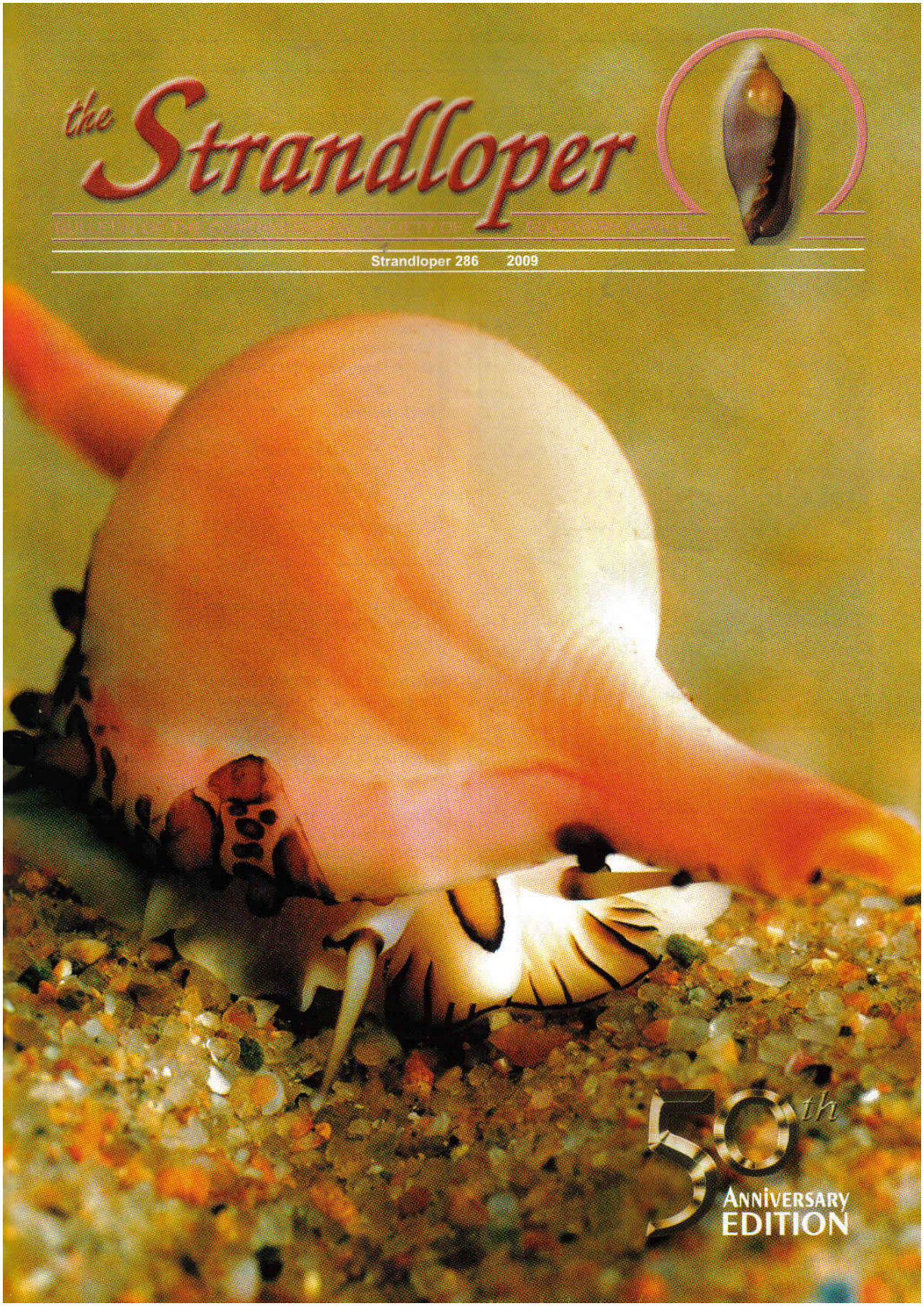
the Strandloper

BULLETIN OF THE AMATEUR GEOLOGICAL SOCIETY OF SOUTHERN AFRICA

Strandloper 286 2009



Conchological Society of Southern Africa

Founded 1958

Patron : Dr R.N. Kilburn

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Ed.

The Strandloper, official bulletin of the Conchological Society of Southern Africa, is issued as part of membership dues.

Front Page

The beautiful animal of *Volva volva* (Linnaeus, 1758).

Photographer: Valda Fraser

In this Issue

In Memorium

OLIVE MEYER (1932 – 2009)

Olive Meyer chairperson of the Natal South Coast Group and member of the Durban Group, passed away on 14 March 2009.

Olive joined the Durban Group of the CSSA in June 1985. When the head quarters of the CSSA moved from Cape Town to Durban in July 1985 Olive was elected as Honorary Treasurer of the CSSA an office that she held until the move of the CSSA head quarters to Pretoria in 1994. Olive will be sorely missed by the South Coast and Durban Groups for her organising ability and being the heart and soul of many a shelling trip to different coastal venues in Southern Africa.

TERRY MURRAY (? – 2008)

Terry joined the CSSA on 23 September 1979 and was chairman of the Durban Branch in the early 1980's.

Terry passed away in Cape Town in November 2008.

The Beginning

On 6th May 1958, Mrs. Leila Kerr, prompted by Mrs Helen Boswell, took the initiative and organised a public meeting at Shell House, Green Market Square, Cape Town. At this inaugural meeting, attended by 24 people, a constitution was accepted, office-bearers elected and the objective of the Society established as "The study of shells in general and of South African in particular"

The first office bearers were:

President	: Prof. J.H. Day
Vice President	: Mrs. L. Kerr
Secretary	: Mr. C. Swaneveld
Treasurer	: Mr. J.N. Ackermann

Committee members
Mrs C.M. Ackermann, Miss M.G. Kempthorne
Mr D.W.J. Ackermann

The carefully typewritten circulars were produced monthly, using wax stencils as the method of duplication, and sent to all members. The circulars were informative and regular with much conchological info by D. H. Kennelly.

In 1961 with 150 members the Council decided to co-opt three country members, Mrs.H.Boswell from Transvaal, Mr. P. Elston from Natal and Mr. D.H.Kennely from the Border.

Publications

We as a society are indebted to the authors of the books and publications written on our South African shells.

Dr. K.H. Barnard, a founding member, was always ready with support and advice. His book *A Beginner's Guide to South African Shells* (1955) was the invaluable text-book studied by early members.

Prof. J.H. Day's publication *A Check List from False Bay* (1961) was followed in 1962 by his *Families and Genera of Marine Mollusc known from South Africa*. This latter publication was of great help to the Society enabling members to arrange their shells in the correct order.

Marine Shells of Southern Africa by D.H. Kennely was published in 1964 with a second edition in 1969.

G.French and D. Freeman in 1969 brought out *What Sea Shell Is That?*

Sea- Shells of Southern Africa – Gastropods by Brian Kensley (1973) is still used and to be found on many bookshelves.

50 YEARS

A WALK THROUGH TIME

Deidre Richards's *South African Shells a Collector's Guide*, (1981) proved to be very popular and many a casual collector using this book became a serious conchologist. This book was translated into Afrikaans in 1987.

The Living Shores of Southern Africa (1981) Margo & George Branch, Photography: Anthony Bannister.

Sea Shells of Southern Africa (1982) Richard Kilburn & Elizabeth Rippey. This publication by a malacologist has given collectors worldwide an excellent account of South African marine fauna with its sound taxonomy and ecological and biological notes.

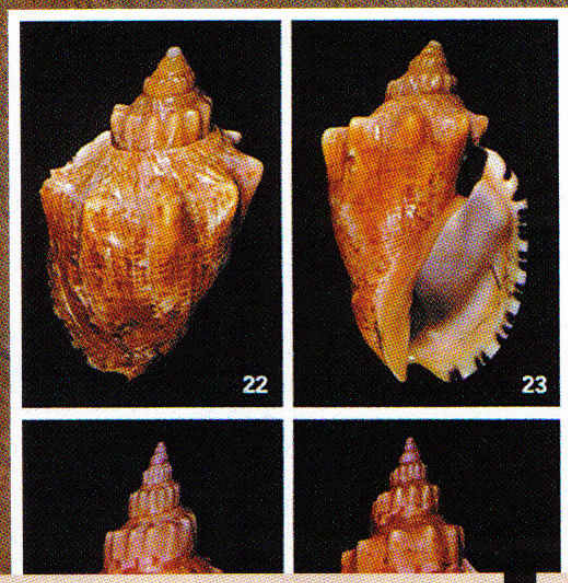
Cowries and Their Relatives of Southern Africa (1989) William Rune Liltved. The advent of scuba diving as a research tool provided a wealth of information on the systematic, biology and biogeography of the taxa of Cypraeidae, Ovulidae and Trividae of Southern Africa.

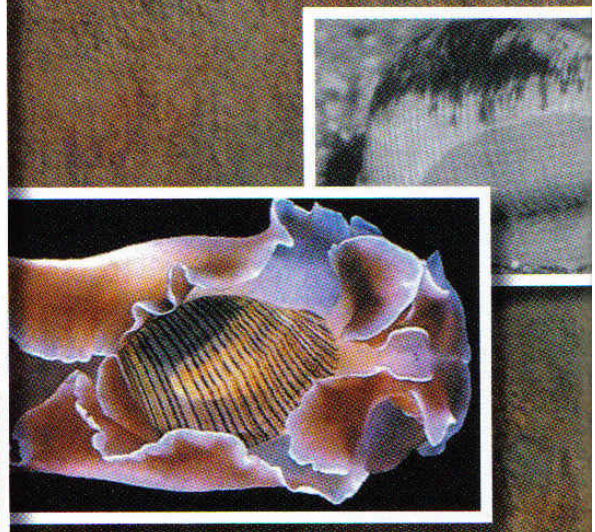
Two Oceans a Guide to the Marine life of Southern Africa (1994) by G.M.Branch – C.L. Griffiths – M.L. Branch and L.E.Beckley

Freshwater Molluscs of Southern Africa (1996) C.C.Appleton

by Roy Aiken, Rina & Jurie Mathee

The 50th anniversary of any organization or persons is indeed a very special occasion. As we acknowledge the passing of this time, it is fitting to paint a brief historical picture, and highlight some milestones and personalities that have shaped the society over the years.





Marine Shells of South Africa (1998) Douw G.Steyn & Markus Lussi

The Sea Shells of Jeffreys Bay (1999) and *A Photographic Guide to Sea Shells of Southern Africa* (2002) by Douw G. Steyn & Elise J. Steyn.

Field guide to the land snails and slugs of eastern South Africa (2004) by Dai Herbert and Dick Kilburn

Offshore Shells of Southern Africa (2005) Douw G. Steyn & Markus Lussi

Groups

The Cape Town Group flourished until 1993 when they disbanded (Strandloper 235 p 8). The Border Transkei Group was founded on 7th July 1963 (D.H. Kennely). The Transvaal Group followed in 1968 chaired by Allan Jenner and meeting appropriately at Shell House in central Johannesburg.

Pretoria Group started on the 17th April 1974 (Laurie Smith) (Strandloper 238) while the Natal and Midlands Group were started on 6 June 1970 with Dr. Kilburn as Chairman.

Southern Natal Group started in July 1978. (Grenville Hyatt & Geoff Wallace) with the old Natal Group reforming and becomming the Durban and Natal Group with Mr J. Scheepers as Chairman.

The Eastern Cape Group (Port Elizabeth) was formed on 7 November 1970 (Mrs. C.M.Waters) (This Group is no longer active). The Bloemfontein Group was founded in May 1989. (Strandloper 228)

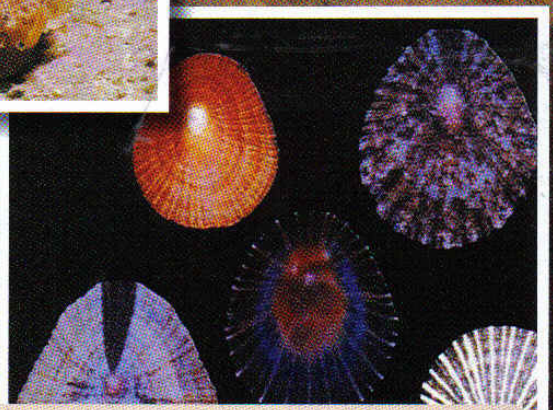
The Strandloper

Seemingly in celebration of reaching the 100th circular, came the first hand drawn illustrations of the Pelecypod hinge, beautifully produced by S. C. Fenwick. The first advertisements were introduced at the same time.

Circular 117 sees the first print of a photograph, that of *Phenacovolva labroguttata* (now *aurantium*)

Circular 121 of August 1970, with Mr. Carlson as editor, heralds the change to metric paper but of significance is the introduction of a motif/logo, *Afrivoluta pringlei*, hand drawn by Zuna Wright. This is followed by a full glossy photographic page, illustrating a lovely dark *ex pisce Cypraea barclayi*.

In July 1972 the circular became "The Strandloper" Bulletin of the Conchological Society of Southern Africa.



1975 sees a complete new-look Strandloper printed on glossy paper with some black and white photographs. The 21st anniversary edition in 1979 is remembered for the lovely full page colour plates of South African Conidae (Millard & Freeman)

Head office move to Natal

The Head Office of the Society was from it's inception to the 29th June 1985 based in Cape Town. When various problems almost led to the Society's demise in the mid 80's, the dedication of Noggs Newman from Durban saved the day. He organized a steering committee to discuss the future of the Society and it was decided that the Head Office be moved to Durban with Dick Kilburn as President, Olive Peel as Secretary and the late Olive Meyer as Treasurer.

On the 27th July 1985 a special general meeting in the Lecture Theatre of the Natal Museum Pietermaritzburg took place with the above office-bearers, and the following members also elected to the committee. Noggs Newman as Vice President, Geoff Wallace as Director.

Head office move to Pretoria

The Head Office was moved to Pretoria in 1994. Dr. Dick Kilburn remained President, Lizeke van den Berg Vice-President, Mike Cortie Director and editor, Bill Kruger as Treasurer and Laurie Smith as Secretary.

General

During the years the Groups reported on their activities at the AGM and took an active part in the Strandloper. We are thankful to all the members for news on groups, as well as articles. Thank you all for your dedication and perseverance,

Members rely on the editors for the publication of the Strandloper and the following editors did sterling voluntary work over the years

Editors of Circulars and the Strandloper

Mr. C Swaneveld	Circular	1 - 14
Leila Kerr	Circular	15 - 104
Elizabeth Giles	Circular	105
Richard Carlsson	Circular	106 -191
David Freeman	Circular	192 - 210
Victor Millard	Strandloper	211 - 228
Olive Peel	Strandloper	229 - 236
Mike Cortie	Strandloper	237 - 267
Kobie du Preez	Strandloper	268 - 281
Alwyn Marais	Strandloper	282 -

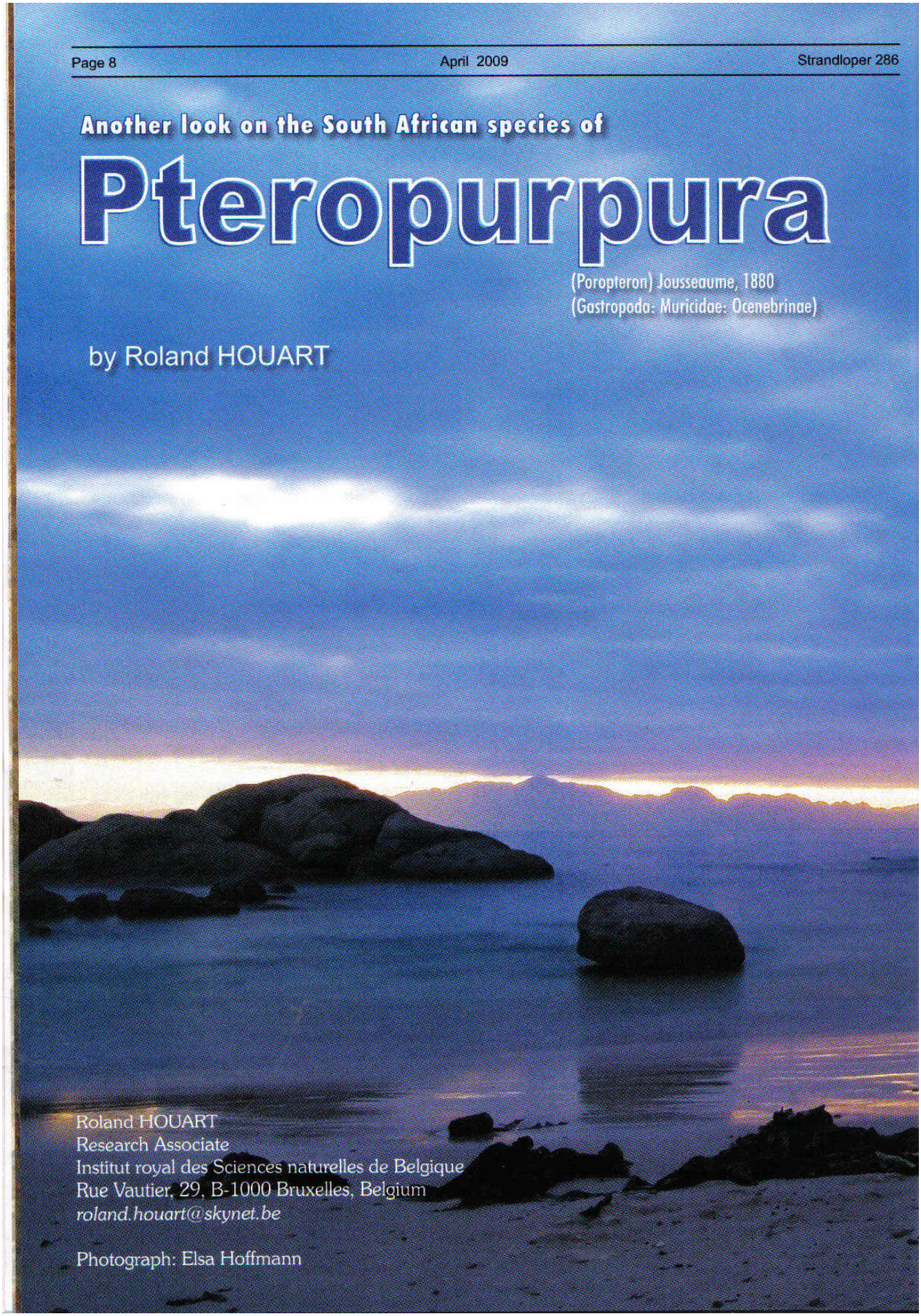
Being blessed with 50 glorious years we are grateful to each and every member, without your interest and membership this could not have been.

Another look on the South African species of

Pteropurpura

(Poropteron) Jousseaume, 1880
(Gastropoda: Muricidae: Ocenebrinae)

by Roland HOUART



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Photograph: Elsa Hoffmann

Abstract

The subgenus *Poropteron* is updated. Six Recent species are recognized:

Pteropurpura (Poropteron) uncinaria (Lamarck, 1822),
P. (P.) quinquelobata (Sowerby, 1879),
P. (P.) graagae (Coen, 1947),
P. (P.) debruini Lorenz, 1989,
P. (P.) transkeiana Houart, 1991 and
P. (P.) multicornis Houart, 1991.

All the species are briefly redescribed, compared and illustrated.

Abbreviations.

BMNH: The Natural history Museum, London, U.K.
HUJ: The Hebrew University, Jerusalem, Israel.
MHNG: Muséum d'Histoire naturelle, Genève, Switzerland.
NM: Natal Museum, Pietermaritzburg, South Africa.
RH: Coll. Roland Houart.

Introduction

The subgenus *Poropteron* was reviewed by Houart (1991), however the study of additional specimens and the recent introduction of the reviewed description method of spiral cord ontogeny in Muricidae (Merle, 1999 & 2001, a.o.), led me to re-examine, seventeen years later, the available and the additional material.

After a careful study of the shell morphology, I came to the conclusion that not only five, as stated in 1991, but six species are involved. Shells within some species are exceedingly variable. A group of three taxa comprising *P. quinquelobata* (considered a synonym of *P. uncinaria* in my previous review) (Houart, 1991: 60), *P. uncinaria* and *P. joostei* is largely restructured.

Pteropurpura (Poropteron) quinquelobata of which *P. joostei* is here considered a synonym is reinstated. *P. uncinaria* is limited to a less variable and apparently rare species from the west coast of South Africa and Namibia.

Pteropurpura (Poropteron) debruini, P. (P.) graagae, P. (P.) transkeiana and *P. (P.) multicornis* are considered to be valid species.

Murex sanctahelenae Smith, 1831 included in *Poropteron* by Lorenz (1989: 49) is here considered as a *Pteropurpura s.s.* species (Fig. 1).

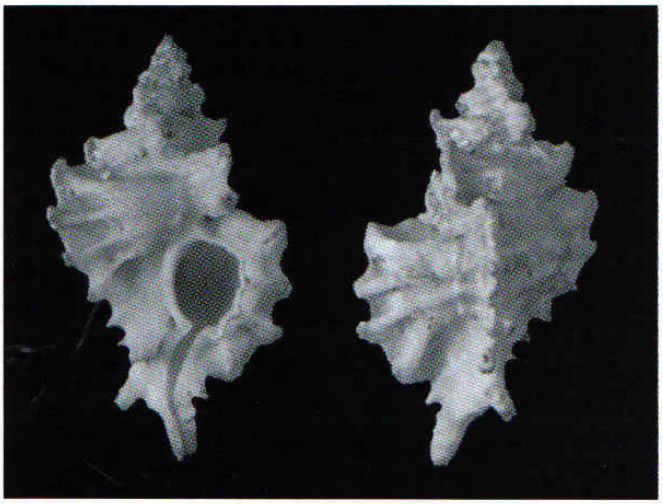
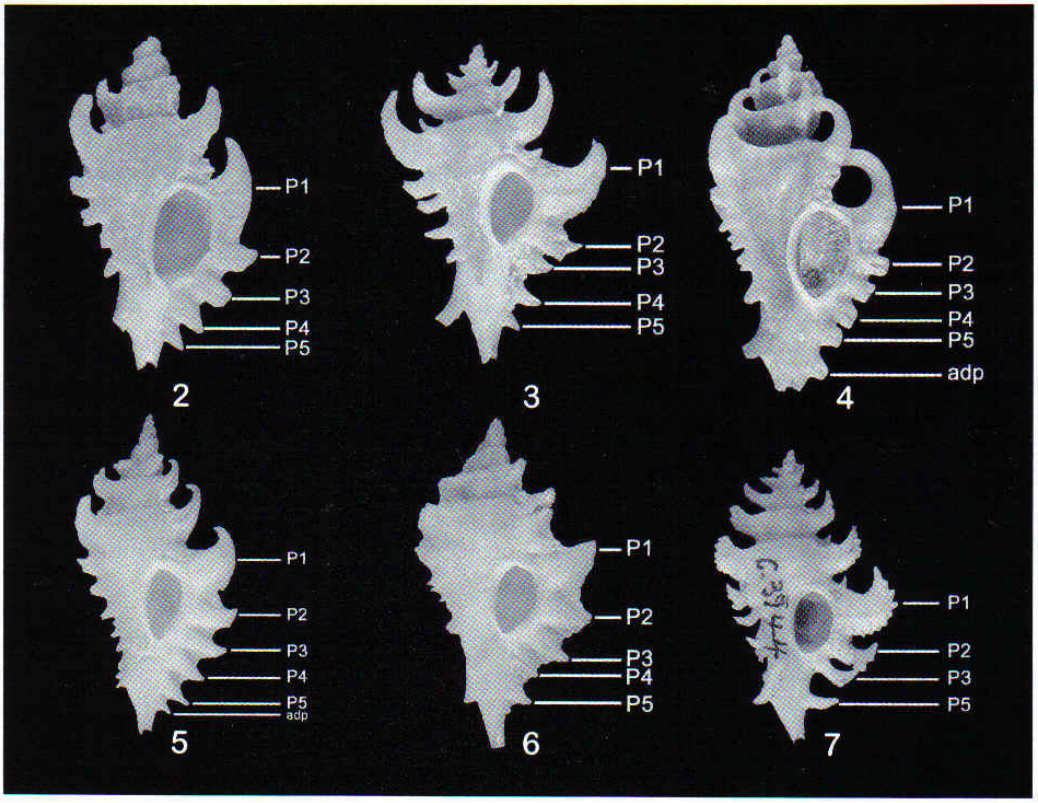


Fig. 1.
Pteropurpura (Pteropurpura) sanctahelenae (Smith, 1831)
Holotype BMNH 1889.10.1.2387, 29.2 mm.

Table 1. Terminology used to describe the spiral cords and apertural denticles according to Merle (1999 & 2001) (see Figures 2 – 7)

Code	Description
P1	Shoulder cord
P2 - P5	Primary cords of the teleoconch whorl
ADP	Adapertural primary cord on the siphonal canal
D2 - D4	Abapical denticles of the aperture



Figures 2-7
Spiral sculpture morphology.

2. *Pteropurpura (Poropteron) uncinaria* (Lamarck); **3.** *P. (P.) quinquelobata* (Sowerby); **4.** *P. (P.) graagae* (Coen); **5.** *P. (P.) debruini* Lorenz; **6.** *P. (P.) transkeiana* Houart; **7.** *P. (P.) multicornis* Houart.

SYSTEMATICS

Family Muricidae Rafinesque, 1815
Subfamily Ocenebrinae Cossmann, 1903
Genus *Pteropurpura* Jousseaume, 1880
Subgenus *Poropteron* Jousseaume, 1880
Type species by subsequent designation (emendation) (Jousseaume, 1881):
Murex uncinarius Lamarck, 1822.

Remarks

Poropteron is traditionally considered a subgenus of *Pteropurpura*. *Poropteron* also bears three varices on the last teleoconch whorl and has a similar ventrally sealed siphonal canal. However, it differs constantly from *Pteropurpura* in having a small, more fusiform shell, rarely exceeding 30 mm in length, in having obsolete or very shallow spiral cords, less webbed varical spines and a conspicuous, broad shoulder spine. The spiral cords P5 or P4 and P5 are situated on the siphonal canal.

The radula (Fig. 8) is typical ocenebrine with a three-dimensional rachidian characteristic. The rachidian bears a short, strongly projecting central cusp with, on each side, a long, broad, triangular lateral cusp with an inner lateral denticle, 3 or 4 lateral short marginal denticles and a fairly long and broad marginal cusp.

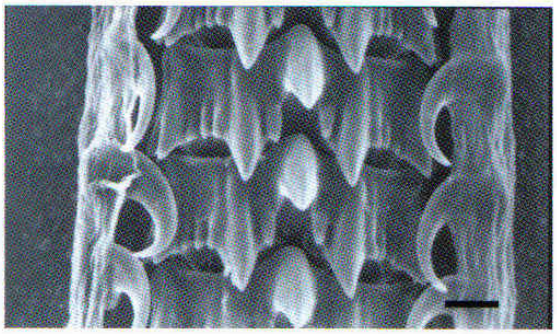


Fig. 8.
Radula of P. graagae (scale bar: 10 μm).

The operculum (Fig. 9) is also typical ocenebrine with a subapical nucleus in lower right.
All the Recent species of *Poropteron* have a rounded protoconch of 1.25-1.5 whorls (Fig. 10).

Fig. 9
Operculum of. *P. graagae*
(scale bar: 1 mm)

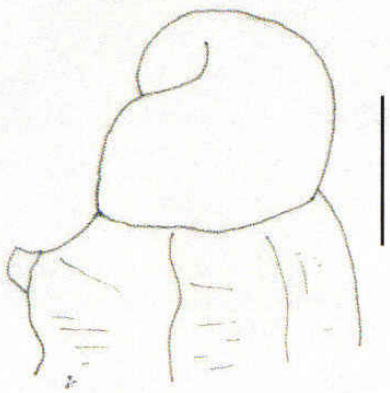


Fig. 10
Protoconch of *P. graagae*
(scale bar: 0.5 mm)

Pteropurpura (Poropteron) uncinaria
(Lamarck, 1822)

Figs 2, 11, 19, 26-31

Murex uncinarius Lamarck, 1822: 166.
Murex capensis Sowerby, 1841a: pl. 190, fig. 76; 1841b: 143.

Description.
The shell is broadly fusiform and almost smooth. Length/width ratio: 1.9-2.4. The siphonal canal is relatively short and broad, 19-26 % of total shell length. The aperture is large and smooth within

Spiral sculpture: P1 spine is broad and upward curved; P2 and P3 spines are short, broad and blunt; P4 and P5 spines are short, broad, triangular and acute with occasional presence of a small and acute ADP. The P5 or occasionally P4 and P5 spines are situated on the siphonal canal.
The shell is white or light brown.
Shell length: up to 27 mm (coll. R. Houart).

Distribution.
From Cape Agulhas to Elizabeth Bay, Namibia.

Remarks.
Pteropurpura (Poropteron) uncinaria differs from the other species in having P1 more widely spaced from P2, in having a broader last teleoconch whorl, a larger and broader aperture, and a broader, shorter siphonal canal.

Fig. 11
Murex capensis
(from Sowerby, 1841: pl. 190, fig. 76).

Pteropurpura (Poropteron) quinquelobata
(Sowerby, 1879)

Figs 3, 12, 17-18, 24-25, 32-40

Murex quinquelobatus Sowerby, 1879: 22, fig. 218.
Pteropurpura (Poropteron) joostei Lorenz, 1990: 13, text figs 10-11.

Description.
The shell is shouldered, strongly triangular, weakly scabrous and occasionally with a single, smooth intervarical node which is closer to the adapertural varix. Length/width ratio: 1.5-1.9. The siphonal canal is relatively long and narrow, 30-40 % of the total shell length. The aperture is broad and smooth within.
Spiral sculpture: P1 spine is broad, weakly or strongly upward bent; P2-P5 spines are decreasing in strength abapically; P2 spine is blunt and occasionally bifurcate; P3-P5 spines are acute and triangular; P3 spine is rarely blunt; P4 and P5 spines are situated on the siphonal canal.
The shell is white to dark brown, occasionally with lighter coloured varices.
Shell length: up to 34 mm (NM 6559).

Distribution.
From Mpekweni (beached specimen) (approximately 33°26' S to 27°13' E) to Cape Town (approximately 33°55' S, 18°26' E).

Remarks.
The type material was not located in the Natural History Museum, London; however the original illustration (here reproduced Fig. 12) and the description given by Sowerby (1846) leave no doubt as to its identity.
The name *P. joostei* may be attributed to a form with short, acute and more or less webbed spines (Figs 17-18, 39-40), however both names are considered as conspecific.

Fig. 12
Murex quinquelobatus
(from Sowerby, 1879: fig. 218).

Pteropurpura (Poropteron) graagae (Coen, 1947)

Figs 4, 13-14, 41-44

Murex mitriformis Sowerby, 1841a: pl. 190, fig. 75 (not Wood, 1828).
Murex mitraeformis Sowerby, 1879: 26, fig. 32 (emend.) (not Brocchi, 1814).
Poropteron graagae Coen, 1947: 91.
Pteropurpura incurvispina Kilburn, 1970: 44, fig. 6 (nom. subst.).

Description.
The shell is fusiform, weakly scabrous, rarely with a single node between the varices. The node is closer to the adapertural varix. Length/width ratio: 1.8-2.1. The siphonal canal is narrow, relatively long, 23-30 % of the total shell length. The aperture is broad or medium sized and smooth within.

Spiral sculpture: P1 spine is broad, strongly upward bent and fused with previous whorl; P2-P5 spines are approximately of the same thickness, short and blunt; ADP spine is smaller and acute; P5 spine is situated on the siphonal canal.
The shell is white, tan or dark brown.
Shell length: up to 27.1 mm (coll. RH).

Distribution.
From north of Durban to Port Alfred.

Pteropurpura (Poropteron) debruini Lorenz, 1989

Figs 5, 15-16, 45-50

Pteropurpura (Poropteron) debruini Lorenz, 1989: 50, text figs.

Description.
The shell is fusiform, relatively narrow, shouldered and smooth. Length/width ratio: 1.8-2.1. The siphonal canal is narrow, relatively long, acute and 27-33 % of the total shell length. The aperture is relatively small, narrow and with obsolete or relatively obvious D2-D4.

Spiral sculpture: P1 spine thick, occasionally curved upward; P2-P5 spines of approximately same length and thickness; P5 spine shorter and situated on the siphonal canal.
The shell is white, light tan or light brown.
Shell length: up to 33.2 mm (coll. RH).

Distribution.
From Hout Bay, west coast of Cape Peninsula to Swakopmund, Namibia (approximately 23° S, 14° E).

Remarks:
Pteropurpura (Poropteron) debruini differs from *P. uncinaria* in having a smaller, narrower aperture with obvious denticles within, in having a comparatively narrower shell, narrower, longer siphonal canal, and in having a less upward curved shoulder spine.

Pteropurpura (Poropteron) transkeiana Houart, 1991

Figs 6, 20-21, 51-54

Pteropurpura (Poropteron) transkeiana Houart, 1991: 68, figs 21-23, 42, 56.

Description.
The shell is broadly fusiform with one or rarely two intervarical nodes. Length/width ratio: 1.7-1.9. The siphonal canal is relatively long, acute and 30-34% of the total shell length. The aperture is relatively small, ovate and smooth within.
Spiral sculpture: P1 spine is broad, P2 spine is weakly narrower, P3 spine is smaller, P4 spine is the smallest spine, P5 spine of the same thickness as P3 spine. ADP is sometimes present. The P5 or P4 and P5 spines are situated on the siphonal canal.
The shell is white.
Shell length: up to 32.9 mm (coll. RH).

Distribution.
From Mzamba (30°51' S, 30°22' E) to north of Port Alfred (32°46' S, 28°35' E).

Pteropurpura (Poropteron) multicornis Houart, 1991

Figs 7, 22-23, 55-56

Pteropurpura (Poropteron) multicornis Houart, 1991: 18-20, 57

Description.
The shell is broadly fusiform with a low, almost obsolete, intervarical node. Length/width ratio: 1.3-1.6. The siphonal canal is relatively long, acute and 30-34 % of the total shell length. The aperture is relatively small, ovate and smooth within.

Spiral sculpture: P1 spine is very broad and strongly bent upward at its tip; P2 and P3 spines decrease in thickness abapically; P4 spine is very reduced or obsolete, creating a broad gap between P3 and P5 spines; P5 spine is narrower, weakly acute and weakly or strongly bent upward; P5 spine is situated on the siphonal canal.
Shell white to tan.
Shell length: up to 19.5 mm in length (holotype NM).

Distribution.
From Durban (29°50' S, 31°12' E) to East London (33°06' S, 28°04' E).

Acknowledgements
I am grateful to Werner Massier from Swakopmund, Namibia for the loan and the gift of specimens. I am also very grateful to Dick Kilburn and to the staff of the Natal Museum for the loan of specimens some years ago, giving me the opportunity to examine and to study their specimens. Thanks also to Yves Finet who provided me with a photograph of the holotype of *Murex uncinarius* taken by J. Dajoz, to H. K. Mienis for the loan of the holotype of *Poropteron graagae*, to Anders Warén from the Natural History Museum, Stockholm, for radula preparation and SEM work of the radula and of the operculum and to the staff of the malacology department of the Natural History Museum, London for their kind collaboration and hospitality when I visited their Museum. Thanks a lot to Markus Lussi for reading and correcting the manuscript.

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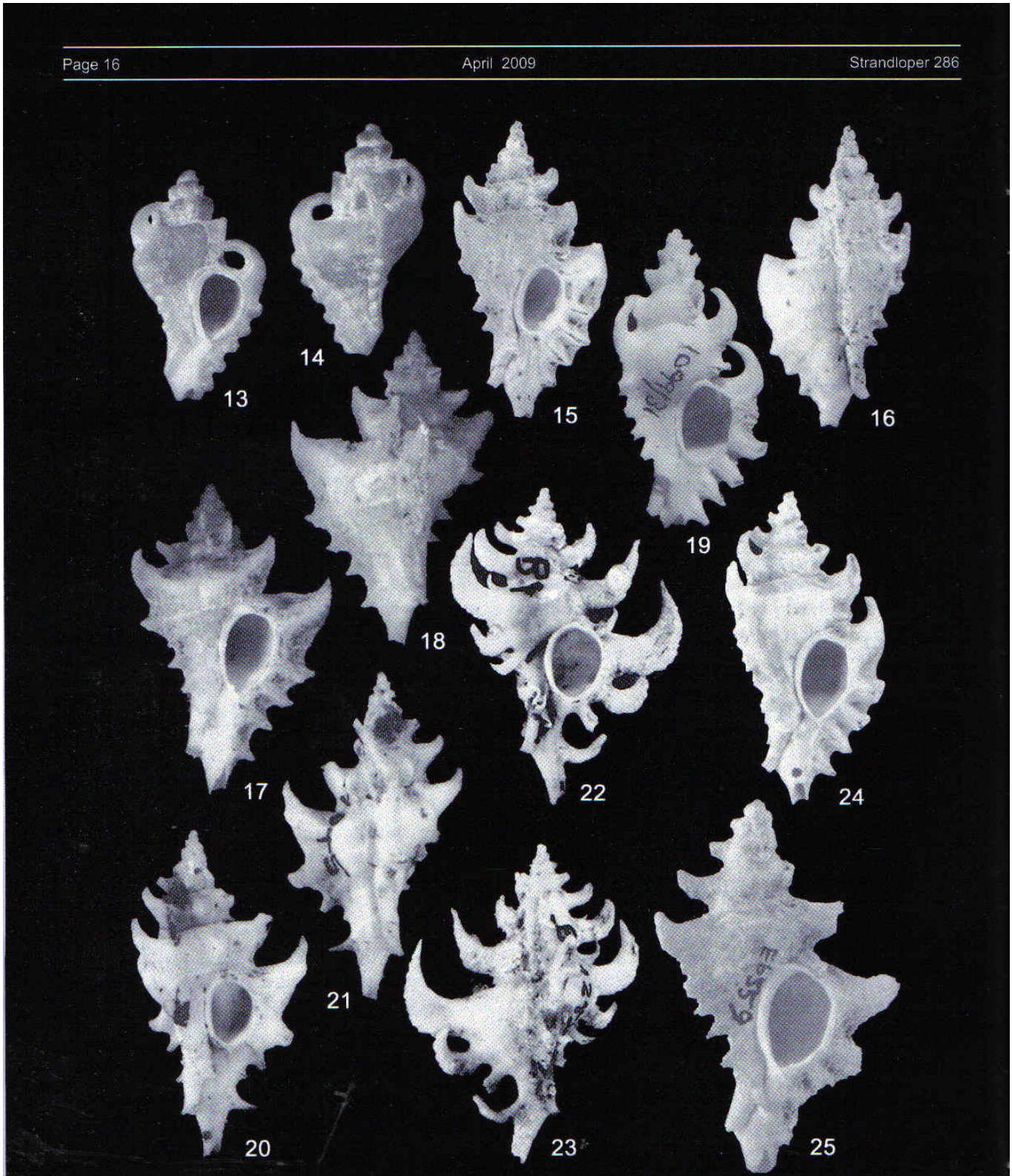

Figures 13-25.

13-14. *Pteropurpura (Poropteron) graagae* (Coen). Holotype HUJ 20491, 14.9 mm; **15-16.** *P. (P.) debruini* Lorenz. Paratype NM S3295/T699, 20.5 mm: **17-18.** *P. (P.) joostei* Lorenz. Holotype, 19.8 mm: **19.** *P. (P.) uncinaria* (Lamarck). Holotype MHNG 1099/31, 24.5 mm, photo J. Dajoz.; **20-21.** *P. (P.) transkeiana* Houart. Holotype NM S3775/T438, 22.7 mm; **22-23.** *P. (P.) multicornis* Houart. Holotype NM B8249/T447, 19.5 mm; **24.** *P. (P.) quinquelobata* (Sowerby). Cape Peninsula, NM B5518, 24 mm: **25.** *P. (P.) quinquelobata* (Sowerby). Agulhas Bank, NM 6559, 34 mm

Figures 26-40.

26-31. *Pteropurpura (Poropteron) uncinaria* (Lamarck)
26-27. South of Lüderitz, Elizabeth Bay, Namibia, RH, 26.3 mm; **28-29.** Hout Bay, South Africa, RH, 25.1 mm; **30.** South of Lüderitz, Elizabeth Bay, Namibia, RH, 23.3 mm; **31.** South of Lüderitz, Elizabeth Bay, Namibia, RH, 21.1 mm.
32-40. *Pteropurpura (Poropteron) quinquelobata* (Sowerby)
32-33. Cape St Blaize, South Africa, RH, 21.1 mm; **34-35.** Hout Bay, Cape Peninsula, South Africa, RH, 21.7 mm; **36-37.** Algoa Bay, South Africa, RH, 22 mm; **38.** Algoa Bay, South Africa, RH, 29.6 mm; **39-40.** Algoa Bay, South Africa, RH, 20.5 mm.

Figures 41-56.

41-44. *Pteropurpura (Poropteron) graagae* (Coen)
41. Xora, Transkei, South Africa, RH, 21.9 mm; **42.** Xora, Transkei, South Africa, RH, 21.9 mm; **43-44**. Haga Haga, South Africa, RH, 18.4 mm.

45-50. *Pteropurpura (Poropteron) debruini* Lorenz
45-46. Sandy Bay, South Africa, RH, 27.1 mm; **47.** Apertural denticles; **48**. Hout Bay, Cape Peninsula, South Africa, RH, 23.3 mm; **49-50.** Hout Bay, Cape Peninsula, South Africa, RH, 28.1 mm.

51-54. *Pteropurpura (Poropteron) transkeiana* Houart
51-52. Port Alfred, South Africa, RH, 27.8 mm; **53.** Port Alfred, South Africa, RH, 18 mm; **54.** off Nthlonyana River, 32°17.2' S, 29°04.9' E, South Africa, paratype RH, 18.1 mm.

55-56. *Pteropurpura (Poropteron) multicornis* Houart. Off Qolora River, 32°46.1' S, 28°35.0' E, South Africa, paratype RH, 19.7 mm.

AGM

The Annual General Meeting of the Conchological Society of Southern Africa will take place on Saturday 27 June 2009 at Uitsig Primary School Lapa in The Reeds, Centurion starting at 11 am.
This is also a voting year and nominations for office bearers should reach the secretary no later than Friday, 6 June 2009.
List of office bearers is given below.

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President
Vice-president
Secretary
Treasurer
Editor - Strandloper
Additional members (max. 3)

Should you feel that you would like to nominate a member of the Society for a position on the committee, please make sure that the nominee accepts the nomination before it is submitted. Please also make sure that the member nominated is a member of the Society and in good standing.

As usual the AGM will follow the Pretoria group meeting. The exhibition theme will be "My box display". The rules are simple. You can display any shell/s and flotsum as long as it is displayed and contained withing a beer tray.

All members and their families are invited to attend. A finger lunch will be served.

Agenda

1. Welcome
2. Honouring members that have passed away
3. Approval of minutes
4. Matters arising from above-mentioned minutes
5. 25 year Membership Certificates (After 1999)
6. Management Reports
   a. President's Report
   b. Financial Report
   c. Feedback from the Groups
7. Prize for best article in Strandloper.
8. Election of Committee Members
9. Exhibit – Judging will take place and the winner announced during teatime.
10. General

The genus DENTIMARGO

Including a recently described specie from northern kwaZulu-Natal.

by R. Aiken

During 2007, a comprehensive dissertation on the genus Dentimargo in South Africa was compiled, which included the description of a new species, *Dentimargo spengleri*. This attractive group of relatively uncommon, small Marginellas is covered in detail, including fine illustrations, which will be of much assistance to those who can find them in dived or dredged grit. The paper is hereby reproduced in shortened form with kind permission of the author, Markus Lussi, who has done much work on our diminutive Marginellidae species. He is also thanked for providing the photographs.

Of the eighty living species of *Dentimargo* occurring worldwide in warm to temperate waters, seven are found off South Africa. They are small (2,4-12mm), plain coloured or banded, with four strong columellar plications. There is no siphonal notch, labial lirae, periostracum or operculum in any discussed species. Their animals have long siphons and the mantle extends over the external shell surface.

Dentimargo neglectus (Sowerby,1846).
Saldanha Bay to Eastern Cape. Variable in shape, colour and size. Eastern Cape specimens more elongate & with more distinct bands than those from further south. The species is endemic, occurring infra- to intertidally. Animal reported to be white. Synonyms include: *M.reevi, M.rufula, M.ignota, M.clara* and *Dentimargo debruini*.
5 to 9mm.

Dentimargo dianae Lussi & G.Smith,1996.
Off the Bluff, Durban, 120metres. Never banded, fresh specimens sometimes pinkish, otherwise opaque and white.
Shell 6,5 to 7,4mm.

Dentimargo dentatus Lussi & G.Smith 1996.
Infratidally off kwaZulu Natal, 40 metres. Beautiful red-brown spiral bands on a fawn background. Unique within the genus, distinguished by the characteristic posterior tooth on the labium.
3,7 to 4,2mm.

Dentimargo procritus (Kilburn,1977).
NE Cape. Transluscent brownish-pink with paler median band, & a blunt, conical spire. Known from only four specimens so far.
4,9 to 5,4mm.

Dentimargo costulatus (Thiele,1925).
Off kwaZulu Natal 40 to 60 metres. Glossy white, with unmistakable surface sculpture of axial riblets.
2,8 to 3,2mm. A synonym is *D.costata*.

?Dentimargo augustus (Thiele,1925).
Agulhas slope, deep water. This rare species is placed provisionally in this genus, although not typical.
16mm.

***Dentimargo spengleri* Lussi, 2007.**
Northern coast of kwaZulu-Natal, at 60 to 110 metres. Narrow for the genus. Shell smooth and glossy, consistent morphologically. Fresh ground colour reddish-brown with two darker spiral bands on dorsum (not visible in photo). The four columellar plications are darker.
4 to 5mm.

Dentimargo neglectus
(Sowerby,1846)

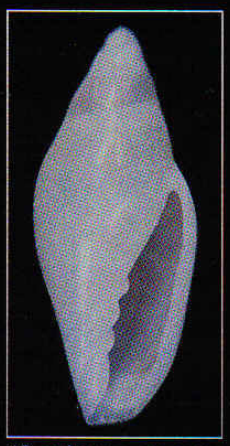
Marginella clara
Thiele, 1925
(syn. *D. neglectus*)

Dentimargo dianae
Lussi & G.Smith, 1996

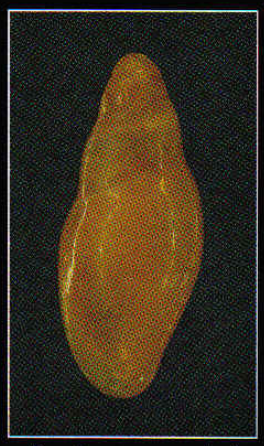
Dentimargo dentatus
Lussi & G.Smith, 1996

Dentimargo procritus
(Kilburn,1977)

Dentimargo costulatus
(Thiele,1925)



?Dentimargo augustus
(Thiele,1925)



Dentimargo spengleri
Lussi, 2007

Dentimargo spengleri
Lussi, 2007

Gastropodial MUSINGS

an informal column for questions, thoughts and answers

by Roy Aiken

The Marginellidae of Southern Africa are numerous, complex, and diverse. Live material is on the whole difficult to come by, resulting in identification based principally on morphological differences, with colour and pattern playing lesser roles. Recent work at depths of approximately 90 metres off Southern Natal has brought to light another conundrum in this family (*fig 1*), which appears to be an intermediate, or bridge, between classic *M. ornata* (*fig 2*) (more from Eastern Cape), and *M. pseudornata* (*fig 3*) (more from Natal).

These new shells are very variable morphologically, but are a consistent deep rose colour in all the dead material seen so far. In terms of shape and colour, they lean towards *M. ornata*, but exhibit a very similar overall pattern to *M. pseudornata*. *M. pseudornata* has been recognized up to now for its characteristic broad shoulder and very depressed spire. It has a mauve to pink-grey colouration. The wine-red, fresh ex pisce specimen illustrated by Danny Spengler in issue 285 would suit this new group, which is distinctively different from *M. ornata* or *M. pseudornata*.

Figure 1
Intermediate group

Figure 2
M. ornata group

Figure 3
M. pseudornata group

Ex- Countdown

The final set of five shells. Although there are two unknown species represented in this final group, they are each so spectacular and interesting that they could not be ignored.

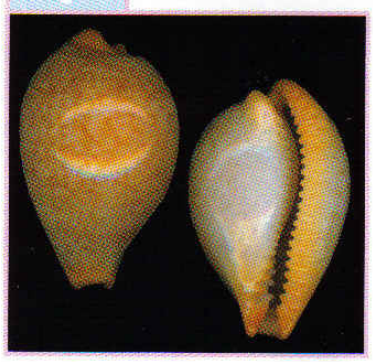
The top spot is taken by *Cypraea lisetae*, a very very elusive shell in South African waters.

Displayed is the final set of five shells.

Danny Spengler

Pseudocypraea exquisita
Petuch, 1979
11 mm.

Stomatolina sp.
15 mm



Cypraea barclayi
Reeve, 1857
25 mm

Trochid sp.
10 mm

Cypraea lisetea
Kilburn, 1975
14 mm

A new species of Triviella and Zemiropsis *from South Africa*

***Triviella williami* Fehse, 2006**

The shell closely resembles *Triviella rubra* (Shaw, 1909), but differs in its finer, less numerous anterior basal folds and stronger, more numerous posterior basal folds. Its aperture is narrower than that of *T. rubra* and the colour pattern of the animal is opaque white with yellowish white specks. In contrast, the animal of *T. rubra* is creamy white with dark brown ocelli and spots. The new species ranges from East London to the Atlantic coast of the Cape Peninsula, in 20-120 m.

***Zemiropsis joostei* Dekkers, 2008**

The shell superficially resembles *Z. papillaris* and *Z. pintado*. It has the randomly scattered small dots of *Z. papillaris* but far fewer of the dark irregular blotches near the suture of *Z. pintado*. It also differs in its distinctly smaller size, yellow ground colour and the presence of microscopic spiral sculpture. It is dredged off East London, in 100 m. Shell size approx. 25mm. To date only dead specimens have been found.

THREE '*New*' TEREBRA'S *from Southern Africa*

BY R. AIKEN

***Terebra pseudofortunei* Aubrey, 2008**

For many years our local conchologists have received occasional specimens of a fair sized, attractive Terebra from the deeper waters off Natal. Of these, the major percentage have been taken from, and with, the carrier *Xenophora pallidula*. In December 2007 the writer and Alwyn Marais had begun investigations into the viability of the shell as a species, although it had been recorded by collectors as *Terebra fortunei* Deshayes,1857. Lussi & Steyn in Offshore Shells of Southern Africa illustrate it as no.727. Comparisons with specimens from the Philipines indicated that they were different species.

We record with interest, therefore, the description of this Terebra as a full new species by Umberto Aubry in Malacologica of April 2008. Unfortunately, his short paper is in Italian. For the benefit of our members the following relevant information was extracted:

Examples studied are four shells dredged on sand and coral at 150 - 200 metres off Beira, measuring between 56 and 59 mm. Until now, they are only known from the locality where they were found. The solid, relatively heavy shell has a deep suture and an average of 15 ribs, forming small depressions on top of the suture. There are spiral depressions

between the ribs. The shells have a brown band below the suture. The colour at the base is dirty white-grey, with a double band or stripe of maroon. The examples came from a South African dealer accompanied by a card which read "*T. fortunei*, Mocambique channel, Beira". Superficially, this species may look like *T. fortunei* ('at a glance'), however there are differences evident on close examination.

Reference is made to *T. mactanensis, T. russoi, T. suduirati, T. multistriata, T. poppei* and *T. fijiensis* to support the new species as separate. The name *T. pseudofortunei* therefore replaces what we have been calling *T. fortunei*. The localised range, as per Aubry is therefore also extended southwards from Beira to as far as off Durban. The fresh specimens illustrated are from the author's collection measuring 53, 54 and 48mm.
Photo credit: M.Aiken.

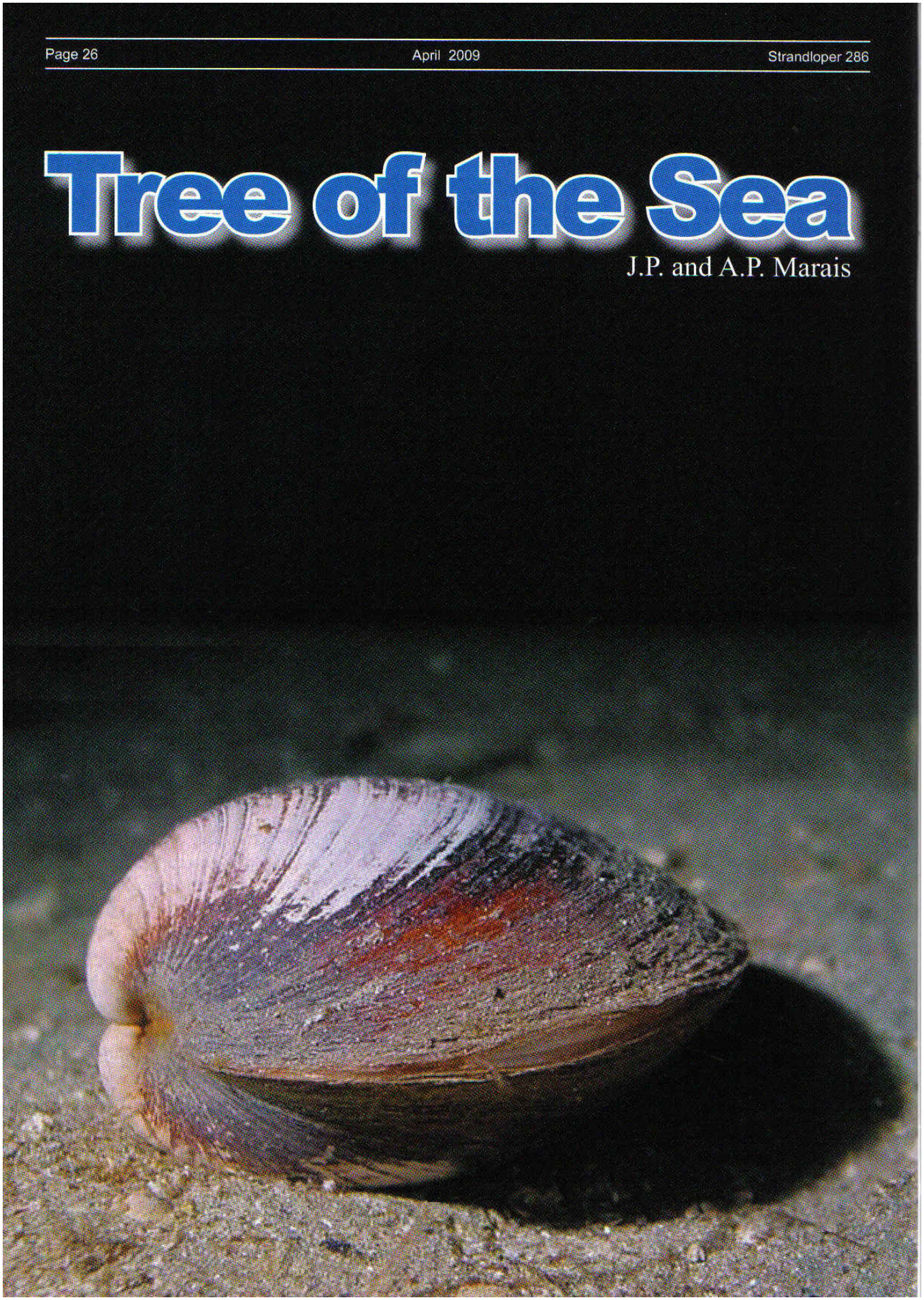
***Terebra sandrinae* Aubrey, 2008**
Material examined was collected at night in deep water on a sandy substrate off Inhaca island, Maputo.The material has so far only been found from this locality. Two shells studied are small for the group, being 10,75 and 8,9mm in length. Protoconch 1,5 turns; teleoconch whorls 8, with a straight profile. Colour grey, tending to cream. The colour on the suture is dark, and the sutural band well defined. Ribs 15, prolonged/elongated, and well defined. The columella is short and slightly recurved. The aperture is somewhat square in shape. *T. sandrinae* differs from *T. mcandrewi* E.A.Smith,1877 in the characteristic of colour, protoconch, columella and sculpture of the whorls.
Note: Although described as a new species, *T. sandrinae* bears a striking resemblance to *Duplicaria fictilis* (Hinds,1844), a species that Aubry does not actually mention.

***Terebra fujitai* Okutani & Habe,1975**
An attractive, large (98mm) Terebra was dredged off Park Rynie recently, and tentatively identified as *Terebra connelli* Bratcher & Cernohorski,1985. Yves Terryn identified the shell as "a most magnificent specimen" of *Terebra fujitai* Okutani &Habe,1975. He had never heard of this species from anywhere near Southern Africa. It is typically from the Phillipines region, and as such can be presented here as being a major extension of it's known range.

A smaller shell in my own collection, obtained from the same area (erroneously kept under *T. connelli* for some years), proved also to be a *T. fujitai*. They are compared with *T. connelli* in the accompanying photograph. (two specimens on the right)

Tree of the Sea

J.P. and A.P. Marais



Global climate change is a fact that may hold serious consequences for mankind. Even small changes in global temperature may have a disastrous effect on all aspects of our lives. Scientists estimate that a rise of only 2 °C will put as many as 30% of the world's species at risk of extinction. Due to a lack of knowledge, climatologists are still in the dark regarding future climate changes and exactly how it will affect us. One approach to solving the problem is to extrapolate knowledge of past climatic changes to the future. If we know and understand past weather patterns, we may be able to predict future events. But how do we gain insight into the happenings of the past, long before recorded history and the rise of modern man?

Several avenues of research are being followed. The study of ice core samples from polar regions is providing invaluable information on past weather events. Dendrochronology, the study of tree rings, gives further much needed information on past conditions on land. Investigating the physical and chemical properties of the annual growth rings, such as size and isotopic composition, yields a wealth of information about the climatic history the trees have witnessed. The oldest known living organism, the California bristlecone pine, for instance, has provided 5,000-year-long chronologies. However, when these are cross-dated with older dead bristlecone pines, the continuous record can be extended back in time almost 10,000 years.

Investigations of climate changes in the ocean are as important as those on land and led to the search for marine organisms showing similar periodic features in their skeletons. This field of study has been termed sclerochronology, since the light and dark bands shown in cross sections of scleractinian corals showed initial promise for investigation. However, the long-lived bivalve Arctica islandica proved to be a much better candidate for research.

The most striking characteristics of the shell are its almost circular shape, its heavy weight and black periostracum. It is about 100 mm in diameter and the left hand valve has a large hinge tooth. During growth the shell material is deposited as a series of annual bands during which the shell grows fast, separated by narrow lines during which growth is slow. The annual nature of these bands has been proved by isotope studies and has identified Arctica islandica as the longest-living bivalve known, capable of reaching the remarkable age of 405 to 410 years.

As in the case of tree rings, information from the environment is incorporated into the annually deposited carbonate increments of the shell and its growth record therefore forms an environmental archive. The hinge plate in the umbo of the shell is used for study, since its growth lines are clear and it is usually not damaged by erosion and abrasion. Firstly the hinge plate is sectioned, polished and etched with hydrochloric acid. Acetate peel samples of the etched surface are made and the growth lines imprinted on the acetate peel are studied under the microscope.

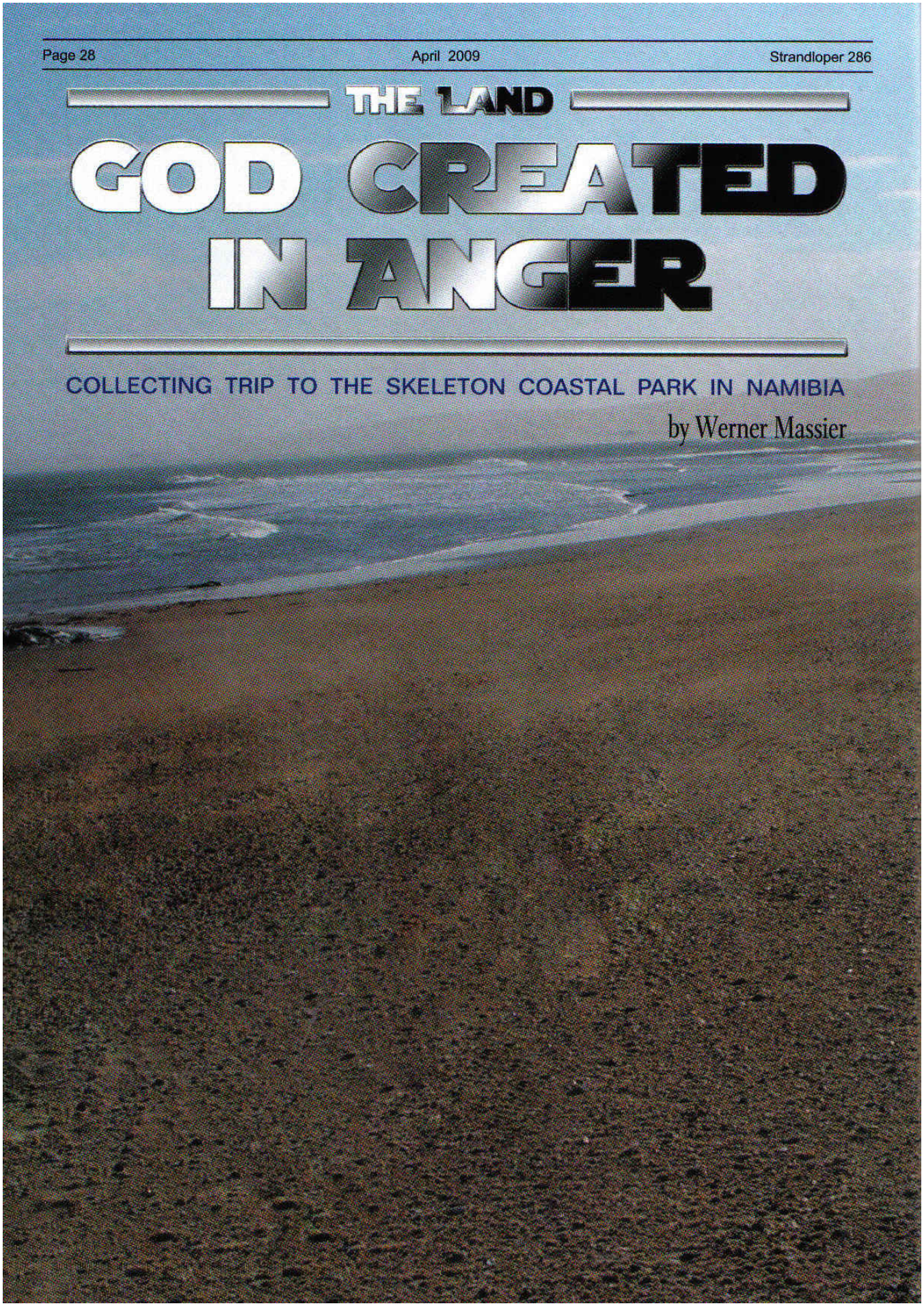
Arctica islandica has a wide distribution and is found on the continental shelves bordering the North Atlantic, from North America to Europe. Linking growth line series from both live collected and fossil specimens, has the potential of providing an absolute time-scale of climatic events from the marine environment for a large geographical area. Once the procedure is fully developed, the results obtained should match the information derived from growth rings of trees in accuracy and usefulness. This information is badly needed to put us in a better position to deal with possible future climatic catastrophies. Researchers in the field aptly call Arctica islandica, "The tree of the sea".

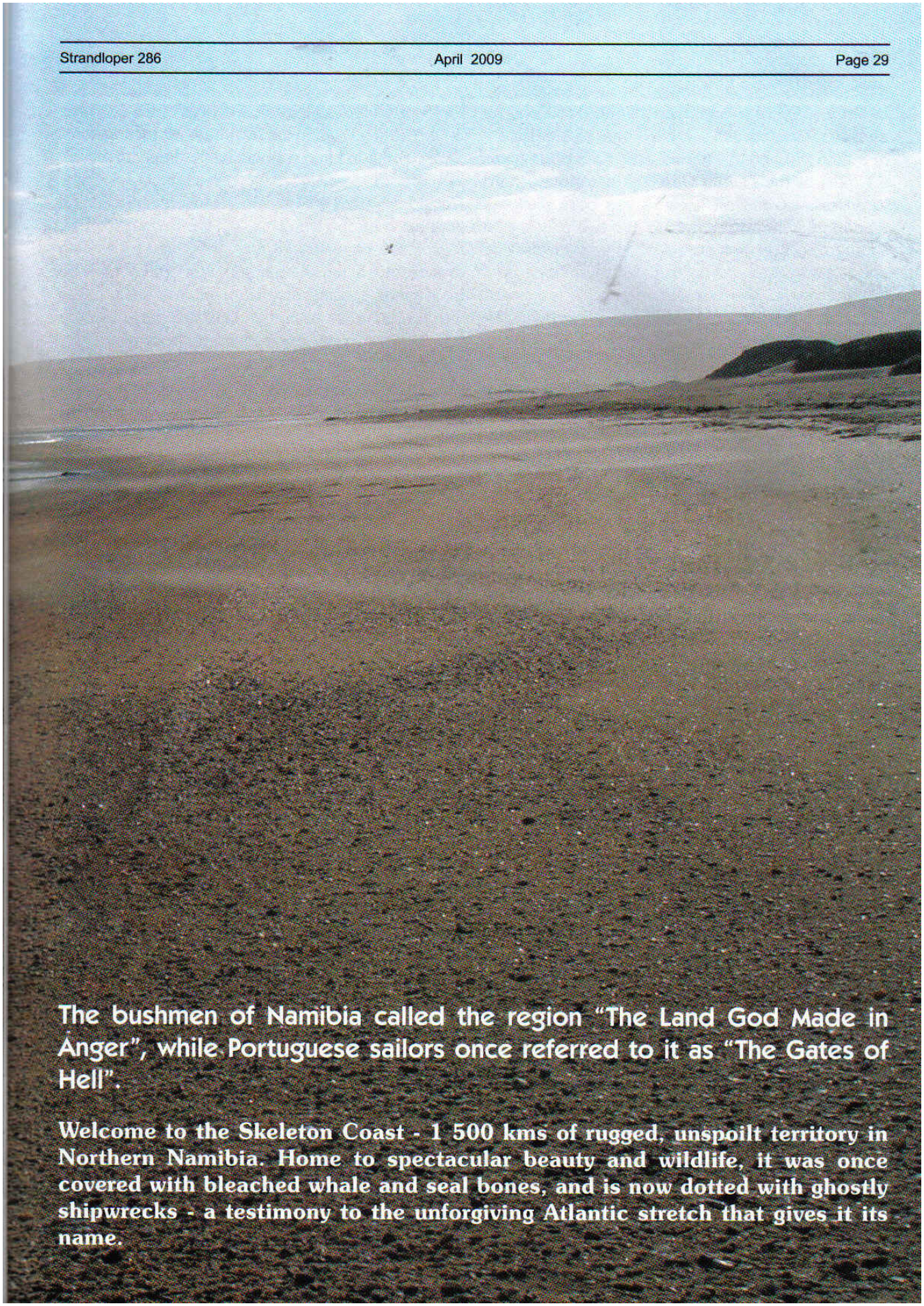
A California bristlecone pine.

THE LAND GOD CREATED IN ANGER

COLLECTING TRIP TO THE SKELETON COASTAL PARK IN NAMIBIA

by Werner Massier





The bushmen of Namibia called the region "The Land God Made in Anger", while Portuguese sailors once referred to it as "The Gates of Hell".

Welcome to the Skeleton Coast - 1 500 kms of rugged, unspoilt territory in Northern Namibia. Home to spectacular beauty and wildlife, it was once covered with bleached whale and seal bones, and is now dotted with ghostly shipwrecks - a testimony to the unforgiving Atlantic stretch that gives it its name.

In April 2008, the Namibian Ministry of Fisheries and Marine Resources invited me to participate in a field trip here. I jumped at the opportunity, as this part of the Namib Desert is notoriously hard to access. 1.6 million hectares has been declared a national park and is divided into two zones - the southern section, between Ugab and Hoanib rivers, and the northern section between the Hoanib and Kunene rivers. The northern part is a designated wilderness area and can only be entered with an exclusive permit.

Our journey began in the quaint German colonial town of Swakopmund. We travelled for 170 km northwards on the region's well-maintained salt road, and then wound our way along a sand road for 280 km to Möve Bay. From here we ploughed our way patiently through an orange sea of winddunes and lichen-strewn gravel plains. The route is treacherous and should not be attempted without a 4 x 4.

We could make up time at low tide by travelling on the beaches. Although this was the most comfortable way to drive , it did clash with prime shell collecting times! An amazing array of sea and shore birds live here, attracted by the Atlantic's nutrient-rich Benguela current. A colony of Cape Fur seals (*Arctocephalus pusillus*) can be found at Torra Bay, while roughly 20.000 migratory seals frequent Cape Frio. Strictly speaking this isn't a colony, as the seals don't breed here, but use the area as a resting place after feasting on abundant fish resources.

In the northern region, ghost crabs (*Ocypode africana*) have colonised the beaches. Alerted by the vibrations of the approaching cars they leave their burrows by the millions, rushing frantically towards the sea. The ocean provides a smorgasbord of delights for Black-backed jackals (*Canis mesomelas*), but the cheeky creatures still entered our camp. Every morning we found their tracks winding their way through our sleeping bags. While we slept, they helped themselves to whatever unsecured items that took their fancy.

Brown hyaenas (*Hyaena brunnea*) were a lucky find. They are one of Africa's rarest large carnivores and extremely shy. Beware of lions in the river beds! Although this area is not their natural habitat, the excellent rainy season inland has allowed rivers to plough their way to the sea, creating arteries of life in the desert. Here springbok and oryx antilopes graze on the fresh growth in the river beds, attracting lions. Sadly, we didn't find a single leatherback turtle.

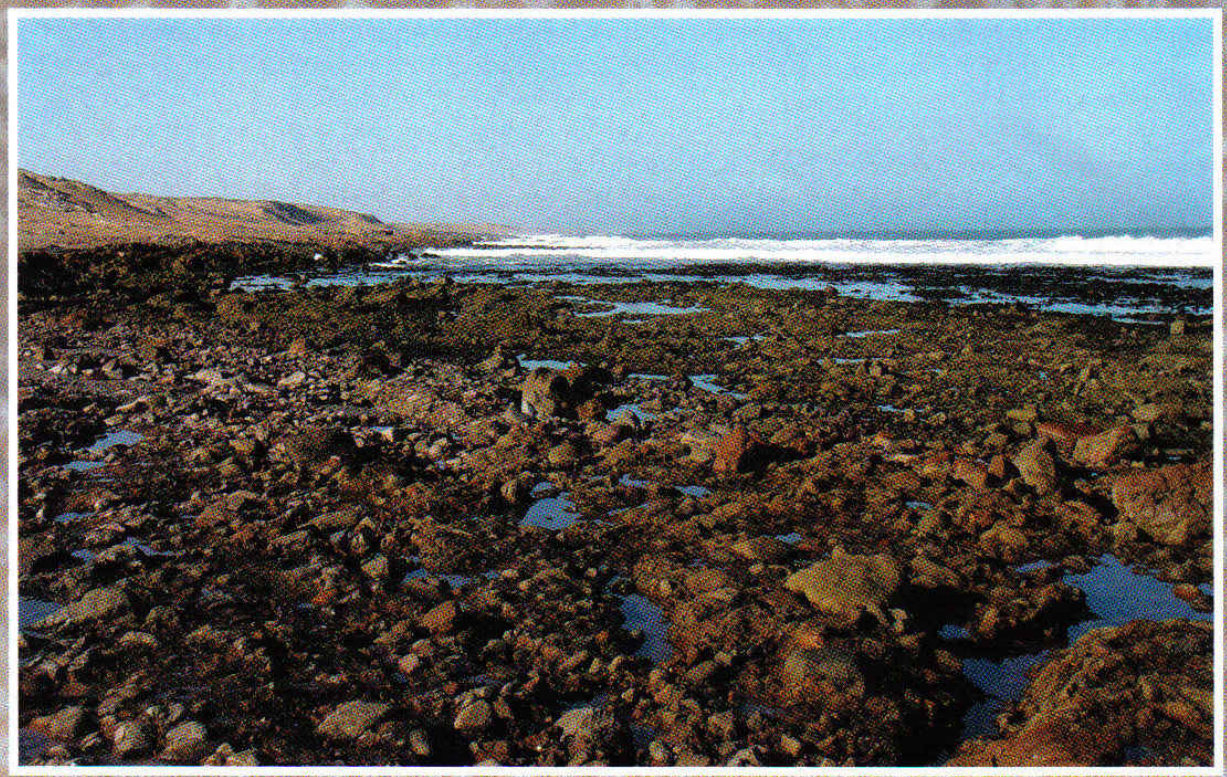
Considering that the Skeleton Coast is a transitional area between the southern and west African zones, I expected some interesting finds. The upwelling seawater with abundant nutrients should contribute to a great species diversity, but the reality was disappointing. There are endless stretches of sandy beaches with only the occasional rocky outcrop. Furthermore, the coast line is almost entirely straight, with no real bays. As a result, waves pound the shore line, and there are no rocks to turn over - hardly the home of choice for molluscs. In fact, the vast 700 km shore line yielded only 37 species!

Bosluis Bay (17°19.39'S 11°45.30'E) was the northern-most collecting point, but the name "bay" is somewhat optimistic. There are few rocks, but beach collecting was rewarding, and the location was one of the most productive. A few kms north lies the mighty Kunene River. This perennial river forms the border between Angola and Namibia. To my great disappointment the area, with its unique collection of wildlife, is sealed off by a diamond mine.

Considering the close proximity to Angola, there was a strange absence of Angolan and west African species. I can only assume that the Kunene River's sand and mud deposits form an insurmountable barrier, preventing most species from spreading further south. Five species from further north were also found: *Medusafissurella chemnitzii, Patella safiana, Charonia lampas lampas, Bufonaria marginata, Siphonaria pectinata*, as well as *Petricola angolensis*, which is endemic to Angola and Namibia. The keyhole limpet *M. chemnitzii* grows to an astounding size here! The largest piece I found measures 59 mm, far above the registered world record!

Having collected shells in southern Angola recently, not far north of the Namibian border, it was indeed strange not to find any of these species. Especially the many Conidae species were conspicuously absent. I could not find a single *Patella natalensis*, which is found in abundance in southern Angola. In spite of its name, it seems to be a truly endemic to Angola, and cannot be grouped with *Patella*

Gost crabs scavenging the beach at Cape Frio



The rocks at Möve Bay.

granularis. There are significant differences.
All other shells I found at Bosluis Bay belong to the southern African region. I was suprised to find the Nassariidae species *Demoulia ventricosa* so far north. The few rocks emerging from the sand hosted some giant *Patella safiana* - up to 115 mm in size! This species is completely covered in algae, so it was only after cleaning them upon my return that I realised I had in fact collected two different species, including a new species! As they share the same geographical area and the same habitat and not a single integrade could be found, I will describe this as a new species in due course.

The next southern collecting point was Cape Frio (18°26.02'S 12°00.22'E). This was the most northern record for *Littorina knysnaensis, Littorina punctata* and *Thais haemastoma*.

The following night was spent at Rocky Point (18°59.83'S 12°28.62'E), a large rocky outcrop. There was little growth here and it yielded only a limited number of species, including live *Medusafissurella chemnitzii* and *Fissurella mutabilis* in shallow, flat rock pools. In the evening, a strong southwesterly wind sprang up and the night was bitterly cold. This is a common occurence in this area. The next morning the bright sunshine and a calm, clear day greeted us once again.

Travelling south, we arrived at Möve Bay (19°22.40'S 12°42.34'E), which houses a permanent camp from the Nature Conservation Department. Although it's a bit disappointing as a bay, it does offer plenty of rocks - and jackals! Möve Bay is the most northern location for *Patella argenvillei*, a wellknown South African species that lives side-by-side with *Patella safiana*. *P. argenvillei* is quite common in southern Namibia, but rare even in the country's central regions. I certainly didn't expect this find so far north. Möve Bay was also the most northern record for *Natica vittata textilis*.

Next stop was Terrace Bay (20°07.71'S 13°02.08'E), a paradise for fishermen but a nightmare for shell collectors. Large pebbles are rolled up and down the beach by huge waves, crushing everything in their path. The noise alone can kill any attempt at a conversation. Only two species seem to be able to survive this harsh environment: *Thais haemastoma* and *Siphonaria pectinata*.

Torra Bay (20°19.40'S 13°14.42'E) is not far south of Terrace Bay and was slightly more mollusc friendly. The true *Patella safiana* can still be found here. Further south it seems to interbreed with *Patella miniata* and they are often difficult to positively identify.

At our next stop, the Huab River Mouth (20°56.40'S 13°37.37'E), huge diamond mining activities have altered and completely destroyed the natural landscape. It is usually a picturesque area and the river was still partly in flood. Beach collecting produced a member of the Epitoniidae family - a first for Namibia! The specimen is 19 mm long, with thin, low and distantly placed costae. So far it has eluded all my identification attempts.

After spending a night in the river bed under a breathtaking canopy of stars, including the famous Southern Cross and several satellites hurrying across the horizon, we were suddenly hit by a warm wind. It was like switching on a heater, as the temperature shot up from one second to the next. The eastwind from the inland desert had arrived. On the way to the next collecting point at Cape Cross (22°03.57'S 14°12.46'E) we ventured into a sandstorm, which left even the interiour of our cars blanketed in fine sand. Luckily it lasted for only 30 kms. Temperatures approached a mercliless 40°C. Cape Cross is the famous breeding ground for the cape fur seal. The colony (apparently the largest in Africa) lies outside the Skeleton Coast Park. The cross marks the spot where the first European landed on Namibian soil. The usual assortment of tourists from all over the world congregates here. Most are lobster pink, having once again underestimated the African sun. Shelling here is not particularly interesting, but I was suprised to find the Cultellidae shell *Phaxas decipiens* so far north.

All in all it was a very enjoyable journey. Luckily not one car broke down, which can be a problem when you are so far away from civilisation. Landscapes were breath-taking. As there are no permanent inhabitants, it would remain a totally unspoiled desert paradise, were it not for the devasting consequences of the local diamond mines. Sadly, the spectaular fauna and flora don't fetch quite the same lucrative price on international markets.

Rocky point.

The seals at Cape Frio.

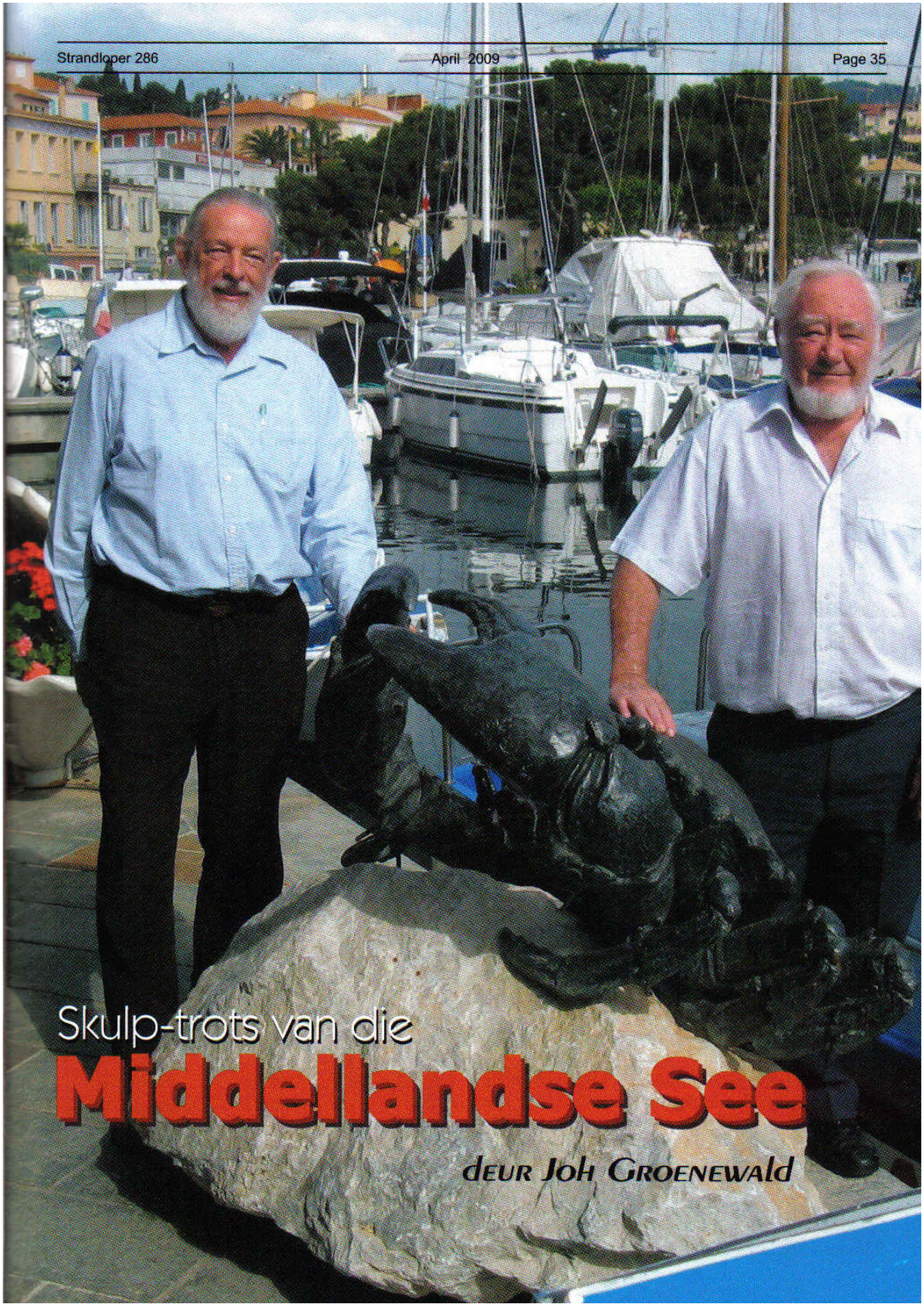
Species found:

GASTROPODA

Fissurellidae	*Diodora* sp.
	Fissurella mutabilis Sowerby, 1834
	Medusafissurella chemnitzii (Sowerby, 1862)
Patellidae	*Patella argenvillei* Krauss, 1848
	Patella granularis Linné, 1758
	Patella miniata Born, 1778
	Patella safiana Lamarck, 1819
	Patella sp. nov.
Trochidae	*Oxystele variegata* (Anton, 1839)
Littorinidae	*Littorina knysnaensis* (Philippi, 1847)
	Littorina punctata (Gmelin, 1791)
Calyptraeidae	*Crepidula porcellana* Lamarck, 1801
Naticidae	*Natica vittata textilis* Reeve, 1855
Bursidae	*Bufonaria marginata* (Gmelin, 1791)
Ranellidae	*Charonia lampas lampas* (Linné, 1758)
Epitoniidae	*Epitonium* sp.
Muricidae	*Thais haemastoma* (Linné, 1767)
Nassariidae	*Bullia callosa* (Wood, 1828)
	Bullia laevissima (Gmelin, 1791)
	Demoulia ventricosa (Lamarck, 1816)
Siphonariidae	*Siphonaria pectinata* (Linné, 1758)

BIVALVIA

Mytilidae	*Aulacomya ater* (Molina, 1782)
	Choromytilus meridionalis (Krauss, 1848)
	Perna perna (Linné, 1758)
	Semimytilus pseudocapensis (Lamy, 1931)
Limidae	*Limaria tuberculata* (Olivi, 1792)
Ungulinidae	*Ungulina alba* Rang in Dunker, 1853
Mactridae	*Mactrotoma compressa* (Spengler, 1802)
	Scissodesma spengleri (Linné, 1767)
Cultellidae	*Phaxas decipiens* (E. A. Smith, 1904)
Tellinidae	*Gastrana matadoa* (Gmelin, 1791)
	Leporimetis schultzei (Thiele, 1910)
	Tellina trilatera Gmelin, 1791
Donacidae	*Donax serra* Dillwyn, 1817
Veneridae	*Venerupis corrugata* (Gmelin, 1791)
	Venus verrucosa Linné, 1758
Petricolidae	*Petricola angolensis* von Cosel, 1995



Skulp-trots van die Middellandse See

deur Joh Groenewald

'n KLEIN kleinboothawe aan Frankryk se Côte d'Azur bied 'n groot verrassing - die grootste skulpmuseum aan die Middellandse See. 'n Besoek hier word gou 'n vreugdefees vir die skulpgeesdriftige. Die museum is op die kaai van die ou hawetjie aan die baai van St Jean, op die skiereiland bekend as St Jean-Cap Ferrat. Die skiereiland is 'n lang smal land-tong wat 3 km ver loodreg suidwaarts die see insteek, aan die skouspelagtige kus tussen Nice en Monaco.

Dit is hier waar die dierkundige navorsingsentrum van die nabygeleë Villefranche tussen 1930 en 1960 'n enorme inheemse skulpversameling byeengebring het. Hierdie versameling is die kern van die museum, wat later aangevul is met 'n tweede wetenskaplike versameling en 'n derde een, van 'n private versamelaar wat oor 35 jaar meer as 'n duisend spesies Mediterreense skulpe gevind en bewaar het.

Le Musee des Coquillages (die Museum van Skulpe) het 'n glas vertoonvenster en, by die intrap, 'n groot regop glaskas met die mooiste Murex-versameling denkbaar. Maar daar is slegs 'n halfdosyn groot vertoonkaste met 'uitheemse' skulpe, soos pragversamelings van kauri's en van keëls, want die klem is op die skulpkunde van die Middellandse See.

Skulpe van bykans al die 2 045 molluske wat in die Middellandse See bekend is, word vertoon. Dit sluit in die skeletskulpe van uitgestorwe koppotiges (inkvisse), terwyl 'n hele aantal van hierdie diere heelhuids in lang glassilinders bewaar word.

Besonder indrukwekkend is die reuse-mossels (Familie Pinnidae) van tot 1 meter lank. Hierdie mossels staan regop op die seebodem, met die smal punt aan die bodem geanker. Jean-Pierre Sidois, bewaringsbeampte van die museum, vertel dat die Europese Unie redelik onlangs 17 Mediterreense skulpspesies as beskermd verklaar het. Die bepaalde skulpe mag nie geoes, vervoer of aangehou word nie.

'n Besoek aan die museum begin met 'n oudiovisuele aanbieding van 7 minute, wat blitsvinnig verloop omdat die beelde mekaar eintlik te vinnig opvolg. Daarna kan 'n mens kyk na dioramas van die seebodem, en daar is 'n mikroskoop om te kyk na miniatuurskulpe - die kleinste is 0.1 mm lank.

'n Navorsingslaboratorium word as deel van die skulpmuseum bedryf en word veral gebruik deur studente in natuurwetenskaplike vakke.

Oplaas is daar allerlei skulpe te koop. Kan 'n mens weier ? - Joh Groenewald

Summary

Shell-jewel of the Mediterranean – On the St Jean-Cap Ferrat peninsula, between Nice and Monaco, lies a picturesque small-boat harbour. Situated on the jetty is the *Le Musee des Coquillages*, the largest shell museum in the Mediterranean. It forms part of the Zoological Research Centre of Villefranche. Apart from a superb murex, cowrie and cone display, their collection includes most of the 2045 known Mediterranean seashells. Displays vary from large (1000 mm) members of the Pinnidae to miniature shells of 0.1 mm in size. A visit to the museum include audiovisuals and dioramas, and shells are available for sale.

Wetenswaardighede

ontleen aan die Musee des Coquillages, St Jean-Cap Ferrat, Middellandse See.

Skulpe verteenwoordig die tweede talrykse vorm van dierelewe, na insekte en aragniede (spinnekoppe ens). Daar is 117 500 species skulpe bekend.

90 000 soorte molluske kom voor in die see. Hiervan het 84 500 skulpe en 5 500 soorte is sonder skulp (naakslakke, ens).

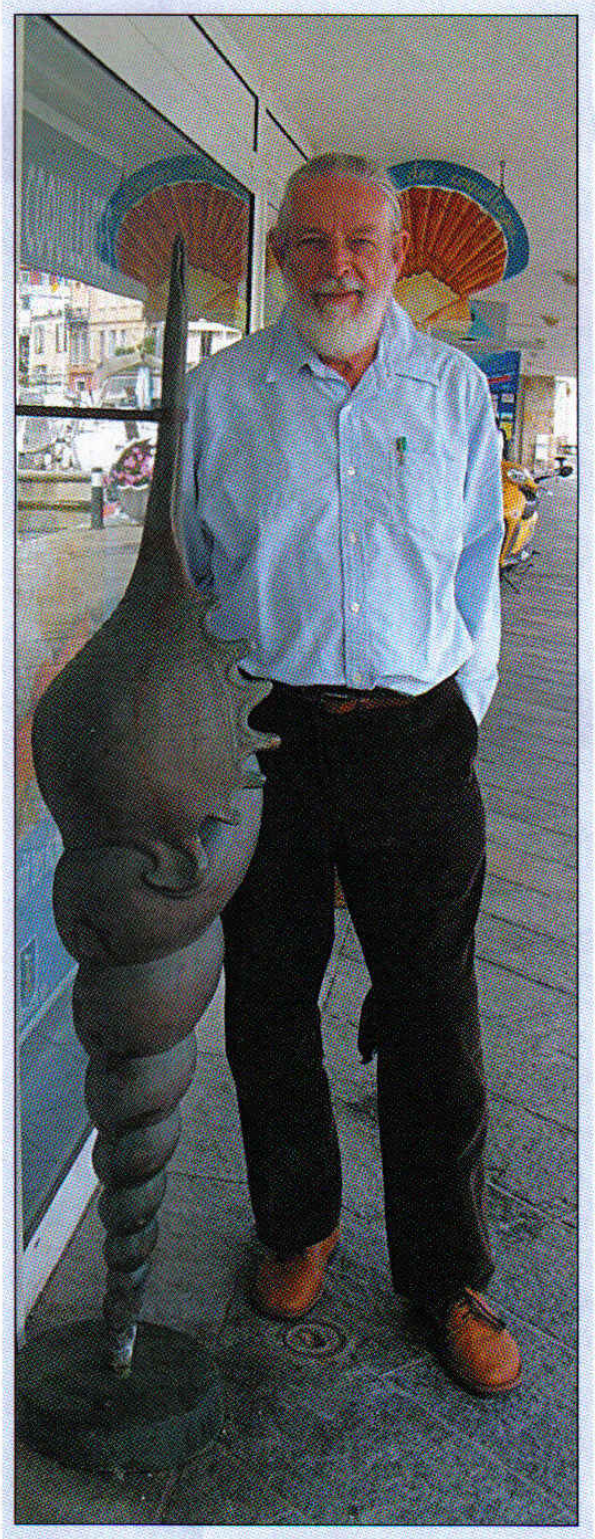
21 055 soorte molluske woon op land, 19 000 met skulpe en 2 055 sonder skulpdoppe.

1 025 soorte molluske woon in bome.

5 410 soorte molluske woon in lopende vars water, riviere en mere.

Die oudste skulpe bekend, is van 600 miljoen jaar gelede. Die grootste is die reuse-gapermossel van die Suidsee, wat 1.7 m lank kan word en waarvan 'n enkele klep 250 kg kan weeg. Die kleinste is 'n skulpie van 0.1 mm lank.

Previous page:
Op die museum-kaai is groot metaalbeelde van krappe, terwyl blombakke in die agtergrond in die vorm is van gapermossels. Die blomme is malvas, wat al 300 jaar in Europa gekweek en veredel word.



Voor die museum staan beeldvorms van reuse-skulpe (en Joh Groenewald).

Hierdie reuse-mossels wat regopstaande op die bodem van die Middellandse See voorkom, is byna 'n meter lank.

ANGEL WINGS

Pholadidae. *Pholas dactylus*. (Linnaeus 1758),
Beached, Kanon, Western Cape, South Africa

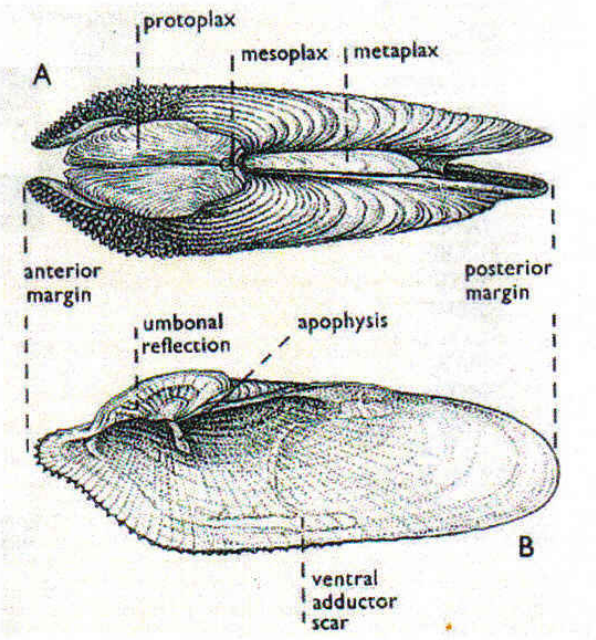
By Renata Kruyswijk

These feathery shells can break between one's fingers with the minimum of effort. The graceful delicately sculptured shell, of snowy whiteness, is well described by it's homely name of "angel's wings". A singular feature of the living *P. dactylus* is its phosphorescent properties, the elliptical outlines of the animal glowing with a green-blue light in the dark.

The Piddock has a thin, brittle shell, which is covered with rows of small, vaulted prickles, the largest toward the base of the shell. When it bores into soft sandstone it uses its shell like a file. In this way the shell digs out a home for itself which it never leaves. The adjacent picture of the rock illustrates that the ovoidal holes, several of which you may often find close together, are the entrances to its burrows. When the burrow gets choked up with the material which has been scraped away, it just squirts out a jet of water from the siphon tubes, by means of which it breathes, and so washes the burrow out. It sucks in its food and oxygen through its siphons (a tubular organ through which water passes. It is an extension of the mantle.) The burrow is not much longer than the shell itself, for the animals siphons are quite short.

The boring process is mechanical, the front sculpture of the shell being particularly adapted for the purpose. The ligament is much reduced, always internal. The hinge line is without true teeth, but with modified articulating surfaces, condyles and umbonal reflections, on which the valves rock rather than open. Alternate contractions of adductor muscles control this rocking, allowing the serrated ridges of the anterior sculpture pattern to act as cutting tools. The sucker-like foot projects through the pedal gape between the two valves anteriorly and, by changing its position of attachment, ensures a different angle of cutting by the valves and ultimately a circular bore.

P. dactylus is basically equivalve with symmetrically disposed protoplax and mesoplax but with a long thin asymmetric metaplax producing an inequivalve condition. The umbo is in the anterior half and it has a beaked anterior end above a permanent antero-ventral pedal gape. Specimens can reach 75 mm in length. Piddocks often have a pale yellow periostracum (surface layer consisting of organic material). The ligament is small and pear shaped and placed above the line of the apophyses (a calcareous projection). *Pholas dactylus* is sculptured by about 24 or more prominent, low, sharp and concentric ridges. There is an anterior group of about 40 radiating ribs. Where the ribs cross each other, short, sharp spines project. The apophyses is short, flattened and somewhat ridged at the end. It has a glossy white interior. The external sculpture is faintly visible

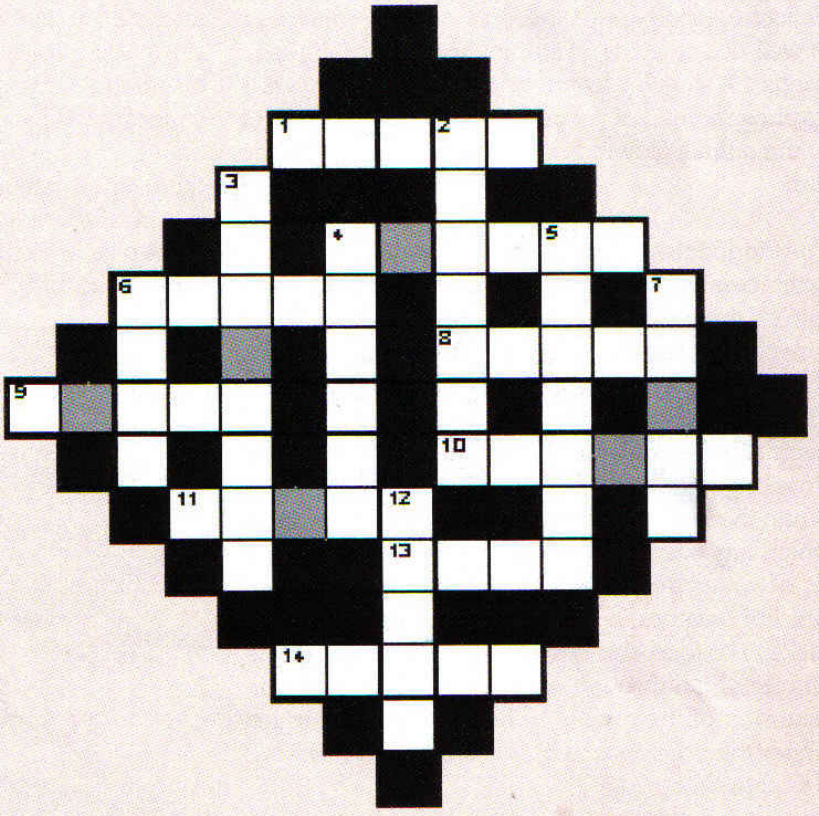


Angel wings have a large anterior adductor scar that lies about half-way along the dorsal line. A thick pallial line (line indentation on interior of bivalve) expands into the ventral adductor scar (muscle used to close valves) where it curls back into the pallial sinus which is deep and extends into the anterior half of the shell. These shells have smooth margins, except near the anterior beak (apex of a bivalve) where small projecting spines make it crenulate (fine notches). The beaks of these shells-the "knuckles" of the wings- are packed by curious flaps of shell, quite separate from the wings proper.

Shell Puzzle No. 5

This puzzle is somewhat different to the previous ones. Below is a list of conchologists that have described shell species over the centuries. Place them in the available spaces taking in consideration their lengths. Please note that there are three additional names added to the list. Make sure you choose the correct ones!!

ADAMS
BAIRSTOW
CATE
GOULD
HAYES
IREDALE
KIENER
KRAUSS
LAMARCK
MASSIER
PEASE
PETIT
REEVE
SCOTT
SHAW
SMITH
THIELE
TOMLIN
VOKES



Enjoy the challenge.

Win

1st Prize

A wonderful selection of essential oil products, distributed by *ESCENTIA PRODUCTS*

2nd Prize

A selection of trawled shells from Natal and Beira

Instructions

1. Complete the puzzle.
2. Arrange the letters in the shaded blocks to form the name of a famous conchologist.
3. Put your one word answer on a post card with your name and address and send to Shell Puzzle No 5, P.O. Box 1855, Rooihuiskraal, 0154 or alternatively you can email the answer to alwyn@deark.co.za
4. The first two correct entries drawn will each receive a prize.
5. The decision of the Committee will be final.
6. The winners will be announced in the next Strandloper.
7. The closing date is 15th Sept. 2009

Answer: Shell Puzzle 4

Dr DG Herbert
Dai Herbert is the Chief Curator of the Mollusca Section of the Natural Science Department. He obtained his Ph.D. from London University in 1984, the same year that he joined the staff of the Natal Museum.

Winner: Shell Puzzle 4

1st Prize: J Marais (Pretoria Group)
2nd Prize: C Broberg (Pretoria Group)