, hengel- en kamptoerusting, en so aan.

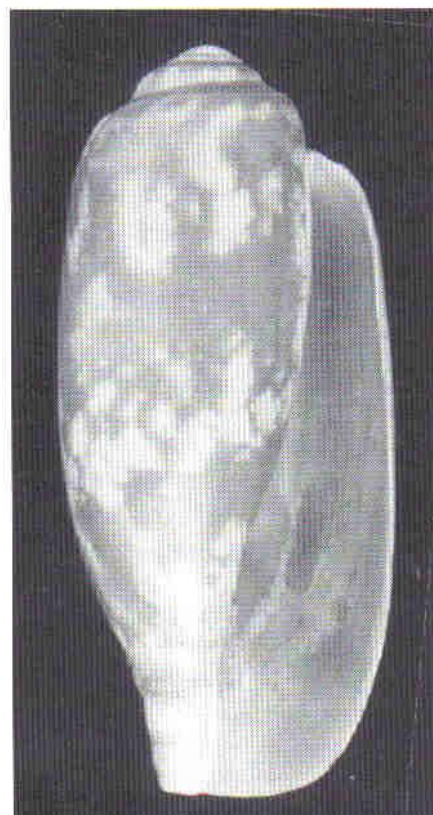
In een wit tent was 'n hoekuitstalling met die allermooiste skulpe, en die allervriendelikste mense.

Danksy die ywer van prof Douw Steyn, die nuwe Pretoriase voorsitter, is die uitstalling byeengebring om die vereniging aan die publiek bekend te stel. Dit was mooi!

Blou lakens is as tafeldoeke gebruik. Elize Steyn het ou ruitgordyne as 'nette' gedrapeer en gehang. Die vereniging se kleurfotovergrotings is as dekor aangebring, en ook die kleurblaaië uit onlangse uitgawes van die *Strandloper*. In een hoek was selfs 'n stukkie plastiek-badkamer gordyn met 'n skulptema!

Laurie Smith het 'n "skildery" van skulpe gemaak wat soos 'n blommerangskikking in sy raam gehang het, met die opskrif "EETBAAR". 'n Mooi uitstalling en 'n hele verskeidenheid groot los skulpe is verskaf deur Lana en Bill Kruger. Ander uitstallings in glaslaaie was:

Coffee Bay shells - Medea Evans
Klipmossels - Jeannie Willemse
Skulpfamilies - Vellies Veldsman
Skulpe van Sodwana en van Jeffreysbaai, albei deur Douw en Elize Steyn



Whirly-word answers:

(from page 7)

across: chiton, cypraea, lira, oxysteles, tulipa, varix,
down: operculum, hydatina, charonia, turritellidae, umbo, callus, strandloper, hyalina, ex pisce, conus

Scoring (out of 16):

16 Hol. May I come shelling with you next time?

12-15 Pretty good. Not much escapes you. I bet that you collect microshells too.

9-12 Average collector-type person. Has a well-developed aversion to housework.

6-9 Time you found out that there is more to life than cones, cowries and volutes

3-5 Write an article for the *Strandloper*

0-2 Do you buy ALL your shells?

Erik Holm het twee eksemplare van *Die Seeskulpe van Suid-Afrika* aan die organiseerders van die skou geskenk, en een is by die opening van die uitstalling aan die burgemeester van Centurion oorhandig.

Belangstellendes het by die skulpstalletjie 'n pamflet gekry, met 'n uitnodiging om die maandbyeenkoms van die Skulpkondevereniging in Pretoria by te woon. Toonbankdiens is beurtelings gedoen deur Lana Kruger, Linda Swart, Vellies Veldsman en Elize en Douw Steyn.

SUMMARY

The Pretoria Group of the Conchological Society had a display at the Saifex outdoors show at Centurion. At the show were 4x4 vehicles, camping equipment and under-water gear, and now, for the first time, a display of beautiful shells hosted by the friendliest people!

The Society's presence at the show was organised by professor Douw Steyn, the new Chairman of the Pretoria Group. The shells were displayed on blue material, along with large colour photographs and back issues of the *Strandloper*.

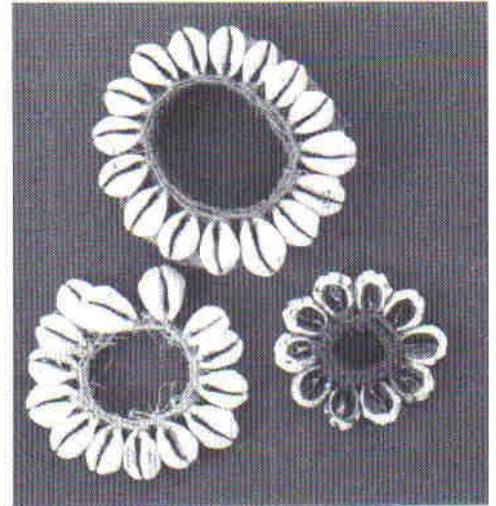
Laurie Smith had on display a shell sculpture in the form of a flower display, made from the shells of edible species. Lana and Bill Kruger contributed a variety of large shells. Medea Evans showed a selection from Coffee Bay, Jeannie Willemse had a display of Patellidae, Vellies Veldsman a display showing the diversity of families, and Douw and Elize Steyn displays showing the shells of Sodwana and the shells of Jefferys Bay.

Publisher Erik Holm donated two copies of the new book *Marine Shells of South Africa*, which were handed to the mayor of Centurion at the opening of the show.

Shell Power

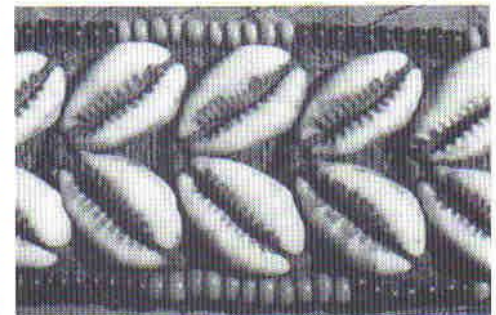
Artifacts from collection of Lizieke van den Berg

Text by Mike Cortie & Lizieke van den Berg



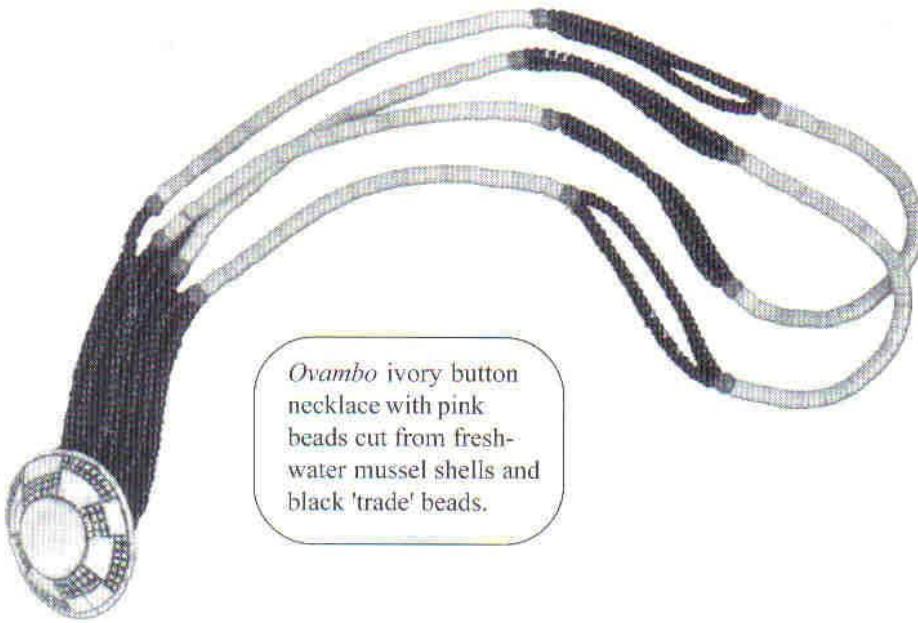
Sea shells captivate the imagination of nearly all who come across them. Allow a heap of little bivalve shells to cascade through your fingers and you will hear the music of the sea and, perhaps, you may feel the ancient residual magic that has led people over the years to use shells as trophies, religious symbols, fertility charms, and even money. Africans have not been immune to this attraction, and in many traditional African cultures sea shells are intimately woven into the mythology around those most intimate of life's milestones - courtship and marriage.

The peculiar attraction of the cowrie shell has been mentioned before in the *Strandloper* - handfuls of them make a marvelously tactile currency, and their unusual shape has doubtless caused the imagina-



Illustrations

Top of page. *Mbanyina* marriage token.
Left and above. A *Makuba* belt from D.R.C. (Zaire)

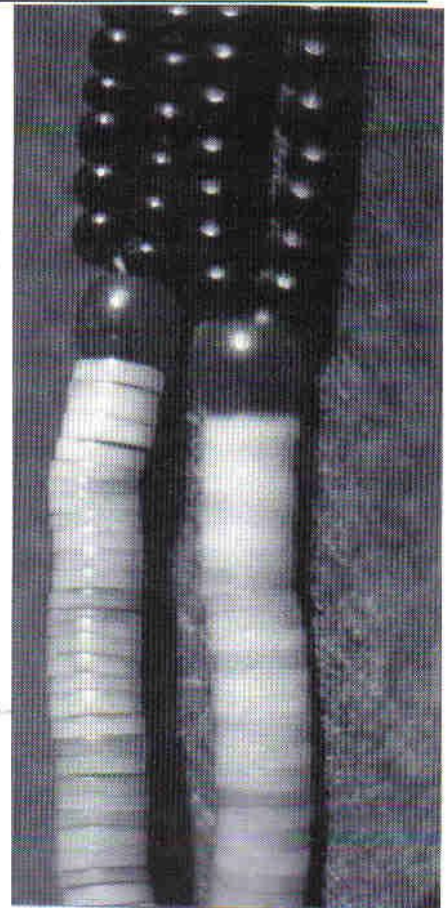


Ovambo ivory button necklace with pink beads cut from freshwater mussel shells and black 'trade' beads.

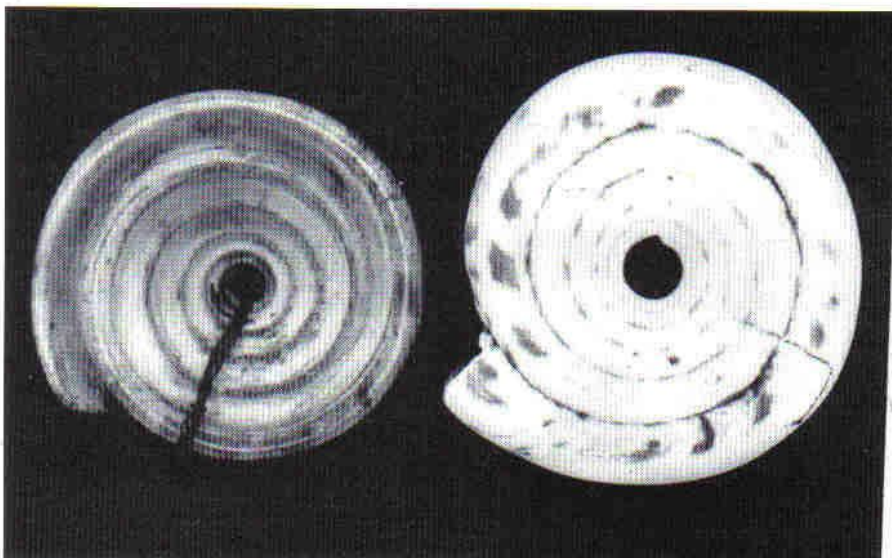
tion of many a susceptible man and woman to incline towards procreative speculations. And so it is no surprise that cowrie amulets and hair adornments were once well known amongst the people of eastern and central Africa. For example, the vaTonga had their *mbanyina* (previous page), which was produced by threading *Cypraea moneta* shells onto a loop of tree bark fibre. Apparently, the loops were then threaded into the hair. It is believed that the ornaments served variously as lucky charms, or as a marriage token, a sort of engagement ring, given not to the bride but to her aunt. Elsewhere in Africa, cowries have been used in ceremonial clothing, as in the *Makuba*

belt from D.R.C. (formerly Zaire) which is shown on page 9. In this case the symbolism of the belt and its cowries is not known to the authors. Another type of shell ornament, the significance of which is also uncertain, are the *Ovahimba* and *Ovambo* necklaces made of pink freshwater mussel shells, painstakingly shaped and drilled with simple tools.

However, better known than the *mbanyina*, or the shell belts of the *Makuba*, are the famous *ndoro* (often called *mpande* in Zambia) of various tribes inhabiting northern Namibia, Angola, Zimbabwe, Zambia and the southern D.R.C. This is a neck, arm



or belt ornament symbolising fertility and status in females or, in males, apparently just status. In many instances it is given by a mother to a daughter on her wedding day, and by all accounts is a highly prized possession. Originally, the *ndoro* of Namibia and Angola was made from the top, button-shaped spire end of the West African cone shell *Conus pulcher* Lightfoot, 1786. The desire to own such a wonderful charm grew faster, it seems, than the ability of the coastal folk to supply the necessary cone tops, and soon East coast cones were being traded across the subcontinent to supply the need. In this way shells of Indo-Pacific species such as *Conus litteratus* Linnaeus, 1758 and *Conus leopardus* (Roeding, 1798) found their way to some pretty remote and out-of-the-way locations on the 'wrong' side of the continent!



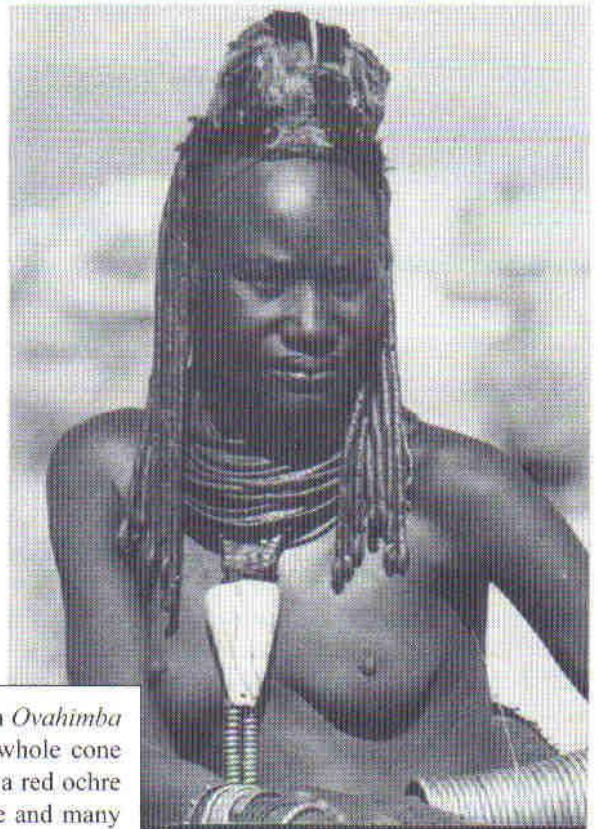
Above - *Ndoro*'s of the *Ovahimba*, of Namibia's Kaokoveld. Left hand one is a ceramic facsimile, right hand one from the top of a *Conus pulcher*.

The *ndoro* was (or is) not necessarily worn alone. Although only the top of the cone shell was used for an actual *ndoro*; in many cases the piece remaining after the top was removed was also turned into jewellery, or even a

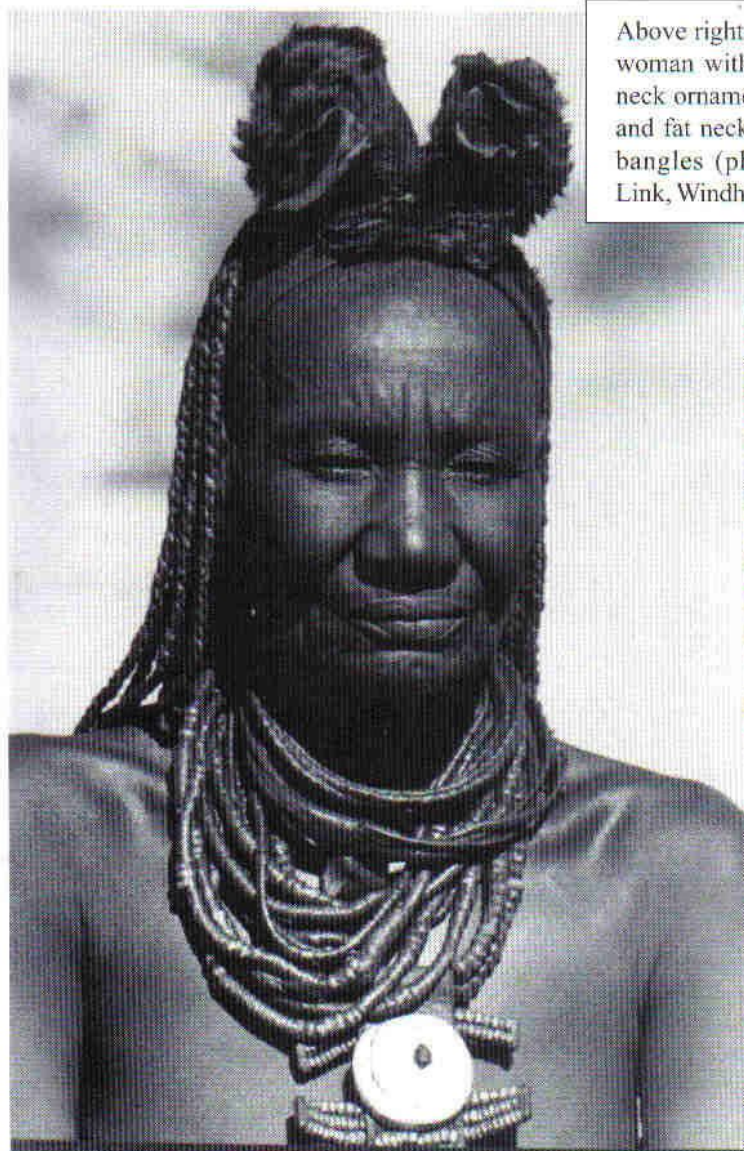
whole cone shell could be pressed into service. A whole *Conus virgo* or *litteratus*, for example, is still reputed to be an excellent fertility charm in parts of Namibia and Zimbabwe. Such artifacts are rarely acquired by Westerners due to the high value placed on them by their owners.

The Portuguese traders were not slow to seize the business opportunity offered to them by the *ndoro* market, and were soon supplying factory-made facsimiles of earthenware, porcelain or glass.

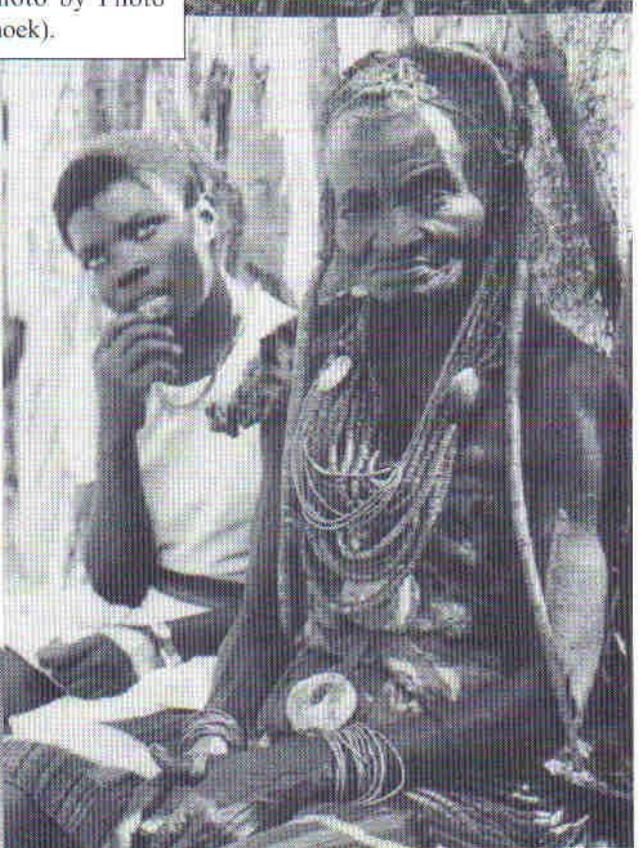
The *ndoro* is also well established in parts of Zimbabwe and in that country was originally usually either the top of a *Conus virgo* Linneaus, 1758 shell, or the calcareous operculum of a turban shell. As in Namibia and Angola, the ingenious Portuguese seized on the commercial opportunities offered by the *ndoro* as early as the Sixteenth Century, and exchanged first actual cone shells or, later, mass-produced ceramic copies, for gold and ivory. Curiously, the factory-made copies sometimes have serial numbers on their reverse. They are believed to have been made in the Portuguese trading bases of Goa, Damao or Diu, on the Indian coast.



Above right- An *Ovahimba* woman with a whole cone neck ornament, a red ochre and fat necklace and many bangles (photo by Photo Link, Windhoek).



Ovahimba woman with *ndoro* and necklace made with red ochre and fat (photo by Photo Link, Windhoek).



Elderly Ovambo woman with three *ndoro*'s and a necklace made with red ochre and fat (photo courtesy Alex Zaloumis).

OVAMBO WOMEN
OGUENATI - "NDORO"

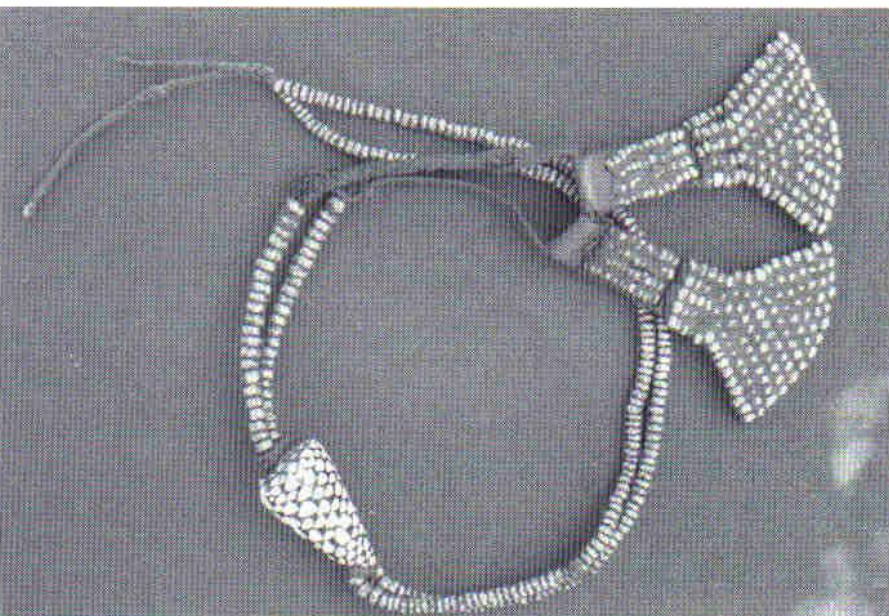


Two whole-cone neck ornaments from the *Makuba*.

In eastern Zimbabwe the *ndoro* were apparently originally worn by the Shona chiefs as a symbol of authority. The magic power of the *ndoro* was also sufficient in some cases to alter the course of battle. For example, it is told that the people of the ancient Zimbabwean chieftain or rain maker Karuva (depending on the version of story) held the *ndoro* in very high regard. Discovering this, his enemies put *ndoro*'s on their foreheads and then marched on him. This either disrupted Karuva's own magic or in any event seriously disheartened his own warriors, with the result that he was defeated and driven away. The *ndoro* continue to have a mystical significance in Zimbabwe and they are used by some traditional healers for divining or for the manufacture of herbal medicines. In addition, it is

said that a medium's ancestral spirits often demand that their own *ndoro* be worn before they will appear. Not surprisingly, only a rightfully inherited *ndoro* should be worn by a person or dire consequences may follow!

It is sad that so much of this rich heritage is disappearing, more-or-less undocumented, as the years pass. The globalisation of society means that African teenagers are more inclined these days to bright plastic hairclips and jeans than a *ndoro*. We strongly encourage any of our readers who may have information or stories about the human aspects of shells in Africa to send them in to the *Strandloper* so that they can be written down and recorded before it is too late.



An Ovahimba ochre- and-fat necklace, incorporating a *Conus marmoratus* from the far off east coast.

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