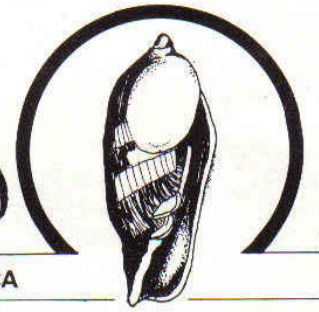


The Strandloper

BULLETIN OF THE CONCHOLOGICAL SOCIETY OF SOUTHERN AFRICA



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TWO YEARS IN THE LIFE OF

Cymatium parthenopeum parthenopeum
(von Salis, 1793)

By
MYFANWY ADAM

Johannesburg

On the 1st January 1975 while collecting live shells in Western Pondoland I found a young 20mm specimen, so fluffy and downy with periostracum that it was barely recognizable*. After a journey of some 900 kilometres it was placed, together with other molluscs and invertebrates, in our Johannesburg aquarium where it immediately went into hiding. It was not until the end of February that it reappeared and I was able to photograph it and take measurement. Its growth in two months was remarkable. Two and a half whorls had been added and by the 17th March the length was 60,5mm – a rate of about 38,5mm in eleven weeks.

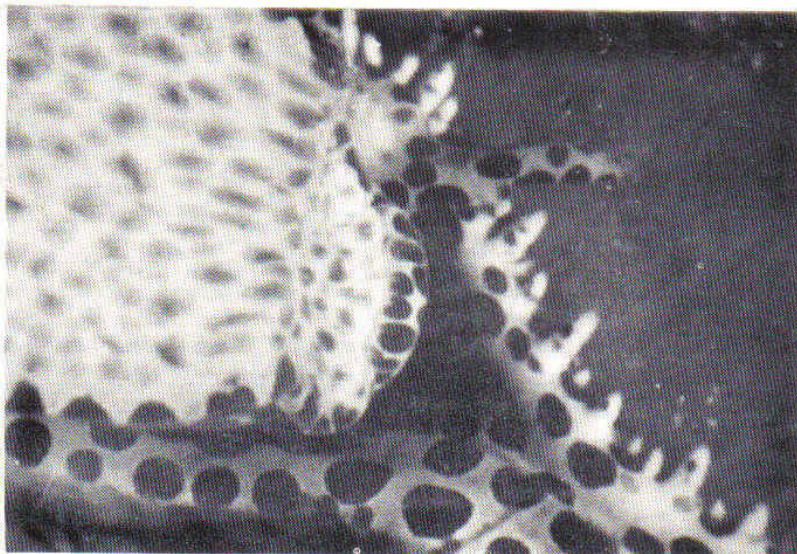
From this time it started to keep fairly regular habits, hiding under stones or burying itself in the sand for two to three weeks, and then for approximately the same period it would remain in the open. Observing and photographing the mollusc became a time-consuming and expensive

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occupation. I have reared *Cypraea annulus* from the bulla stage but have never witnessed the actual process of shell deposition, since in *Cypraea* the mantle obscures the aperture. This process is clearly visible in *C. parthenopeum* however, and one can actually see the finger-like projections of the mantle as it deposits the shell (fig. 1.)

Foot, siphon, proboscis and tentacles are all cream-coloured and ornamented with large bluish-green spots while the projections of the mantle are spotted in a similar manner. The eyes are small and situated one third of the way up the slender tentacles. It has a crawling locomotion and when not resting, is quite mobile.

*This juvenile state was figured by Barnard (A Beginners Guide to S.A. Shells, pl. X, fig. 1) as "*Cymatium cutaceum*".



(Fig. 1)

Portion of foot, head, tentacle and siphon with projections on edge of mantle used in formation of shell and periostracum.

(Continued on page 2)

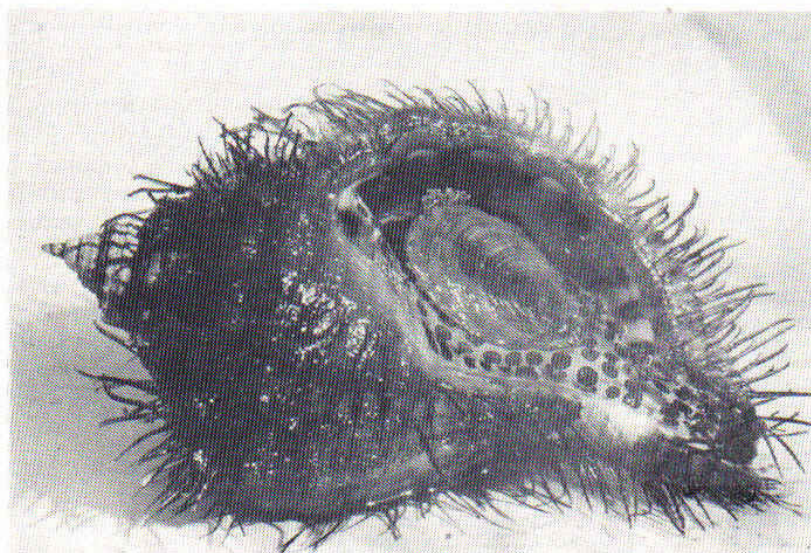
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Growth is not continuous and periods of growth alternate with periods of rest. In this respect too, this species is ideal for study, since the hairy periostracum is laid down in axial rows, and measurements of new growth on the body whorl became comparatively simple. By April 1975 its length was 71.5mm. Growth in length had now slowed down, for as the radius of the spiral growth increases, so the rate of axial extension decreases. At this stage the most interesting measurement was that of the new growth on the outer lip. As an example, between the 8th and the 30th April it had laid down 22mm of new shell – a millimetre a day. (fig. 2.) A note in my log book reads, "April 24th. Anterior canal has taken a 'twist'" and on May 23rd, "observed newly thickened lip". As the shell continued to grow this ultimately became a varix. Later in the year its prominent protoconch broke or fell off, (one often finds an otherwise good beach specimen minus the protoconch), and the periostracum began to flake off on parts of the body whorl.

One must assume that the mollusc had found sufficient food to have grown at such a rapid rate, but apart from mystified entries in the log book such as "Another *Cyp. annulus* dead", I did not see it feeding until the 19th August 1975. Proboscis fully extended towards a small *Turbo cidaris*, it pounced, pinning down the victim with its strong foot. After about three hours the Turbo was cleaned out. On another occasion I saw the *Cymatium* on top of a large oyster, *Crassostrea margaritacea* Lamarck, its proboscis reaching down and into the open valves. It had obviously also made meals of my smaller bivalves, and of course the *Cyp. annulus* which I moved to another tank when it dawned on me that they were being annihilated.

The radula is taenioglossate and very small compared with the size of the mollusc. Figure 3 shows the central and two lateral teeth under x400 magnification.

(Continued opposite)



(Fig. 2)

Cymatium parthenopeum showing thin new growth on outer lip after six months in aquarium.

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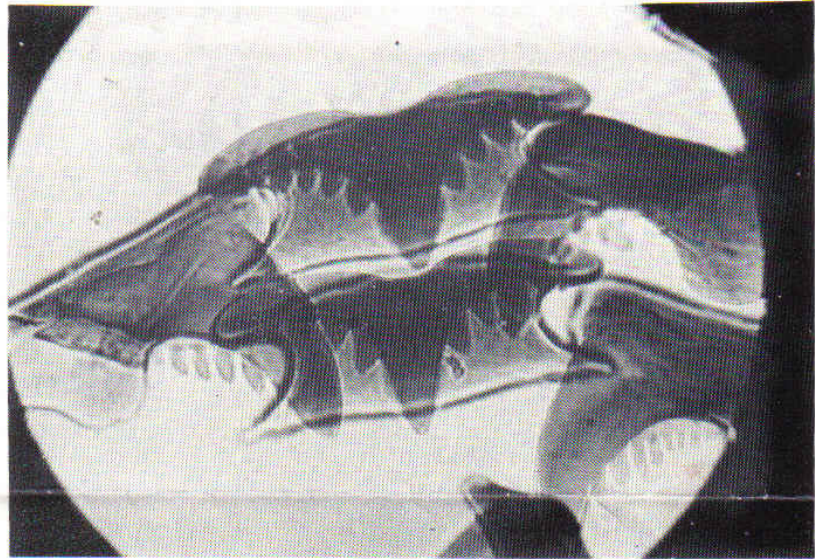
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EXCHANGES WANTED

- Fabrizio Dellaporta, Via Circonvallazione 86, 27043 BRONI (PV), Italy, offers Mediterranean shells in exchange for South African cowries.
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 Doug Westfall of 419, Orlena Avenue, Long Beach, California 90814, U.S.A., offers Mexican and American West coast shells in exchange for species of Trophon, Boreotropon and/or Trophonopsis from South Africa.

(Fig. 3)
Cymatium parthenopeum
 Photomicrograph x 400.
 Central and lateral teeth of
 radula.



Our Land Cruiser took us to the same stretch of coast in December and on the 1st January 1976 I found another juvenile *Cym. parthenopeum* measuring 20mm. However, No 2, a male, did not thrive as the first had done. As the months passed, natural food became scarce and it was only rarely that they ate ox heart (a favourite of *Bursa granularis*, regardless of the availability of natural food).

Nos. 1 and 2 had now entered their third and second years of captivity and in February 1977 they measured 93.4mm and 43.4mm respectively. However, growth rate had slowed considerably. Thinking that conditions had become untenable I moved them into a spanking new tank — fresh clear sea water and clean sand. A mistake on my part since No. 1 died on the 3rd February and No. 2 a month later. They must have become accustomed to the old environment and were unable to adapt to new con-

ditions. In all probability there was also a shortage of food, for by the time all the small bivalves and the oysters had been eaten and there was little to ferret from the sand.

In time a tank sets up its own ecology and supports a greater variety of marine life than one is at first aware of. Minute creatures and algae are imported with the sand and stones and on the shells themselves, providing additional sources of food.

Although the *Cymatium*'s death was a great disappointment, those two years were intensely interesting and worthwhile for I learned a great deal and had much enjoyment from the study of this species. This may well continue, since in April 1978 I collected two more live specimens — one an immature specimen of about 70mm and the other a 23.4mm juvenile.

FIELD NOTES by Clarice Connolly

January 1975: Reported in the Veliger that the large *Volva* found at Gonubie, usually with the ends broken, has been named *Volva kilburni* Cate.

May 1975: Reported in the Veliger that the new name proposed by Crawford Cate for the invalid name *Amphiperas smithi* Bartsch 1915 is *Subsimnia zuidafrikaana* Cate.

November 1976: *Janthina pallida* Harvey found in False Bay. The specimens were mostly about 16mm with one of 20mm. Turton gives the size as 25mm. This species is the palest of the *Janthinas* and has a rounded base to the columella. Can be found feeding on *Velevella*.

February 1977: An addition to the False Bay check list is *Volvatella* species found on the long green sea grass in False Bay. The shell is about 9 x 4mm and the animal cream with minute white spots. It moved quickly in the aquarium and when disturbed it ejected a milky fluid. Previously collected live at Sunrise-on-Sea.

We would welcome any article of interest to
 Shell Collectors for future publication.



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AROUND THE GROUPS

PORT ELIZABETH: A field day held at Flat Rocks in Algoa Bay in August was not a success as the tide was not low enough, but a new record for that area was a large live *Turbo coronatus* Gemlin. Members were alarmed at the destruction caused by bait collectors. This point would be raised at the next meeting of the Co-ordinating Council for Nature Conservation who could appeal to these people through their magazine. Shells discussed at the October meeting were *Turbinidae* and *Vermetidae*, while Mr Crews showed shells found along the coastline of his farm Hougham Park in Algoa Bay.

EAST LONDON: The ever popular shell naming competitions are drawing to a close. These competitions have been of great value to all the members. Prizes are to be awarded at the December meeting. Shells on display at the October meeting were *Nassariidae* and Connie Hulley brought many specimens that had been named by D.H. Kennelly and were still in their cellophane-topped match boxes made by him and described in his book, *Marine Shells of Southern Africa*.

DURBAN: A specimen of *Conus milneedwardsi* (Jousseume) was found at the Bluff, Durban, last October by a member while out collecting shells. It would be useful to find out if this is an extension of the range of this species or if it was dumped by trawlers and then washed up on the Bluff. Dr George Davis, Ph.D. (Dept. of Malacology, Academy of Natural Sciences, Philadelphia, U.S.A.) gave a talk and showed slides on the Genus *Tomichia* in South Africa and the convergent evolution of similar groups in other countries since the continental separation from Gondwanaland.

JOHANNESBURG: The Golden City has had two shell shows this year, one at the Rand Hobbies Fair at the City Hall in July, and the second at the Rand Afrikaans University in early September, which got the group onto the front page of the Vaderland newspaper.

CAPE TOWN: At the October meeting there were two interesting talks, one on a visit to Kei Mouth illustrated by slides taken by the Carlssons, and the other in the form of a sound movie on Antigua and other West Indian Islands, visited recently by Mr & Mrs Watt on their son's yacht. The group's shell show, scheduled for January, would be discussed at the next meeting.

Some shells were auctioned for group funds, to help defray the expense of the shell show.

PRETORIA: John Hoffman vertel van sy groot fonds by Jeffreysbaai op 11 September vanjaar toe hy 'n lewendige *Cypraea fusco-dentata* ongeveer 1 meter van die waterlyn opgetel het. Die skulp is dadelik na mev Hoogenhout geneem waar die diertjie 6 uur later sy verskyning uit die skulp gemaak het. Die skulp is na die Skulpkondevereniging van Port Elizabeth geneem waar dit gehou was tot mnr Hoffman hulle se terugkeer na Johannesburg, maar ongelukkig is die diertjie op pad dood — 11 dae na dit gevind is.

Almal het ook die lewendige *Conus tinianus* wat John na die vergadering gebring het baie interessant gevind, en veral die feit dat hy die diertjie ertwurms voer.

The Pretoria group were invited to a "bring and braai" on the farm of Han and Lizette Vandenberg on 10 September. Their interesting and beautiful home at Broederstroom about half an hour's drive from Pretoria, far from everything in the peace and quiet of the Transvaal veld, was an ideal setting for a braai. Thirty-two of the Pretoria group managed to be present, including children. We all gathered under the shade of the indigenous trees in their garden and later enjoyed the shell talk around the fires, while the children went for a swim in the dam. The Pretoria ladies again proved their worth by providing delicious salads while the men excelled at the braaiing of the meat. Jean Havenaar had a brain-wave to bring cold dessert. The day was thoroughly enjoyed by all.

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