

TIDAL WAVE'S 'GIFT'

An Indian Ocean tsunami or "tidal wave" is credited with delivering specimens of a new *Bursa* species to the feet of malacologist Manfred Blocher while visiting northwestern Malagasy (Madagascar) a couple of years ago.

HMS member Blocher and Heinrich Muhlhauser, both of West Germany, have named the new species *Tutufa nigrita*. They described it in the November 1979 issue of *Spixiana*.

The holotype of *B. nigrita* Muhlhauser & Blocher has been deposited in the Munich State Zoological Collection. A paratype was sent to the Bernice P. Bishop Museum in Honolulu.

The type locality is "outside the Grand Recif at Tuleare, southwestern Madagascar." The range is said to be from the Maldive Islands to the East African coast near Dar-es-Salaam, Tanzania.

In a personal letter to HSN Associate Editor Elmer Leehman accompanying the paratype for the Bishop Museum, Blocher reported some of the circumstances of his find.

"In mid-September 1978, strong ground swells — evidently caused by a 'seaquake' in the Mozambique Channel — washed shells onto the Grand Recif at Tuleare," he wrote. "Some were shells never seen there before, or only as an occasional worn beach specimen.

"*Tutufa* Jousseume, 1881, was raised to genus rank by Opinion 1034 in the *Bulletin of Zoological Nomenclature* No. 33 in 1977.

"*Tutufa nigrita* is the fourth known species to occur in the Indian Ocean. It is closest to *T. rubita* Linne, 1758, from which *T. nigrita* differs in sev-

Great Barrier Reef Marine Park Moving Toward Realization

By **BLANCHE BOORMAN**

ROCKHAMPTON, QLND — The first section of the Great Barrier Reef Marine Park officially came into existence late in October 1979, when the declaration was published in the *Australian Commonwealth Gazette*.

To be known as the Capricorn Section, the new park comprises the southern portion of the Barrier Reef which has the largest number of cays and atolls. The central section is mainly submerged reefs. Only from Townsville northward does the reef again approach the coastline and the cays and atolls again become accessible.

The Capricorn Section was declared first because it was closest to centers of population. Being reasonably accessible, the islands are the most used — or perhaps, in these days of fast launches, "over-used" is a better word.

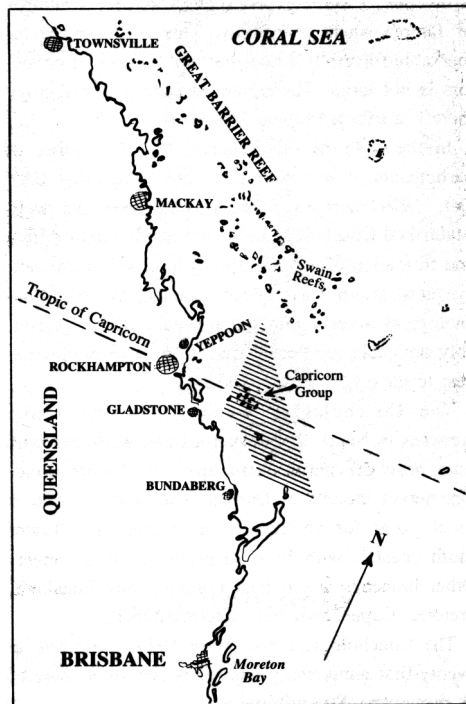
The Great Barrier Reef Marine Park Authority proposes to close some parts completely for use as undisturbed control areas. Other islands would be open to the public on a rotational basis. Permits will be necessary for anyone wishing to camp.

The Marine Park Authority has invited interested persons to make representations regarding the plan. This was intended to give prospective park users a chance to be heard on their ideas for using and controlling the area. The results will be gazetted about April, when we will again have a chance to be heard before the final plan is put into effect.

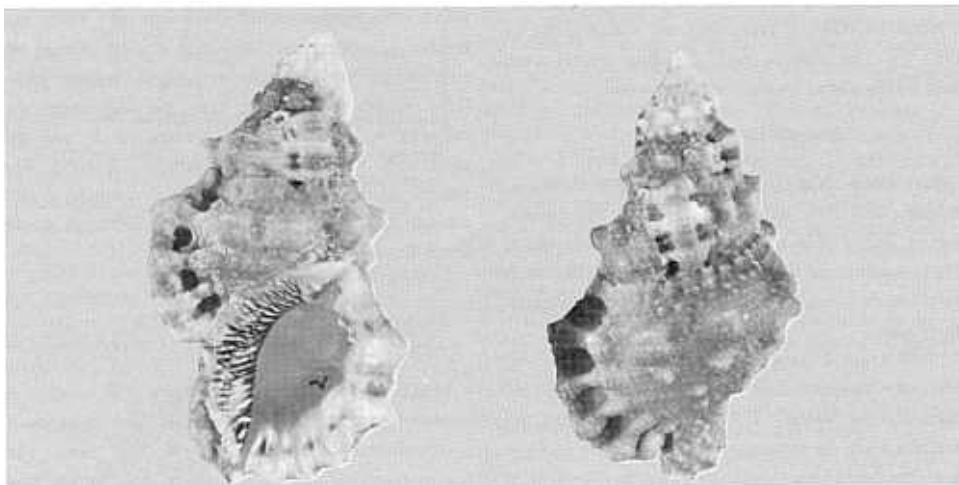
Needless to say, shell collectors are hoping that some collecting will be permitted, although the inevitability of a bag limit is generally accepted. How to arrive at a limit for shells must be quite a problem for the Park Authority people. We know that counts have been made of sedentary fish, so that comparisons between rarely used and regularly used areas should be relatively simple. Not so with shells, however.

Since the islands are about 60 miles off the coast from here, we are hopeful that some camping will be permitted. Numbers, however, must be strictly controlled.

Many families in this area spend their vacations camping on the reef islands. I know a number of young people who have been regular visitors since they were two or three years old. They have grown up with a great love for the reef and its inhabitants, and a strong wish that it be preserved.



eral constant respects — mainly by the structure of its columella, which has yellowish prominent plications, the interstices filled with blackish brown, which characteristic was responsible for the name of the new species."



Tutufa nigrita paratype

Photo: Blocher

Hawaiian Shell News

ISSN 0017-8624

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(Founded in 1941)

P. O. Box 10391 Honolulu, Hawaii 96816

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The Society meets the first Wednesday of each month at the Hawaii National Guard headquarters, Diamond Head Road & 22nd Avenue, Honolulu at 7:30 p.m.

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WELCOME TO HAWAII!!

HMS members visiting Hawaii are invited to contact the Society while in Honolulu. Please keep in mind, however, that the Society office is open irregularly, and that it does not have a telephone. Society officers are listed individually in the telephone book. If in doubt, ask the Waikiki Aquarium or the Bishop Museum for names. Better still, write to the Society in advance.

REEFCOMBING

The U.S. Associated Press Almanac describes the Republic of South Africa as "a shining, pleasant land (with) broad vistas of high veldt, seacoast, desert and mountains." Its area is put at 471,800 square miles — a little less than twice the size of our State of Texas — and the population is in the range of 25,000,000. Another vital statistic is that it has something like 2,500 miles of coastline, about equally divided between the warm waters of the Indian Ocean and the often tempestuous South Atlantic.

Among other commendable features, South Africa is notable for some expert shellers and for a number of famous shell collections. This is the more remarkable for the fact that the total number of collectors is not large. The advanced state of malacology there is a tribute to their dedication.

In the light of this relatively small number of participants, it was with some misgivings that HSN Oct. 1979 reported a break-away from the well-established Conchological Society of Southern Africa and formation of a Natal Shell Club. As it turns out, the new group was indeed formed, but the Conchological Society remains alive and well. Reasonably amicable relations between the two bodies appear to have been established.

The Conchological Society has two active branches in Natal, the prosperous and well-developed state near the northeastern apex of the Republic. One serves the city of Durban. The other provides a focal point for shellers living along the "lower south coast", with Port Shepstone as their center. Other branches are at East London, Port Elizabeth, Pretoria, Cape Town and Pietermaritzburg.

The Conchological Society in 1979 celebrated its twenty-first anniversary with a special color issue of its bi-monthly *Strandloper*.

"It was our first venture into colored illustrations," wrote Editor David Freeman with justifiable pride. Color is "difficult to finance with only about 400 members, but we think it was worth the trouble and expense."

The Conchological Society of Southern Africa welcomes overseas members, incidentally. The subscription is US\$9 a year, plus an entrance fee of US\$1.50. The address is P. O. Box 98, Howard Place 7450, Cape, South Africa.

Anyone for Melanism?

Clark Brean is a high school teacher at Lebanon, Oregon, with B.S. degrees in zoology and general science, and a M.S. in science education. He also is a new member of HMS and in writing to the Society about dues, etc. he asked for help in an interesting project.

"For years I have been working with invertebrates, specializing in *Cypraea* and near-*Cypraea*," he wrote. "I would like to continue my graduate work on the causation of melanism in *Cypraea*, but have been unable to locate anyone who is interested in, or currently working in, this field. Do

you know of anyone?"

Any takers? Write directly to Clark Brean, 705 E. Sherman, Lebanon, OR 97355.

A Shell By Any Other Name . . .

"As an amateur collector stuck in the unrealistic rut of thinking that mollusks are biological creatures which should be studied and named with some scientific care, I read with interest the suggestion by Charles Cardin (HSN Nov. 1979) that we encourage collectors and dealers to give new names to shells which vary in color or form from other shells of the same species," wrote long-time HMS member Ed Womack from Lompoc, California.

Womack, it should be added, is a refugee from Hawaii, where he was a frequent diving and shelling buddy of Society officers for several years. So we tend to pay close attention to his remarks, however hotly they may be delivered.

"At first, I wondered if Cardin could be serious. How could the proliferation of names *simplify* the taxological situation for amateurs who cannot remember the thousands of names already in use?"

"Then I realized that Cardin is very serious, and for good reason. He wrote that he is 'not (yet) the busiest shell dealer in the world,' but I suspect that he is working at it.

"As he said, people buy shells because they are beautiful. As he did not say, people also buy shells, sight unseen, from dealers' lists because they want to acquire new species.

"Cardin's suggestion would encourage dealers all over the world to list esoteric names which appear on no other dealer's list. The dealer would be busier yet, and the customer would not know that his 'new species' is only a color or morph variation of a more common shell until it is too late."

Womack — who obviously has little faith in shell dealers as a morph variation of Mankind — concluded with a proposal that a system of guarantees and penalties be established to go with the orgy of naming he foresees. The idea probably would not be popular with dealers.

While sympathizing with Ed Womack in his anguish over irresponsible shell naming, HSN has trouble accepting the idea that dealers should be singled out for their part in a much broader problem. As has often been said, no one forces the collector to buy a "new" species (or to pay the sometimes exorbitant price quoted). Anyone who orders, sight unseen, an "unofficially named shell" almost by definition has to know enough about shells to realize what he is doing.

HMS Members: Nonmembers will receive a complimentary copy of *Hawaiian Shell News* (with a membership application) if you send the Corresponding Secretary their full name and address.

Conus questions:

C. malacanus Hwass and **C. eximius** Reeve

By DIETER ROCKEL

DARMSTADT — John K. Tucker has attempted to show (HSN May 1978) that *Conus subcarinatus* Sowerby, 1865, *C. eximius* Reeve, 1848, and *C. multicatenuatus* Sowerby, 1865 are conspecific with *C. malacanus* Hwass, 1792.

I regret I must disagree with some of Tucker's statements and will briefly substantiate my objections, as follows:

1. *Conus eximius* Reeve: Tucker believes that the holotype of *C. eximius*, as well as specimens such as the figure by Hinton, are in reality small *C. malacanus*. He recognizes clearly that there is an evident difference in the spire form: "The early whorls of the larger *C. malacanus* are much more elevated than are the last formed whorls."

That is indeed a most important difference — not, however, between larger and smaller *C. malacanus*, but between *C. malacanus* and *C. eximius*. This can be shown by reference to series of *C. malacanus* and *C. eximius* in different sizes.

In respect to the shape of the spire, each species is homogenous from the small to the large. Tucker's assumption, that specimens around 25mm are called *C. eximius* and larger than 40mm are ordinarily identified as *C. malacanus*, seems to me to be erroneous. The largest *C. eximius* figured by me is 58mm (a record?) and is obviously distinct from *C. malacanus* specimens of similar size. (right).

Pattern does not seem to be a useful characteristic to review the validity of *C. eximius*. More or less interrupted bands are here and there, but I am willing to admit that they occur more on *C. malacanus* than on *eximius*.

Much more important than comparisons of the

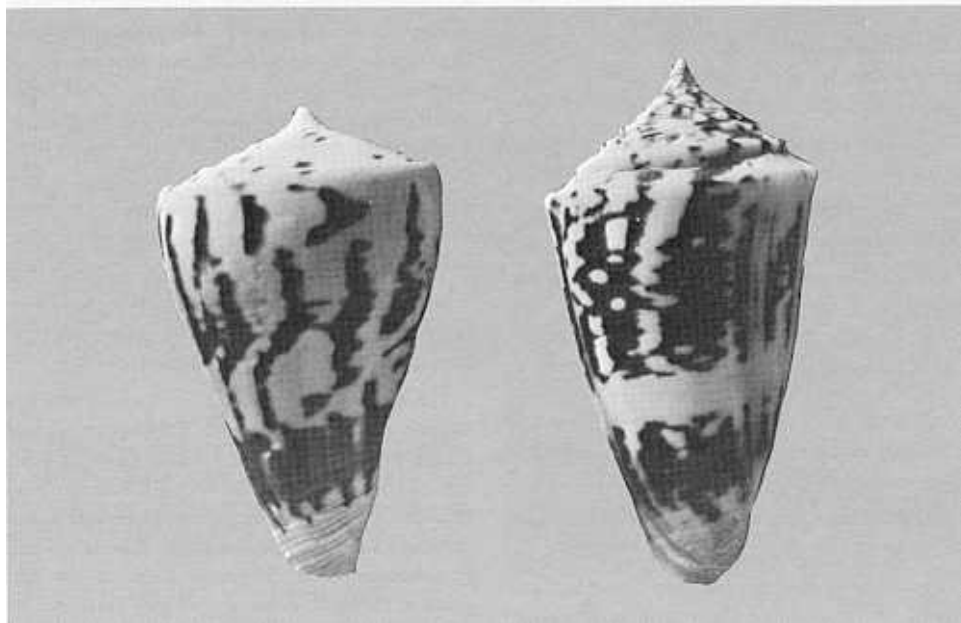
Approx. life size *Conus malacanus* Hwass*C. eximius* Reeve

Photo: Rockel

pattern are the following criteria:

- Size: *C. malacanus* has an average size of 60mm; *C. eximius* averages 30-35mm.
- The spire (see above).
- The shape of the last whorl: *C. malacanus* is a heavier, more broad shouldered shell; *C. eximius* is light and graceful.
- The surface of *C. eximius* is smoother and more glossy than *C. malacanus*.

I am convinced that *C. malacanus* and *C. eximius* are distinct valid species. *Conus eximius*

seems to be limited to the shores of the Bay of Bengal; both *C. malacanus* and *C. eximius* live side by side on India's east coast. The occurrence of *C. malacanus* in the Pacific seems not to have been proven. In any case, neither Tucker's fig. 5 nor his fig. 6 can be accepted as *C. malacanus* forms.

2. *Conus subcarinatus* Sowerby: I consider *C. subcarinatus* to be conspecific not with *C. malacanus*, but with *C. eximius*. You may compare the types of *C. subcarinatus* (HSN May 1978), with the largest *C. eximius* specimens (fig. 2 above). The similarity is evident. Tucker mentions in this connection that his fig. 5 should be very similar to Sowerby's paralectotype of *C. subcarinatus*, but also to some deep-water "malacanus" from Taiwan, figured by Old (HSN Nov. 1975). I do not agree with this view and identify the specimen fig. 5 as conspecific with what is ordinarily called *C. coffeae*, *C. kermadecensis* or *C. fulmineus* (I consider all these names invalid). Old's figures of Taiwan "C. malacanus" (HSN Nov. 1975) are conspecific with the newly described *C. tribblei*, Walls, broad form.

3. *Conus multicatenuatus* Sowerby: It is meritorious that Tucker pictured in all cases the available type material, so everyone with Conidae experience can see for himself that indeed this *C. multicatenuatus* is not *C. acuminatus* (locumtenes Bl.) — Wagner and Abbott's *Standard Catalog* notwithstanding. I agree with Tucker in respect to the close similarity of the types of *C. multicatenuatus* and *C. eximius*. But if *C. eximius* is to be a valid species, it is a logical conclusion to define *C. multicatenuatus* as a junior synonym of *C. eximius* Reeve.

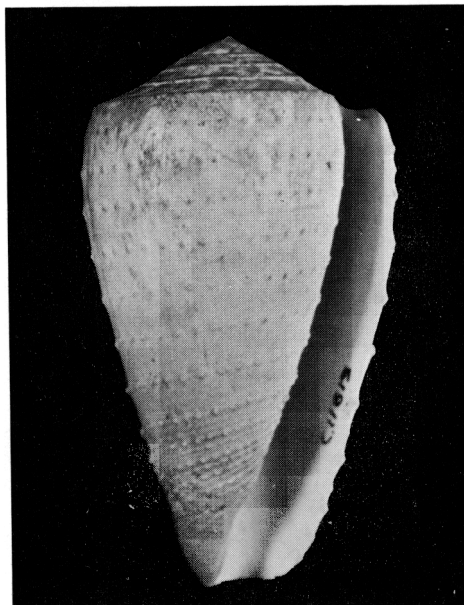
(Dr. Rockel's references are on page five)

ON THE IDENTITY OF *Conus sophiae* BRAZIER, 1875

By WALTER O. CERNOHORSKY

AUCKLAND — In his 1979 work, *Cone Shells: a Synopsis of the Living Conidae*, Walls listed in the section of doubtful species of Conidae the species *Conus sophiae* Brazier, 1875 (*Proc. Linn. Soc. New South Wales*), described from Hammond's or Bannieta Id. [= New Georgia Id.], Solomon Ids. Walls presumed that the type has been lost and tentatively associated the species with *C. catus* Linnaeus.

Many of Brazier's molluscan types are in the Australian Museum, Sydney. Among these is the holotype of *Conus sophiae* Brazier, No. C-11613, length 39.5mm, width 22.1mm, height of aperture 35.2mm. This holotype is undoubtedly the granulose form of *C. planorbis* Born, 1778, and a similar pustulose form has been illustrated by Reeve (1843, *Conch. Icon.* 1:fig. 197b) and Cernohorsky (1964, *Veliger*, 7(2):pl. 14, fig. 29a). An interesting synopsis on smooth and granulated forms of *Conus* has been published by Coomans (1973, *Malacologia*, 14:321).

*Conus sophiae* holotype

HERE'S MORE ABOUT THOSE BAKED FAKES

By R. H. JONES

SOUTH EUCLID — Some further thoughts on baking shells (see HSN Feb. 1980, Page 1). I doubt seriously that baking, if done "properly," can be detected except for the color change.

The secret is in the baking. When expertly done, there is no cracking or crazing of the shell. This is true even with specimens that are heavily callused.

I examined specimens under 15X magnification.

Nor does there need to be any iridescence of the nacre. In fact, the appearance of the nacre is "improved" in some specimens!

The general effect of baking is to lighten all colors. Some seem to disappear, others, are merely changed. This may be because of the transformation of constituent colors, or it may be an actual color change.

One thing is certain: Some very interesting "varieties" can be created — a dangerous situation.

It would be interesting to develop a "before" and "after" catalog of baked shells to serve as a reference to keep this potential problem from developing.

Incidentally, I have only examined *Cypraea*. Has anyone had experience with "baked" cones, miters or volutes?

HMS Junior Shell Club News

The HMS Junior Shell Club's first meeting of the new year was held January 4 at the Hall of Discovery in the Bishop Museum, Honolulu. The attendance was 64 youngsters and 38 adults — the largest turn-out since we started meeting at the Museum.

We did not have a guest speaker, but Bill Christensen (HMS Director who maintains liaison with the juniors) talked to us about the 12 major gastropod families. He also told us about his plans for membership cards for our club, and asked for ideas for a club symbol.

Mr. Christensen also discussed the giant clam from Eniwetok now on display at the Waikiki Aquarium, weighing 350 to 400 pounds.

The most exciting part of the evening was the election of officers for 1980. Christopher Ho was chosen as president. He is a fourth grader at Iolani School and a winner at the 1979 HMS Shell Show. Monique Arnette, a seventh grader at Hawaii Baptist Academy and past president of the club, is our new first vice president. Benjamin Kam, in the fifth grade at Punahou, is the second vice president. He and Monique shared the Ellis Cross Award last year.

Yours truly was chosen as secretary. I'm in the fifth grade in Lunalilo School.

After the business part of the meeting, we all

A Senior Citizen Among the Mercenaria

ST. PETERSBURG — At the mouth of the canal that connects Maximo Mooring with Boca Ciega Bay here, I picked up a fairly large *Mercenaria mercenaria* one morning in January 1978. Not only was its size impressive, but it had a venerable look that prompted me to take it home for further examination.

After I had cleaned it, I took one valve to the Florida State Department of Natural Resources, where it was cut in two with a diamond saw.

Acting on the theory that a clam of this sort adds growth lines annually, we counted the "rings" and came to the conclusion that my specimen was 17 years old.

On subsequent visits to the bit of beach where I found my clam I have seen quite a few others of comparable size. Obviously, the Tampa Bay area is a favorite with senior citizens among the *M. mercenaria*, also.

Lula B. Siekman

moved to the Shell Room for refreshments.

Ken Salva Cruz

(Ken is a grandson of Karl Greene, early member of HMS and founder of the Karl Greene Collection now housed at Bishop Museum.)



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Cypraea pyriformis: Variations in Color, Pattern and Banding

By RAY SUMMERS

PETALUMA, CA — Lawrence Thomas (possessor of a fine cowry collection) and his son David, who run The Shell Shop at Morro Bay, California, in 1976 sent me two specimens of a puzzling *Cypraea* from South India. They asked for my comments.

I felt at that time that we had freak specimens of *Cypraea pyriformis* Gray, 1824. Before offering any definite opinions, however, I wanted to see more specimens.

When, a short time later, more specimens arrived from South India there could be no doubt that the puzzling newcomers were *C. pyriformis*. I reported back to the Thomases, who agreed with my diagnosis. Although some shells lacked the typical *pyriformis* pattern and tooth coloring, the progression was obvious.

Recently I read Dr. Guglielmo Biraghi's article naming *Cypraea angioyorum* in *La Conchiglia/The Shell*. I found that his description fits my original specimens quite well.

Nearly all the specimens I looked at were mature. Some had color on the columellar teeth, spotted margins, and the dorsal pattern of minute light chestnut-brown specks of *pyriformis*. Biraghi's description stated that these features are not present in *angioyorum*. Some specimens I have seen do not have dorsal banding.

It is unfortunate that Dr. Biraghi, before writing his description, did not have an opportunity to see variations of *angioyorum* with definite characteristics of *pyriformis*. I have *pyriformis* from several areas, and I find it to be an extremely variable species.

One specimen of *pyriformis* which I obtained in 1935 from an old collection is smaller and paler, and the color on the columellar teeth does not extend as far as usual. The locality slip says Ceylon (now Sri Lanka), but I do not know how reliable the data are.

In his description of *angioyorum*, Dr. Biraghi remarked that *angioyorum*'s relationship to *pyriformis* and *subviridis* should be investigated further. The foregoing information should make the relationship clearer, and I offer it because of my interest in the taxonomy of the *Cypraeidae*.

Conus malacanus and *C. eximius*
from page three

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MY FIRST SHELL

NORFOLK, ENGLAND — In common with most collectors, my first shells were picked up from a local beach, taken home, and hesitantly identified. I dreamt of coral reefs, blue skies and unlimited shells, but this seemed a lifetime away from England in the gloom of winter.

The opportunity suddenly presented to take a holiday. Appropriately, the Seychelle Islands were chosen. My first "real" shells, hopefully, could be found there.

The dawn broke fast the morning after my arrival on Mahe Island. The tide was low. Keen for a prebreakfast swim in the Indian Ocean, I strolled across the small expanse of coarse greyish sand. In a shallow pool, two small brown objects lay near a knob of broken coral. Approaching with some caution, not to mention excitement, I realized they appeared unmistakably conelike in outline.

They were dark brown and rough in texture, with algae growing on them. They did not resemble my beautifully coloured and shining cones at home!

I turned them over. A faint dash of colour, a yellowish white, appeared at the aperture.

I promptly picked them up, taking care to handle them at the broad end. I had read that some cones could poison you with darts!

Popping them into a plastic bag, I enjoyed my swim. On returning to the hotel, I carefully cleaned out the animal, preserving the small operculum. It was only on my return to England that I was able to remove the periostracum, the dark brown colour, and reveal *Conus litteratus*.

Finding them had produced intense excitement and lasting memories. Although a common species, these two shells will always remain my first real shells. I found them myself and, more important, I discovered the exact environment in which they lived.

K. S. Erskine

MAUI OBSERVATIONS

LAHAINA — I read with interest the observation by Wes Thorsson and Ray McKinsey that *Cypraea teres* lay their eggs on the North Shore of Oahu between April and late October (*HSN* Sept. 1979).

Here on the island of Maui, early in January I turned a rock in about one foot of water and found a 30mm *C. teres* "sitting" on a large yellow egg mass. The beautiful orange mantle hid the egg mass until I touched it.

So *teres* lay eggs in "winter," also.

I am not sure whether it proves anything, but I found the above *C. teres* only about 60 yards from where Mike Severns found his live *C. erosa* (*HSN* Jan. 1980).

Dr. Ed Dunlap

Recent Finds

Haifa, Israel

Dear Mr. Higa:

While snorkeling on Fungu Mkadya reef, Dar-es-Salaam, in Tanzania, I found a live *Conus retifer* Menke in October 1979. It was in four feet of water, hidden in a thick stand of red coral. The tide was at its lowest point (-0.4) and the water very clear and warm.

The shell itself measured 27.6mm, and was narrow and elongated with a rounded shoulder. The

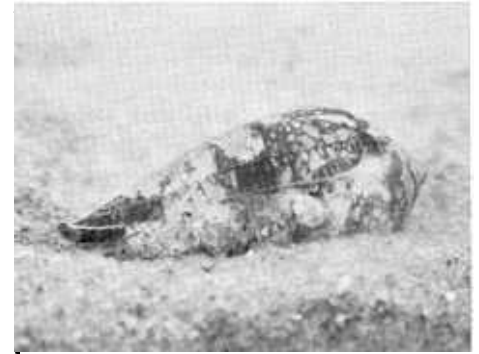


Photo: Dr. Gary M. Bernacsek

animal was the same brown as the shell, except for the siphon which had a red tip followed by alternating black and white bands.

Conus retifer is extremely rare in East Africa. I understand that it has been collected only once before on the Tanzanian mainland — by my uncle, Mischa Fainzilber, diving on the same reef several years ago. He also secured a few beach specimens on the offshore island of Zanzibar after a heavy storm. One of the latter was illustrated in Walls' *Cone Shells*.

Four others from the same source are in the Fainzilber collection (now housed in Haifa, Israel). They measure 42.2, 38.8, 35.1 and 33.8mm respectively. All are relatively wider at the shoulder and more conic than the Dar-es-Salaam specimens.

Mike Fainzilber

HOUSTON — An apparent new record for *Murex fulvescens* (Sowerby, 1834) has been set by a specimen obtained late in 1979 by Mrs. Betty Allen of Port Isabel, Texas. It measures 21.35cm. The largest previously registered with Bob Wagner for *The Standard Catalog* was 17.7cm.

Once regarded as rare, *M. fulvescens* now is commonly found in relatively shallow water of the Gulf of Mexico. (American Malacological Union members who attended the 1979 meeting in Corpus Christi found a number while scuba diving around oil rigs in 40 to 80 feet of water.)

Mrs. Allen receives shells regularly from shrimp boats working the Texas-Louisiana shoreline. The record specimen was in a basket of shells purchased from a shrimper last year. The operculum was not identified, although Mrs. Allen believes it rests among a handful of fragments in the bottom of the basket.

The Way We Were: 3. Creating A Famous Shell Collection By JEAN CATE

RANCHO SANTA FE, CA — As I review our years in malacology, it becomes more and more difficult to set them down on paper in a chronological — or even just plain logical — fashion. So many memories keep tumbling in on top of others that I shall have to tackle them in bursts of more or less related topics, whether they happened next or not. Perhaps it doesn't really matter. One important area to be discussed, of course, is our collection itself and how it grew.

During our early years we added important bulk by purchasing three collections, though not all at once. I already have mentioned the Lloyd Berry collection, largely of *Cypraea* but with many other nice items as well.

One of the remarkable things about Lloyd's collection was the way in which he housed it — in candy boxes! Although unconventional, possibly even unique, it was an ingenious solution to Lloyd's biggest problem, a lack of space. Living in a one-room apartment with few cupboards, he devised a simple method for housing his shells that worked perfectly for him.

He arranged with the local outlet of a chain of candy stores to collect all its new, empty boxes having damaged, torn paper covers — that is, the glossy part carrying the company's logo, similar to the dust jacket on a book. Upon removing these, he had clean, prefabricated cartons in three graduated depths (1, 2, and 3-pound boxes), but all with identical lengths and widths. He then carefully cut and fitted tiny sections of posterboard to create a neat compartment for every shell specimen.

He could tie a cord around a stack of 15 to 20 full cartons and easily carry them to his car (a heart patient, he was careful not to lift heavy weights), either for exhibiting or whenever he moved to a new apartment. As a noncooking bachelor, he was able to use his otherwise empty kitchen cupboards as shell cabinets, yet the boxes were entirely portable.

There were two problems with his system, we found. First, he had deliberately avoided labeling his boxes (though each specimen was well labeled inside). He was afraid the choicest shells might be stolen. Further, although all cowries were kept together, he was unable to keep the different genera separated, for each shell when it was received would be placed in its own tailored compartment, mostly according to size. Thus classification was regulated by the depth of the box — tiny shells in the one-pound size, medium ones in the two-pounds, and so on.

It grieved us to have to rearrange Lloyd's collection when it came to us, and to destroy his neat, painstakingly made containers, but there was no way for us to carry on a significant study. Lloyd was quick to admit these shortcomings. He was familiar with his collection and could locate any specimen within moments, thanks to a secret code of colored paper squares pasted on the boxends. We have never seen any other collection housed in this way.

Lloyd arranged for his collection to be sold for the benefit of the local Children's Hospital, with my husband Crawford having first refusal. We believe he would have been pleased to know how lovingly it was kept and used for over 20 years, in addition to his satisfaction with having helped the children.

A second collection purchased in our early years belonged to Rubie Sharon of Redondo Beach, California. Rubie was a collector's collector; she had dolls, postcards, rocks, bottles, and all sorts of things, including a fine collection of local shells she had put together before the rich Southern California fauna largely disappeared. Her shells included spectacular growth series of such things as *Pteropurpura macroptera* (Deshayes, 1839) and *Ceratostoma foliatum* (Gmelin, 1791) and others which are all too seldom seen on our beaches today.

One shell Rubie would not relinquish was the type specimen of *Lamellaria sharonae*, named by George Willett in her honor in 1939. The remainder of the type lot did come to us, however, and is now at the Los Angeles Museum of Natural History. The holotype may have been thrown away by Rubie's heirs.

An interesting bit of collecting lore we learned from Rubie is that she used to harvest *Cypraea spadicea* by baiting a wire hanging garden basket with rotten meat or fish and fastening it, at low tide, to a rock which would later become submerged. By the next low tide, her basket usually contained about a dozen chestnut cowries.

The third large addition to our collection came from the estate of David K. Baker of San Diego, who died suddenly as the result of the careless use of DDT in spraying his roses. David worked at the San Diego Museum of Natural History and had accepted some of the duplicate shells in lieu of a salary.

By the time we learned that his collection was on the market, it had been picked over by other collectors for nearly a year. We went to see what *Murex* might be left. Mrs. Baker convinced us we should take all the shells that remained. This was the source of most of our *Comus* collection. Our first *Tibia fusus* was there, too — a splendid specimen that had been overlooked due to its location in the very front of a top drawer, well above eye level. We well remember the thrill of discovering this one!

The Baker collection was housed in three antique J & P Coats thread cabinets, themselves as collectible as the shells and still in our possession. David's shells were quite well labeled, with one glaring exception. It was a tray of mixed items which bore this astonishing information: "Some assorted unidentified specimens from down below."

Whether he meant "Down Under" (Australia) or simply scraped together from under his desk we shall never know.

The rest of our collection was acquired more or less piecemeal; some were bought, some were gifts, and some were exchanged with friends around the world, many of whom are still in touch with us. During our researching years of specializing in Cypraea and Mitridae, much of that material came to us for identification, with the sender allowing us to keep a portion in exchange for our work.

Some of our shells were self-collected, although field work was never our metier. This attitude was primarily because our main interest lay in the exotic shells from far distant habitats, but I must confess at least a teeny part of it, at least on my part, was due to a disinclination for hard physical labor. However, when we were finally able to travel to those exotic places in our later years, we worked as hard as anybody and turned our share of rocks over and back. But by that time we were retired and were no longer young enough to do as much as we might have wished.

I can not hazard a guess as to the ultimate size of our collection. Crawford had "about 20,000 cowries", give or take a few thousand! I had about 80 drawers of miters, like the crazy woman who liked pancakes and had seven trunks full. Some of these drawers contained only a single species, but in depth, representing many different collecting localities. We are more than pleased to know that most of these have been purchased by the American Museum of Natural History.

Without doubt the dumbest question ever asked us — and it came all too often, right on the heels of "Do you polish your cowries yourself?" — is "How many shells do you have?" Anyone who has time to count the individual shells in any large collection should have been doing many other things a lot more useful.

When we returned to California in 1975 after a few years in Florida, our new home, while large enough, was not "right" for a big shell collection. By now we were doing other things and — to be brutally honest, although Crawford objects to the description — our collection had become mostly a beautiful hoard, a status symbol or whatever one wants to call it. We still loved it all, of course, and I had constantly used many of our own specimens to photograph for my SHELL-LECTURES, a very handy source indeed.

After serious consideration we decided it was time to let it go. So we sold most of it, retaining only keepsakes and the material Crawford was still working on, namely the Ovulidae, Eratoidae and Triviidae. Now that his trilogy of monographs has been completed, the primary type material has all been transferred to the Los Angeles Museum of Natural History.

What's left are mostly bits and pieces, odds and ends kept mostly for sentimental reasons. One drawerful of colorful *Spondylus* has been retained to be used on rare occasions as very special gifts for very special people, whether they are shell collectors or not.

Every now and then we are pleased to hear from someone, somewhere — possibly a stranger, sometimes an old friend — that he now owns our "so-and-so shell," bearing our label, and that he is enjoying it as we did. We are perfectly satisfied at having sold our collection, knowing within our lifetimes that it is continuing to give pleasure to many people around the world instead of gathering dust, still in its crates in some museum's storeroom.

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Tree Snails Can Make a Difference

By HARRY G. LEE

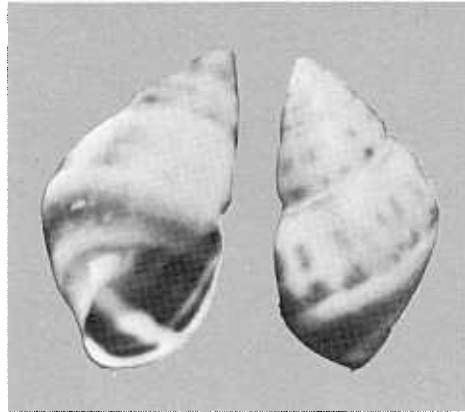
JACKSONVILLE, FL. — One doesn't normally associate arboreal snails with northeastern Florida, but there are no less than seven species of land snails which have an interesting predilection for life in trees. In the case of *Drymaeus dormani* (Binny, 1852), this habit has been the source of great interest.

Like its cousins, the Liguus, *D. dormani* is found in association with the saprophytic sooty mold which thrives best on smooth-barked trees. Throughout much of its range (basically central Florida) *D. dormani* is associated with citrus trees. It was noted long ago that "sooty mold" kept company with the citrus growers bane — the white fly. The larvae of these pests excrete honey dew which encourages growth of the sooty mold of orange (*Meliola*). The association between mold and fly larvae is so constant that badly infested groves may be recognized at a distance by the heavily coated dark foliage.

Sooty mold, although not a parasite on the orange tree, produces discoloration of fruits and probably impairs proper nutrition of heavily affected plants by smothering the leaf surfaces. There is a measurable economic impact on orange growers, who must wash the fruit before shipping to minimize decay and maximize consumer appeal.

Enter Dorman's tree snail. Years ago naturalists observed that citrus groves "infested" with this lovely snail were "protected" from sooty mold on leaves, bark, and fruit without harming these parts of the trees. According to one source, "the trees that are cleaned stand out conspicuously from the surrounding trees by their bright foliage and clean trunks, (and) the fruit thus cleaned has a better color and probably ripens earlier."

While some groves probably were naturally "attacked" by *D. dormani*, for many years these snails were purposely introduced into groves to the benefit of the oranges and growers. The more recent reliance on pesticides has overshadowed the use of tree snails (while probably killing these beneficial



Drymaeus dormani Photo: Lee
creatures indiscriminately).

The future of the snail in orange groves is uncertain, but it may someday have a resurgence as man becomes increasingly aware of the environmental hazards, increasing costs, and only temporary effectiveness of chemical pesticides. What we will need is a biological control for the insect parasites of the orange which is as effective as the work done on sooty mold by our molluscan friend, *Drymaeus dormani*.

From Jacksonville Shell-o-Gram

On West African Cones

BRAINTREE, England — While in Portugal last year, I was fortunate enough to obtain some more Cabo Verde Islands shells with good authentic data and also some from Angola. The data are particularly important because I am warned that the Portuguese dealer/professional collectors are falsifying data to protect their sources as some species are being "fished out".

I am told that for every 100 specimens of *Conus cuneolus* taken, only one or two are in specimen (gem) condition after cleaning. The others are destroyed to protect the price levels and the illusion of rarity.

The falsification of data confuses the true picture of lots of small closed ecological units, each very distinct and unique. I gather that of other cones, huge numbers get killed just to produce a small number of collector's shells.

Graham Saunders

Speaking of Books:

PULMONATES 2A: SYSTEMATICS, EVOLUTION, and ECOLOGY V. Fretter and J. Peake, eds. 540 pp. 1978. London: Academic Press. \$50.75.

PULMONATES 2 B: ECONOMIC MALACOLOGICAL WITH PARTICULAR REFERENCE TO ACHATINA FULICA. V. Fretter and J. Peake, eds. 150 pp. 1979. London: Academic Press. \$25.20.

Reviewed by CARL C. CHRISTENSEN

Volume 1 of *Pulmonates*, published in 1975, reviewed the physiology and functional morphology of pulmonate snails and slugs. The long-awaited Volume 2 has now appeared in two parts containing eleven contributions by recognized authorities on the systematics, ecology, and economic significance of members of the Subclass Pulmonata. Together, these works provide a comprehensive summary of the biology of these fascinating animals.

Volume 2A includes ten chapters; a mere listing of their titles does not do justice to the wealth of information presented but is perhaps the best way to describe their contents in the limited space available. These are: "Systematics and comparative morphology of the Basommatophora" by B. Hubendick; "Classification of the land Mollusca" by A. Solem; "Experimental methods in molluscan systematics" by G. M. Davis; "Chromosomes of pulmonate molluscs" by C. M. Patterson and J. B. Burch; "Genetic variation and natural selection in pulmonate molluscs" by B. Clarke, W. Arthur, D. T. Horsley, and D. T. Parkin; "Slugs — a study in applied ecology" by P. J. Hunter; "Pulmonate molluscs as intermediate hosts for digenetic trematodes" by D. S. Brown; "Ecology of freshwater pulmonates" by W. D. Russell-Hunter; "On the evolution of gastropods in ancient lakes" by K. J. Boss; and "Distribution and ecology of the Stylommatophora" by J. Peake.

Each of these is a highly competent review of its subject. The reader should be aware, however, that this book was long in press (chapters were submitted as early as 1972); coverage of recent literature is therefore not of uniform quality throughout. A lack of editorial care is sometimes evident in the spelling of taxonomic names. These are minor faults in an otherwise excellent volume.

Volume 2B is devoted entirely to an exhaustive update by A. R. Mead of his 1961 book on the giant African snail. His discussion of the use of carnivorous snails as a means of biological control of *Achatina* is of particular interest to residents of Hawaii and other Pacific islands; Mead points out that whatever their influence on the African snail, such voracious predators as *Euglandina* (now ubiquitous on Oahu and introduced elsewhere in Hawaii, Tahiti, Palau, etc.) can only have a seriously negative impact upon the unique and fast-disappearing Pacific land snail fauna.

The authors, editor, and publisher of these books



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are to be congratulated for making the body of scientific knowledge about pulmonates more readily accessible than ever before. It is to be hoped that this may stimulate additional students to enter a currently unfashionable sector of malacology.

An unfortunate but no doubt inevitable obstacle to the widespread availability of these books is their high cost. It will discourage purchase by all but major institutional libraries and committed pulmonate enthusiasts.

SEA SHELLS OF WESTERN EUROPE. By Philippe Bouchet, with photos by D. Danrigal and C. Huyghens. 139 pp. + index. Melbourne, FL: American Malacologists, Inc. \$8.95.

A refreshingly different volume on the living shells of Western Europe — with major emphasis on France — is being distributed by Dr. R. Tucker Abbott and his American Malacologists, Inc. of Melbourne, Florida. *Sea Shells of Western Europe* appeared first in 1979 as *Couquillages des Cotes Atlantiques et de la Manche*. HMS member Philippe Bouchet, of the French National Museum of Natural History was the author. Now it has been skillfully translated from the French by B. E. Picton.

The 50 pages of text constitute a fascinating easy-reading introduction to the ecology of the French coast. The relation of the sea bottom — boulders, sand, silt, or bare rock — to the seaweeds, kelps and algae, and their influence in turn on the marine animals living there, is pointed out dramatically. Unlike most shell books, it takes full account of the importance of the commercial exploitation of shallow-water molluscs.

The photography is spectacular. In addition to 142 close-ups of live animals in their natural habitats, 11 plates identify some 200 of the common shells of Europe. The use of color is outstanding.

Sea Shells of Western Europe is a smallish book (approximately 7½ by 5 inches) with a glossy hard back — the sort of thing that fits easily into a jacket pocket. You may never have an opportunity to roam the beaches of Brittany or the Channel, but you will find Bouchet's book a handy guide to the shells of that area, nonetheless. S.L.

Japanese Publication

The Institute of Malacology in Tokyo recently issued Vol. 1, No. 1 of its new *Bulletin*. Nine new muricids were described and named by Sadao Kosuge, who appears to be the guiding genius. The new species include *Pterynotus miyokoeae*, *Homalocantha anomaliae*, *Latiaxis mediopacifica*, *L. kawanishii*, *L. takahashii*, *L. fruticosus*, *L. cristatus*, *L. macutanica*, and *L. purpuraterminus* — mostly from the Central Philippines.

The printing and the photo reproduction are excellent. Descriptions, however, seem rather generalized. In addition to the new species, there are interesting reports on collections made by two Japanese research vessels in North Pacific waters.

There is no indication how often the new *Bulletin* is to be published, nor is there information on Institute membership or subscription rates. (A few copies of Vol. 1, No. 1 are available from P. W. Clover in Glen Ellen, CA.)

S.L.

Smiles and a Prize

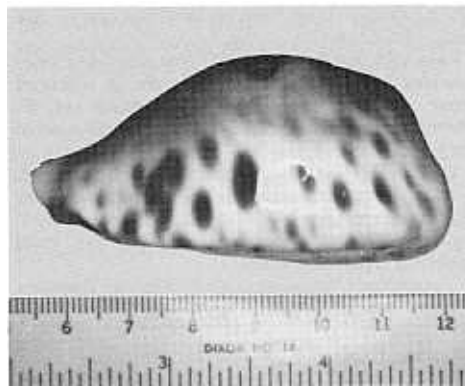


A recurring visitor to Honolulu, Dr. Bernard Stanfield (left, with HMS director Dave Arnette) is the recent recipient of the fine specimen of *Cypraea fultoni* Sowerby, 1903, figured below.

The shell was collected *ex pisce* off Durban, South Africa several years ago. It measures approximately 67mm.

Stanfield is presently stationed in West Germany with the U.S. Army. He plans another visit to Hawaii this year, he writes.

E.G.L.



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Don't Shoot the Shell Dealer, He's only . . .

By MARTY GILL

DEER PARK, NY — In the past few years, I've read several articles dealing with the difficulties that collectors occasionally encounter in purchasing shells from dealers. I have observed a close similarity with the problems that dealers face in trying to buy shells from worldwide sources.

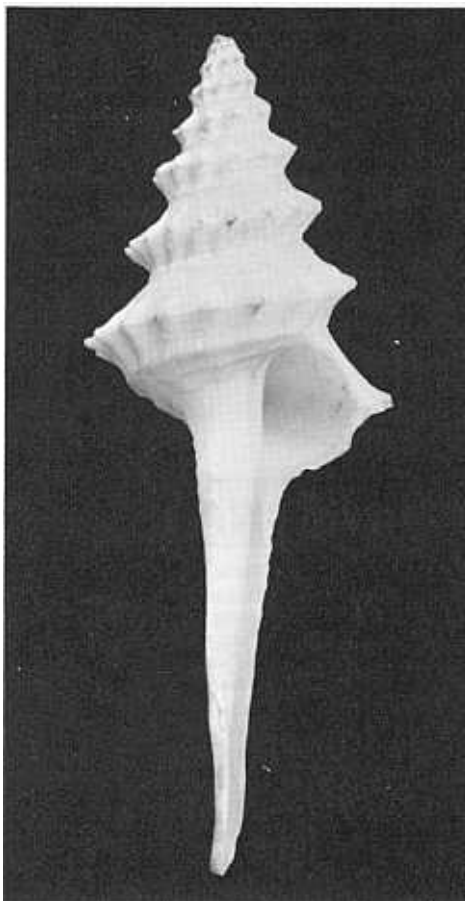
The first problem area in dealing with any new source of shells is trust. Is the source honest? More often a problem, does he really know what he is doing vis-a-vis identification, grading standards, etc? Problems in this area generally arise from ignorance, rather than avarice. If a collector gets a case of the "nervous shakes" the first time he makes an advance payment to a new dealer, imagine how a dealer feels, ordering much larger quantities!

The problem that most people seem to envision, the dishonest supplier, is actually very uncommon. This is primarily true because, in my experience, the overwhelming majority of shelling people — whether collectors, dealers or professionals — conduct themselves with scrupulous honesty and sincere good will. Those few suppliers who do fail to resist temptation find themselves developing a shaky reputation very rapidly.

I know of only two individuals in shelling who I think it would be fair to characterize as outright crooks. Both have become internationally notorious, making it difficult for them to continue trading (incidentally, neither holds himself out to be a shell dealer, but as a collector interested in exchange).

Other types of dishonesty can be a problem. Aside from the obvious (such as shells that have been altered), sources who offer lists indicating gem or fine grade specimens, but don't deliver same, can be very costly. A dealer receiving specimens that he simply could not sell to the rankest beginner, and would not sell as a matter of pride, is stuck at the very least with the cost of reshipping this junk — a cost which inevitably ends up in the right hand column of every dealer's list that collectors see.

Plain, forthright greed is another problem that drives up the prices of some shells with complete disregard to real scarcity. Everyone has heard, or read, rumors of dealers hoarding relatively high priced shells, hoping to keep the market from becoming glutted and preventing prices from dropping. For the most part, these rumors are exactly that —



Approx. X 1.5 Photo: Schoenberg
Columbarium eastwoodae Martin, 1881, used to be a "rare" shell. Recently, however, trawlers off South Africa have been bringing up specimens in good numbers and the rarity factor has fallen sharply. It is a pure white shell. This 63mm specimen was trawled in 150 fathoms.

rumors. Very few retail dealers or wholesale suppliers can afford to have large amounts of cash tied up in stock that sits, in hiding, for an extended period.

However, manipulations by local suppliers often have the same effect as hoarding. A good example is one Atlantic island on which there are only a few divers, all of them well known to each other. Their

shells are generally sold through two of the local people. The best known shells from this locale are in the \$20 and \$50 ranges, respectively.

Over the last few years, both of the local sellers have been demanding increasingly higher prices, for increasingly lower grade specimens. In three years, one of these shells has gone from \$15 retail to \$50 wholesale! Naturally, these shells have been appearing less and less on price lists.

One of the two suppliers, when informed that a new source had been found on the island — offering the same shells for the old prices — wrote back offering a "bounty" (in shells) for the name and address of this "rat-in-the-woodpile."

This certainly was not a case of cheating, or faking of identifications, or fudging on specimen quality — just a simple demand for more money, or no shells.

Of course, there are problems that have little to do with avarice or larceny. Some of the most difficult species to obtain come from places where, so help me, nobody seems to live — as least, nobody with an interest in shells. Most specimens endemic to such localities are represented by recirculating specimens from old collections, with the occasional new specimen turning up from a collector who has visited the area. One result is a slow, but steady, increase in prices. Another is growing frustration for both collectors and dealers, the former unable to add an especially desirable shell to his collection, the latter unable to sell highly coveted species, at any price.

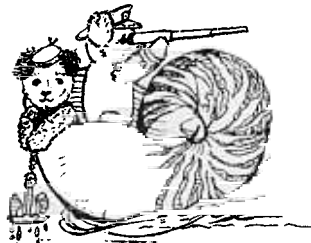
Politics as well as economics play a role, too. Many governments, especially of Third World nations, have been following a trend toward blanket legislation banning all collecting. In addition, the bureaucratic obstacles thrown before anyone attempting to deal with politically "out" nations can be frightful. Cuba is an excellent example. The scarcity of fresh specimens of Cuban terrestrial snails among U.S. dealer lists is a direct result of political conflict.

Similarly, changes in fishing methods — as simple as the length of trawling nets — can drastically change the availability of a species. One well known example is *Cypraea hirasei* Roberts, 1913. This shell, moderately priced 10 to 15 years ago, has been rendered a great rarity by changes in trawling methods off Japan.

Another frustrating problem is the now-you-see-'em-now-you-don't shell. A supplier offers a particular shell, at a good price, and a dealer buys a small stock to see how the item will sell. Surprisingly, collector demand immediately drains the small supply. Naturally the dealer reorders.

Now comes the problem: the shell was obtained from another source and simply isn't available anymore; OR the shell is suddenly in short supply, will you wait until it turns up again?; OR the supplier has disappeared entirely, never even replying to correspondence.

This last is maddening. I know of one gentleman



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in East Africa who has suddenly disappeared, and as suddenly resurfaced, at least three times in the past two years! Aside from the discomfort of having to tell 15 or 20 anxious customers that you just can't send them what they would like, there is the added concern for the welfare of people far away, with whom you have become friendly.

Last, there is the great guessing game, the most confusing problem of all — what does the collector want? It is an unceasing source of surprise — and occasional consternation — to discover which species sit unsold for months, and which are always in short supply, no matter how large my inventory.

It seems to me, having tried it both ways, that finding and obtaining shells offers much the same challenges and joys to both dealers and collectors. While the difficulties I've mentioned sometimes leave me swearing that I'm going to quit this business, without doubt I always add: 'I'll do it tomorrow.' There is no pleasure quite like opening a new parcel of shells, finding everything in order and measuring up to, or even surpassing, my expectations. Who else has Christmas in the mail so often?

Letter from South Africa

PRETORIA — We have had a remarkable demand for mollusca recently, which is surprising considering the large number of new dealers that are appearing in the U.S.A. almost every day. This demand worldwide must surely have some effect on the molluscan populations. All over the world specimens are being collected and sent through U.S. dealers and we feel sure that many areas must be overshelled.

Here in South Africa we are most certainly noting a drastic decline in our shell populations. This is certainly not caused from overcollecting, but by changing ecology. Our Durban Bay was once the richest shelling spot because of its sheltered position and large sandflats. Today we have only one sandflat left. The rest have been dredged away to make place for harbour berths.

The mangrove swamps were filled in to make a container berth. The port holds about 30 large vessels and often oil spillages occur. It is really quite depressing nowadays to walk these sandflats. Even the common shells are disappearing. *Strombus* and *Hydatina* have completely disappeared from their habitat.

The molluscan fauna of South Africa is a varied one, ranging from cold-water species found in the Cape Province to the subtropical species of the warmer Natal Province, where certain Indo-Pacific species are also found.

The rough seas which pound our coastline make diving impossible for many months of the year. Most live specimens are taken intertidally or by diving in sheltered bays. The dangers of the abnormally large waves and turbulent currents are well known to shipping and still account for many shipwrecks every year.

Yet these conditions have advantages in that, in the Cape Province, large quantities of shells are washed ashore that could not be acquired in any other way. For this reason South Africa is well known for its "beach" shells. In many cases these species have never been recorded alive. These beach shells are mostly in fresh dead condition.

Michael Meyer

From Gloria Maris, Journal of the
Belgian Society for Conchology, Antwerp.



HMS scholarship award winner Stan Jazwinski (center) must have heard Wes Thorsson's story previously. Otherwise, it was a serious moment at the HMS monthly meeting.

PERSONAL ADS

IN PREPARATION: Acta Conchyliorum, "Contributions to the Knowledge of Olividae" — Dr. Dietmar Griefeneder, Renate Wittig Skinner, Jens Hemmen and Margrit Widmer. Approximately 100 pages of ecological observations and analysis of habitats. 48 original photos in color. Subscription until 31 August, 1980 only. Send check for US\$27 or DM45 to Club Conchyliia, Am Steinern Kreuz 40, D-61 Darmstadt, West Germany. The book will appear at the end of 1980. No further editions.

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News of New Species; 10 from Brazil Waters

By JOHN K. TUCKER

Edward J. Petuch described 10 new species of gastropods from the Abrolhos Archipelago of Brazil in the *Proceedings of the Biological Society of Washington* ("New gastropods from the Abrolhos Archipelago and reef complex. Brazil." *Proc. Biol. Soc. Wash.*, 92(3):510-526, issued 18 October 1979). The new species are briefly summarized below.

Acmaea (Collisella) abrolhosensis Petuch. Holotype measures 22x19mm; deposited United States National Museum (USNM 780644); several paratypes (USNM 780645, Delaware Museum of Natural History-DMNH 121797, Museu Nacional do Brasil-MNB 3733, and collection of Rosenstiel School of Marine and Atmospheric Science, University of Miami-UMML 8163-8169) were also examined. Type locality: south side of Santa Barbara Island, Abrolhos Arch., Bahia State, Brazil. Distribution: known from the islands of Santa Barbara, Redonda, Siriba, Sueste, and Guarita. Diagnosis: Shell flattened, smooth, oval in outline; apex pointed with sloping sides; externally black with wide white bands radiating from apex; internally cream with dark exterior radial color pattern showing through; callus dark brown with bluish white center; edge of shell scalloped with margin conforming to radial color pattern. Differs from *A. noronhensis* E. A. Smith in possessing white markings; differs from *A. subrugosa* d'Orbigny in the courser white markings, smaller central muscle scar, and by having bluish white clouding at the center of the callus. Radula of *A. abrolhosensis* can be distinguished by an extremely well developed cusp on the second lateral tooth.

Cyphoma macumba Petuch. Holotype (USNM 780606) measures 22x13mm; a paratype (USNM 780647) was also examined. Type locality: Parcel das Paredes, Abrolhos Reef complex. Distribution: known only from Abrolhos Reef complex. Diagnosis: Elongate, shiny with fine longitudinal striations; dorsal edge prominent, sharp; outer lip thickened with protruding hornlike projection corresponding to dorsal ridge; color pale cream orange to white; interior of aperture pale orange. Only known Atlantic *Cyphoma* with a prominent hornlike projection in outer lip.

Dermomurex (Triatella) oxum Petuch. Holotype (USNM 780648) measures 13x7mm; two paratypes (USNM 780649, UMML 8170) also examined. Type locality: 2km E of Santa Barbara Island, Brazil. Distribution: known only from the type locality. Diagnosis: Stocky, broadly fusiform, 5 whorls; aperture large, 1/2 length of shell; inside of outer lip with six elongated teeth that extend well into aperture; siphonal canal short, open, and dorsally recurved; early whorls with six rounded varices; body whorl with three expanded crenulate

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bladelike varices; body whorl sculpture of three strong cords with raised pustules and four weaker spiral cords; intervarical region with three large knobs each corresponding to spiral rounded cord.

Muricopsis oxossi Petuch. Holotype (USNM 780650) measures 9x5mm; one paratype (USNM 780651) also examined. Type locality: 2km E of Santa Barbara Island, Brazil. Distribution: known only from the type locality. Diagnosis: Small, fusiform, spire high, acute; indistinct suture; sculpture of 5 raised axial cords and numerous close-packed overlapping scales, giving a lamellose appearance; varices flattened, winglike, heavily scaled, with 5 flattened spines along edges; shoulder spine longest, recurved posteriorly; spines on last varix fused into a large varical wing serrate edge; seven on last whorl of holotype; creamy yellow with three slightly darker bands, one at shoulder, one at midbody, and one at base of siphonal canal, shell covered with irregular white intritricax; siphonal canal long, fully ¼ of shell length; aperture white. Said to resemble no other *Muricopsis* from the western Atlantic.

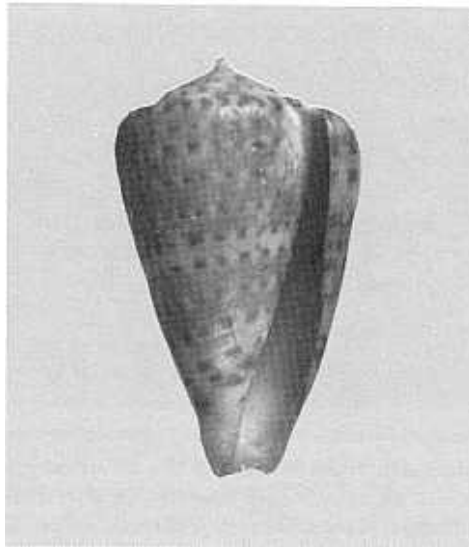
Murexiella iemanja Petuch. Holotype (USNM 780652) measures 8x6mm, one paratype (USNM 780653) also was examined. Type locality: 2km E of Santa Barbara Island, Brazil. Distribution: known only from the type locality. Diagnosis: Stout, fusiform; spire high made up of 2 nuclear and 3 postnuclear whorls; indistinct suture; body whorl slightly globose; 7 varices/whorl; 5 large foliaceous spines/Varix; spine on shoulder twice as long as other varical spines, posteriorly recurved; tips of all other spines bifurcate; body with 5 raised foliaceous cords corresponding to varical spines; siphonal canal long, straight except for dorsally recurved tip, with 3 foliaceous cords and short varical spines; aperture ovate, columellar lip adherent posteriorly, detached anteriorly. Distinguished from *M. macgintyi* (M. Smith) and *M. facetus* (E. Vokes) by the possession of bifurcate spines, higher spire, and smaller size.

Latirus (Polygonia) ogum Petuch. Holotype (USNM 780654) measures 40x18mm. Type locality: west side of fringing reef around Coroa Vermelha, Abrolhos Reef complex. Distribution: known only from the type locality. Diagnosis: holotype with 7 whorls each with 8 elongate, low, rounded axial ribs; spiral sculpture on body consists of 15 raised cords all equally prominent; siphonal canal long, roughly ½ length of shell and with 3 large prominent cords, several secondary cords between; columella with 4 folds; inside of lip with 12 rows of large pustules, fusing into lirae deep inside aperture; color orange red, darker on axial ribs. *L. bernadensis* Bullock differs in lacking the 3 prominent siphonal canal cords and by having stronger spiral cords, lighter color and more angular shoulder. Said to resemble Panamic *L. sanguineus* (Wood).

Oliva (Plicoliva) zelindae Petuch. Holotype (USNM 780655) and several paratypes (MNB 3734 & Petuch collection) were examined. Type locality: south side of Guaratibas Reefs, Abrolhos Reef complex. Distribution: known from the type locality and Santa Barbara Island. Diagnosis: Color of a network of tent markings with a series of dark evenly colored blotches around middle, in turn connected by thin continuous lines which are marked with intermittent dark dashes; characterized by having both longitudinal plications on the body whorl and enlarged columellar plications.

Vexillum (Costellaria) kaicherae Petuch. Holotype (USNM 780657) measures 8x3mm; several paratypes (USNM 780658, UMML 8171-8172, DMNH 121796, NMB 3735, Sally D. Kaicher collection) were also examined. Type locality: Guaratibas Reef, Abrolhos Reef complex. Distribution: known only from the type locality. Diagnosis: Small, fusiform, elongate, biconic shell; rounded shoulder; suture well marked indented; most adults with 5 whorls, protoconch mammillate composed of 1½ whorls; sculpture of 15 to 18 axial ribs each subtended with regularly spaced round nodules.

IS IT A NEW ONE?



Approx. 2X life

Photo: Chapman

What just might be a new cone has been brought to my attention by A. J. Gabelish, HMS member and well-known collector-dealer in Western Australia. The shell was trawled in 600 feet of water off Albany.

This shell appears in two color forms, Gabelish reports, and they occur together. The one figured has a white base with orange dots and dashes over the body whorl and spire. The other variety is almost pure white with a faint similar pattern. Both have a white band around the center of the body.

The shell resembles *Conus sulcatus*, but the shoulder is flatter and it lacks the purple markings on the spire and base. The orange dots are smaller than on *C. sulcatus*.

Elmer G. Leehman

Vexillum (Costellaria) lixa Petuch. Holotype (USNM 780659) 12x5mm; 2 paratypes (USNM 780660) were also examined. Type locality: west side of Lixa Reef, Abrolhos Reef complex. Distribution: known only from the type locality. Diagnosis: Elongate, fusiform, biconic shell; sharply angled shoulder; sculpture of 15 to 17 axial ribs/whorl and 17 to 20 spiral ridges giving shell nodulose appearance; adult with 6 whorls; protoconch mammillate.

Conus iansa Petuch. Holotype (USNM 780661) measures 12x7mm; 3 paratypes (USNM 780662, UMML 8173, and Petuch collection) were also examined. Type locality: 2km E of Santa Barbara Island. Distribution: known only from type locality and Lixa Reef. Diagnosis: Small, squat, with wide heavily coronated shoulder; 8 to 15 incised spiral lines on anterior half of last whorl, posterior half smooth; spire elevated with mammillate protoconch; color variable from white to shades of pink and orange; color pattern a series of dots and dashes in close-packed spiral rows overlaid with large amorphous patches of darker color; some specimens grayish white with bright white pattern; spires with alternating patches of darker color; interior of aperture white; thin smooth transparent yellow periostracum with small shaggy tufts on shoulder. Said to resemble no other Atlantic cone due to coronated shoulder.

Exploring Brazil's Oceanic Islands

By ELMER G. LEEHMAN

The Oceanographic Museum of the University of Rio Grande do Sul, Brazil, has been exploring the oceanic islands off the eastern coast of Brazil for molluscan data. The Museum is directed by HMS member Dr. Eliezer de Carvalho Rios, author of *Coastal Brazilian Sea Shells and Brazilian Marine Mollusks Iconography*.

The expedition staff includes the Brazilian oceanographer Lauro J. Barcellas, who is Dr. Rios' assistant at the Museum, eight student researchers, one medical doctor and a photographer.

In the six years of its experience, the Museum workers have visited the following island groups:

1975 — The Fernando de Noronha islands, 200 miles off the easternmost tip of the Brazilian mainland, with 1,500 inhabitants. ("This is a tourist-oriented area with fine facilities," the Museum's report noted.) The researchers did only intertidal collecting on their first visit, but came back with 35 molluscan species.

1977 — Atol de Rocas. This is a scattering of sand islets and reefs to the northwest of Fernando de Noronha, with a lighthouse, a coconut tree, large numbers of sea birds and no potable water. The group camped on Farol island, the only spot not likely to be covered by the high tide. The principal species collected included *Strombus costatus* Gmelin, *Helicacis perrieri* (Rochebrune), *Nerita asensionis*, *Hipponix subrufus* (Lamarck), *Diadora mirifica*, *Pericula sagittata*, *Rissoina fischeri* Desjardin, *Carditopsis smithii* (Dall), and quite a few others. Altogether 80 species were identified.

1978 — Abrolhos Islands, some 30 miles from Caravelas city, southern Bahia state. The Brazilian Navy has personnel on this island, to operate a lighthouse and radio station, and provided the Museum party with housing on Santa Barbara Island.

The principal species collected there included *Strombus goliath* Schroter, *Vasum cassiforme* Kiener, *Turbinella laevigata* Anton, *Berthelinia caribbea* Edmunds, *Malleus candeanus* (Orbigny), *Acmaea abrohosensis*, *Cyphoma macumba*, *Vexillum kaicherae* and others, amounting to 95 valid species.

1979 — Fernando de Noronha Islands. Using dredges and scuba, the group increased the number of species collected from 1975's thirty five to 118. New ones included *Thais nodosa meretricula*, *Lyria guildingi* (Sowerby), *Nodilittorina helenae*, *Conus regius* Gmelin, *Acmaea noronhensis* E. A. Smith, *Chlamys noronhensis*, *Fissurella emanuelae*, *Chama sinuosa* Broderip, *Nerita asensionis*, *Pinna carnea* Gmelin, *Haplocochlias* species and others.

1980 — As this report is written, the expedition is again in these islands, seeking specimens of species recently described by Ed Petuch of the University of Miami.

All malacological data are being reviewed by Dr. Rios for inclusion in the forthcoming *South American Sea Shells*, which he is writing jointly with Dr. R. Tucker Abbott.

HMS AUCTION WILL ACCEPT MAIL BIDS

The 1980 HMS Shell Auction plans are firm, according to Auction Chairman Wes Thorsson. The date is Saturday, 25 October. Letters are going out to dealer friends of the Society, asking for shells. Hawaii members already have been approached and have started to respond, he said.

The foregoing information came from Thorsson as he paused at the surf line at Waikiki one afternoon early in February. He was suited up for scuba diving and was merely hesitating to enter the chilly (68° F) water.

"If you have a visit to Hawaii in your future, try to include the auction in your plans," he went on. "The committee has been assured that the period from 20 to 30 October will have nothing but the finest weather — Hey, you surfers. Quit splashing me! — and that our shells are busy raising large families in preparation for your visit.

"For unfortunate members who will not be here in person, HMS is going to try something that will allow you to participate, anyhow. (Tell that girl in the bikini to quit staring at me.) We are going to describe our half-dozen best shells in the July Hawaiian Shell News, and let people bid by mail."

Thorsson adjusted his mask and started to walk out through the surf. After a moment he returned.

"Tell the members they can send their bidding instructions to the chairman of the HMS Auction Committee, together with a check for the maximum amount they will pay. A local member will bid for them, in accordance with their wishes. Set an opening bid, increments of bid and highest bid. We'll do the rest.

("By the way, have you any tanning lotion? I'm getting a bad sunburn, standing here.)

"Tell the mail bidders that their instructions will be seen only by their local proxy, who will not be bidding on that item for himself or any other member."

(Wes turned to stare at two nubile beach strollers. "I wonder where they carry shells in those outfits," he muttered.)

"Where was I? Oh, yes, We'll have the rules and the shell descriptions in the July HSN. Bids will have to be in by 18 October."

With that, Thorsson put his scuba air regulator in his mouth and prepared to enter the water.

"Some minor details still have to be worked out, of course."

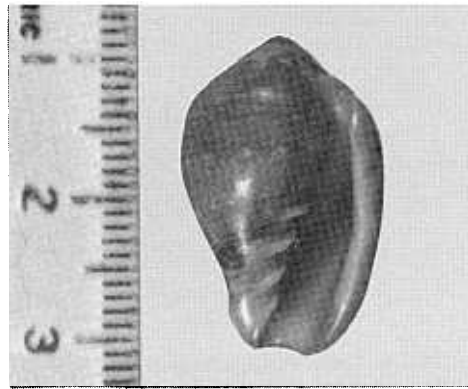
His voice remained strong as he said this, but it had a bubbly quality. His pronunciation was particularly difficult when he exhaled. The regulator hisses badly then.

"Tell members who haven't already sent shells, to mail them to HMS Auction Chairman, P. O. Box 10391, Honolulu, Hawaii 96816."

The interview was interrupted again while Thorsson sat down in the shallow water to put his swim fins on his feet. He was briefly swept along the shore by a set of big breakers. It took a moment to realize he really had not stopped talking about the auction plans.

"If you include a list of the shells you have donated, we will return a receipted copy for tax purposes. The value of your gift is deductible on your U.S. 1980 income tax return, you know. You may include values on your list, if you wish, but HMS cannot set prices.

"HMS auctions always have been most convivial affairs, and we expect this one to be . . ." he was saying as he swam down past the coral heads, crowbar at the ready.



Approx. 2X life Photo: Chapman
Marginella ornata Redfield, 1870 is an exceedingly rare South African deep-water species that occasionally is found in the belly of fishes, according to HMS member Helene Boswell of Pretoria. The specimen figured above was collected by a fisherman off Amanzimtoti, Natal.



HMS member John K. Dunlap, 510 Equitable Bldg., Atlanta, GA 30303 wants to buy, or exchange shells for, Vols. 1 and 2 of **Indo-Pacific Mollusca** (Strombus, 114 pages, Nov. 1960) and Vol. 3 (Lambis, 28 pages, Sept. 1961). If you have a set to spare, or know someone who does, write to Dunlap.

* * *

Miguel A. Carlo, P. O. Box 1178, San German, Puerto Rico 00753, says he has one *Morum dennisoni* Reeve for which he will take the best trade offer coming his way. He has other Caribbean shells for trading, also. Write him. (He adds that he is ready to advise any HMS members planning to visit Puerto Rico regarding local shelling.)

* * *

Otmar Salzmann, Graben 1°, A-4221 Steyregg, Austria, has specimens of the '*Conus pulcher siamensis* Hwass, 1792' described and figured by Dr. Dieter Rockel in HSN July 1978. He is prepared to exchange fine or gem quality specimens of that magnificent shell for cones (preferred) or cowries of comparable value.

* * *

Alex Wright is a 22-year-old member of HMS who has lived on Malta for the past three years. His main interest is *Cypraea*, *Conus* and *Murex*, and he would like to exchange with collectors in other countries. His address is 16/2 Lion Street, Floriana, Malta.

* * *

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NUDIBRANCH ENDEMISM: MORE INDO-PACIFIC RESEARCH NEEDED

By SCOTT JOHNSON

My recent article on endemism among Hawaii's nudibranchs (HSN Jan. 1980) needs clarification. In trying to clear up a misunderstanding that arose in an earlier lecture before the Hawaiian Malacological Society, I compounded the confusion with what might be termed a dangling parallel.

I had said to the Society that many nudibranchs found in Hawaii in the past have set new records for range, and furthermore that many are as yet unidentified. Several of my listeners took that to mean that Hawaii has a great many endemic species. That wasn't exactly what I meant.

My intention in the article was to point out that the endemism rate for nudibranchs here is probably no higher than for other marine animals. It seems higher now simply because nudibranchs throughout Micronesia and Polynesia have not been studied much. With more searching in other areas, it is likely that many of the species we are finding here will also turn up there, too.

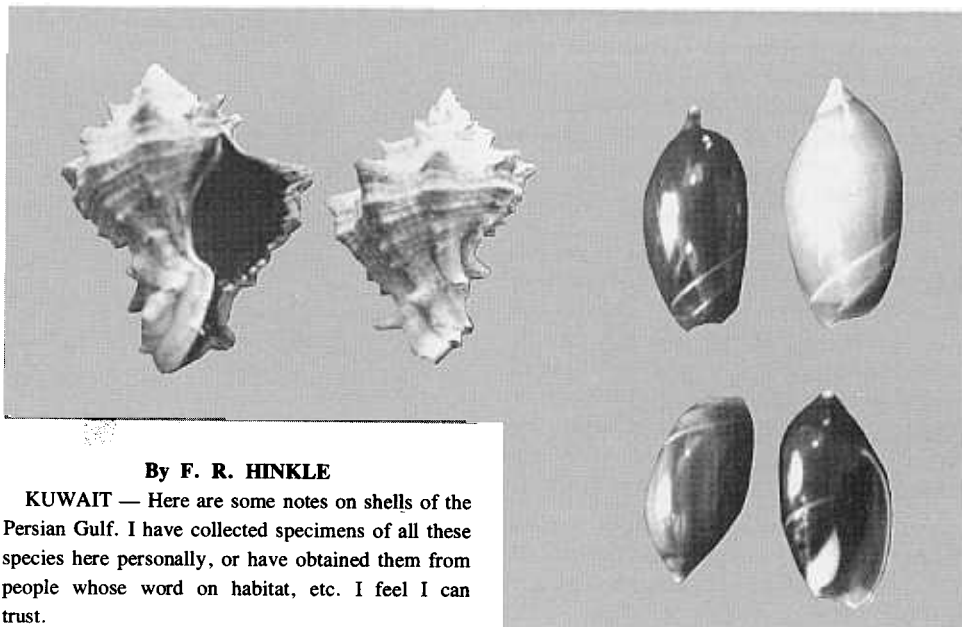
Dr. E. Alison Kay has pointed out to me that the rate of endemism among nudibranchs in Hawaii actually is likely to be lower than the rate for the prosobranchs and other marine animals. Opisthobranchs in general (of which the nudibranchs are one group) tend to have a higher percentage of widely distributed species than many other groups. There is no reason to believe the nudibranchs will be any different.

What is needed is more searching throughout the Pacific. Divers, start working! There is fame to be won in discovering new nudibranchs in the Indo-Pacific!

DO A FRIEND A FAVOR!

HMS Members: Nonmembers will receive a complimentary copy of *Hawaiian Shell News* (with a membership application) if you send the Corresponding Secretary their full name and address.

A Preliminary Checklist from Kuwait



By F. R. HINKLE

KUWAIT — Here are some notes on shells of the Persian Gulf. I have collected specimens of all these species here personally, or have obtained them from people whose word on habitat, etc. I feel I can trust.

Ancilla (Castanea?) cinnamonea Lamarck — Variable in color, dark brown to white. Animal is white with black specks — "pepper and salt." No operc. Frequent in sand near low-tide mark.

Ancilla sp. No. 1 — Very small, 3 to 5mm. White with brown flame markings. As frequent as above. Animal white.

Ancilla sp. No. 2 — Similar to the above, but shell is white with longitudinal blue-black lines.

Fusinus sp. — Possibly *F. leptorhyreus*. Resembles *F. colus* except for color. Animal, shell and operc uniformly orange. Found along the low-tide lines only in January and February. Frequent. Two types or species may be involved.

Murex acanthostephes Watson — Length 5 to 15cm. Uncommon, from 100 meters off beach in sand mixed with rock.

Umbonium vestiarum Linne — Common everywhere in sand.

Tibia insulaechorab Roding — Rare. A deep-water species. A professional diver friend picks them up at 150 feet.

Photos: Hinkle
Two intertidal finds at Kuwait, near the head of the Persian Gulf: Left, a so-far-unidentified *Murex* species, and, right, specimens of *Ancilla cinnamonea*.

Strombus decorus Roding — Common. Intertidal.

Rapana rapiformis Born — Common. Intertidal to deep water.

Hexiplex turbinatus Lamarck (= *M. kusterianus* Tapparone?) — Common. Intertidal.

Hexiplex species — similar to the above, but measuring 4 to 6cm, with purple aperture and tan exterior. One specimen, all black, has sharp recurved back spines on apex and trailing edge of body whorl.

Monodonta canalifera Lamarck — Common.

Neocancilla papilio Link — Only three specimens found.

Bulla ampulla Linne — Uncommon.

Terebra bernardi Deshayes — Rare.

Euspira pulicaris (Philipi) — Uncommon.

Notocochlis species — Rare.

Neverita didyma (Roding) — Frequent.

Neocancilla pretiosa (Reeve) — Frequent.

Mitra plicaria Linne — Rare.

Mitra bovei Kiener.

Vexillum osiridis Issel.

Solidula solidula Linne.

Cypraea grayana Schilder — One only, 90 feet.

C. onyx succincta Linne — One only, Beach.

C. gracilis Gaskoin — Frequent. Low tide line to 10 feet deep.

C. lentiginosa Gray — Frequent. Intertidal.

C. turdus Lamarck — Common. Varies in color and size.



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SOCIETY REASSURED ON DREDGING PROJECT

Reassurances regarding the environmental effect of plans to dredge sand from the bottom of Kaneohe Bay, Oahu (Honolulu), to restore the shoreline of Kualoa Regional Park (HSN Nov. 1979) have been received from most of the officials concerned with the project, HMS president Tom Burch reported to the Society.

Late in 1979, HMS wrote formally to the U.S. Army District Engineer (who is charged with overseeing the project), Hawaii Governor George Ariyoshi, Honolulu Mayor Frank Fasi, and the State's four representatives in the Congress. All responded, either with detailed explanations of the dredging plan's built-in safeguards for the environment, or with promises to remain alert to the threat to marine life foreseen by the Society.

After reviewing the replies, the HMS Board of Directors in February expressed thanks to the officials concerned, and agreed to undertake a program of independent monitoring of the Kaneohe Bay waters likely to feel the impact of the dredging.

In seeking to reassure HMS members, the Army district engineer for Honolulu, Col. B. R. Schlapak, pointed out that development of plans included a marine environment reconnaissance survey in 1977 and studies of littoral movement, water currents and alternative sand sources.

"I believe that we have developed a project that has minimal impact on water quality and molluscan life in the dredge area," he wrote.

"The project will serve two functions. First, it will protect the . . . facilities and public investments in Kualoa Regional Park (where) shoreline erosion has destroyed portions of the irrigation system and landscaped areas, and threatens a restroom facility. Second, it will preserve valuable archeological resources that are constantly lost due to shoreline erosion.

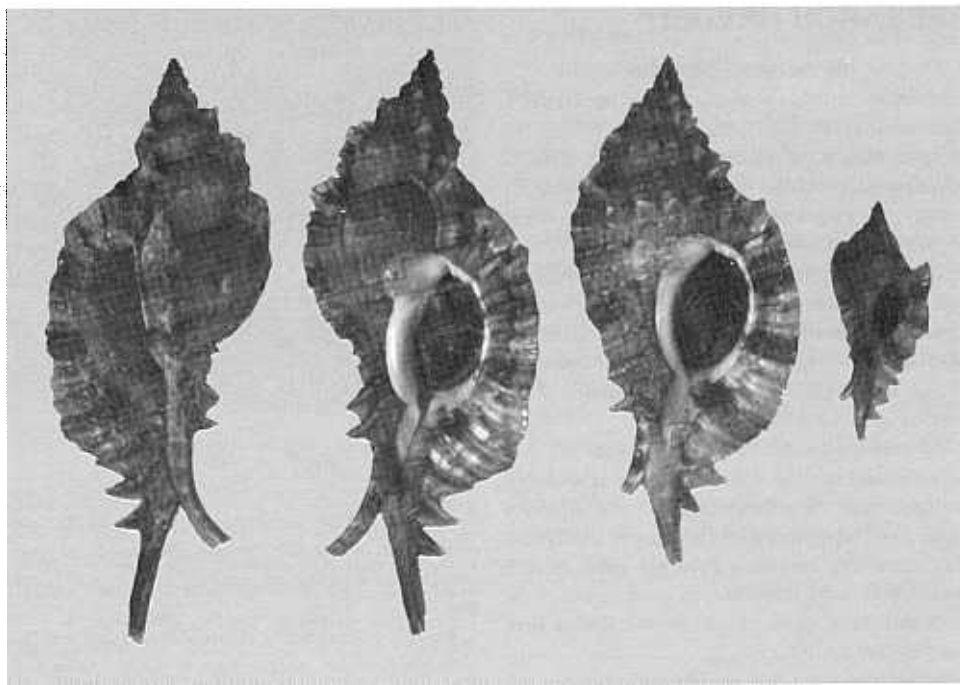
"A significant loss of marine life in the sand area to be dredged is not expected. The marine environment survey indicates that the area to be dredged consists of 100 per cent sand, with an infaunal community consisting of marine worms.

"No fish, macro-algae or macro-mollusks are found in the sand deposit."

Colonel Schlapak's letter included a discussion of measures to be taken to control turbidity resulting from the operation. Water turbidity monitoring is included in the project's specifications, and the contractor is required to take positive steps to avoid turbidity, it said.

In a separate response, Honolulu's Director of Parks and Recreation, Ramon Duran, stated that the 45,000 cubic yards of sand to be taken from the bay will constitute only about 4.5 per cent of the sand in the sandbar. He added that water quality along Kualoa beach actually will be improved by the projected steps to stop erosion of topsoil and organic material from the park into Kaneohe Bay.

From Rarity To Availability



Approx. 2X life

Photo: Chapman

As recently as five or six years ago, this photo could not have been taken. Only three bona fide specimens of *Murex barclayi* Reeve were known. Two were safely housed in the British Museum (Natural History).

Since then, the amazingly productive sea bottom in the Central Philippines has yielded enough spec-

imens of *M. barclayi* to put the species within the reach of many advanced collectors.

The growth series figured here ranges from 104mm down to about 40mm. All were live-taken and have their opercs. The figure on the left is the dorsal view of the specimen next to it.

E.G.L.

Conus leehmani = Or Something Else?

By MARGERET BENTLEY-BUCKLE

MAHE, Seychelles — I have in my collection two specimens of a cone which I have examined with great care and which, I am confident, both correspond exactly to the description and illustrations of a shell that A. J. da Motta and Dr. Dieter Rockel proposed to name *Conus leehmani* (HSN Nov. 1979).

The same shell was the subject of illustrations and descriptions in two separate articles by Elmer G. Leehman and R. M. Filmer (HNS Mar. 1977). They referred to it merely as *Conus sp.*

Having established to my complete satisfaction (so I thought!) this exciting discovery in my collection, I then found myself totally confused by Walls' *Cone Shells* description and illustration of *C. gubernator* Hwass, 1792, which would also appear to be the identical cone!

The *Conus gubernator* that I know is Walls' *C. terminus* Lamarck, 1810. It matches da Motta's

illustrations.

Da Motta acknowledges that these two species were "briefly associated" by Kiener. Walls admits they have been "confused."

In their *Cone Shells of the World*, Marsh and Rippingale declared that the two (*C. terminus* and *C. gubernator*) are "closely allied" and added that *C. terminus* is restricted to the Red Sea.

My specimens of *C. terminus* Lamarck-cum-*C. gubernator* Hwass have all been collected in the Indian Ocean.

Whereas the two HSN Mar. 1977 articles certainly do help to reaffirm that my shells are indeed *Conus leehmani* (or *Conus sp.*), the confusion still remains very real.

(Perhaps I should add that I do have both *C. barthelemyi* and *C. consors* (Singapore type).)

What the "boffins" have to say about this unsatisfactory state of affairs would be of great assistance to myself and perhaps to others as well.

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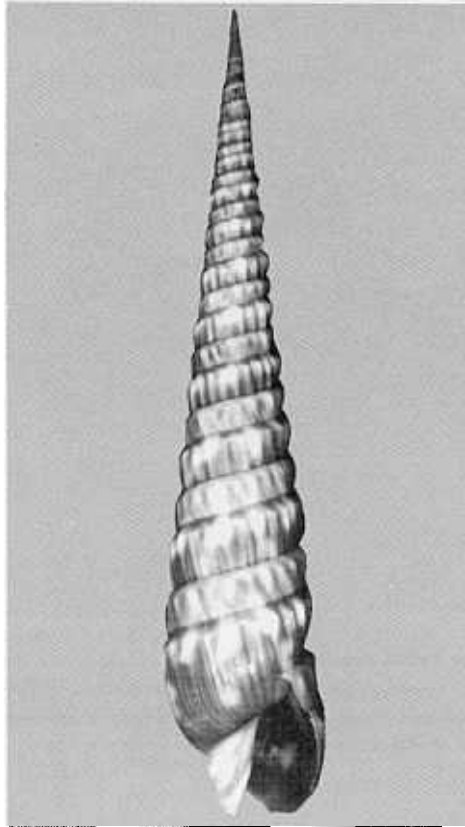
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Terebra trochlea Lost and Found



Terebra trochlea Photo: Schoenberg

By OLIVE SCHOENBERG

A terebrid seldom seen in collections is *Terebra trochlea* Deshayes. Twila Bratcher, writing in *The Veliger*, Vol. II, No. 4, says, "In 1857 Deshayes described a singular and beautiful species of *Terebra* (*T. trochlea*)." The type locality was Zanzibar.

Subsequently, several other authors listed this shell but no new finds were reported. For almost a hundred years *trochlea* disappeared from literature (and collections).

Then, in 1967, Cliff Weaver of Honolulu, the former editor of *Hawaiian Shell News*, received one from Richard Sixberry. He had found it at Nukuhiva in the Marquesas.

At the American Malacological Union convention in Corpus Cristi in 1968, a paper was presented by Dr. Harald Rehder, of the Smithsonian Institution in Washington, D.C. One of the slides shown in conjunction with his paper was of what looked like the Deshayes holotype, but it was unidentified. It, too, had been collected at Nukuhiva by the same man who had sent Cliff his shell.

In 1970 I was on Bora Bora in Tahiti. A lady gave me a strange terebra that she said had come from the Marquesas. I had never seen one like it and hadn't ever come across a description of one. It looked a bit like a mixed-up *T. crenulata* or even an aberrant form of Hawaii's endemic *T. thaunumi*. I couldn't be bothered with identifying it then and put it in a box in the garage — a souvenir of Tahiti!

Several years later, while perusing some old *Veligers*, I came across Twila Bratcher's photographs of my Marquesan terebra. Comparing the photos with my shell proved it was a *trochlea*, and a beauty.

I sent it off to Twila, who confirmed it, saying she was glad to hear it came from the Marquesas. She thinks it is endemic there and that Deshayes' locality data were incorrect, as is sometimes the case in old literature. Shells were brought to Europe by sailors and traders from far-away places and much of the data was lost or mixed up.

Possibly there are more *trochlea* at Nukuhiva, but it is such a remote place and off the shell collectors' trail. . . .

Conchomania

The illness had been incubating for some time. The first symptoms had appeared as far back as June or July, when we were at the Tuamotu Islands. They reappeared in New Caledonia, on the little sandy islets of the Grand Lagoon, where we used to go for night mooring. At Surprise Island the attack had become quite definite. And the moment we landed on the beach of Huon Island there was no doubt about it. It was a plague. And we all had caught it.

CONCHOLOGY. Shell science. Rather, **conchomania**. The symptoms are oblivion of all that is not a shellfish, together with delirium, one-track verbal delirium. There is a consuming feverish condition, with exacerbation of the collecting instinct, accompanied by loss of appetite. There seems to be no antidote. It is one of those illnesses of which one has to say, "it must follow its course."

After a night of dreams (out loud) of spirality, the patients awoke at daybreak, gobbled down their breakfast, leapt into the water or took to the boat, and in a very few minutes entered the typical state of feverish uncontrolled activity. They were to be seen combing the beach all day, neglecting their food. From time to time they would pick up a helical-shaped object. This they would gaze at rapturously for some moments before placing it carefully in a plastic receptacle.

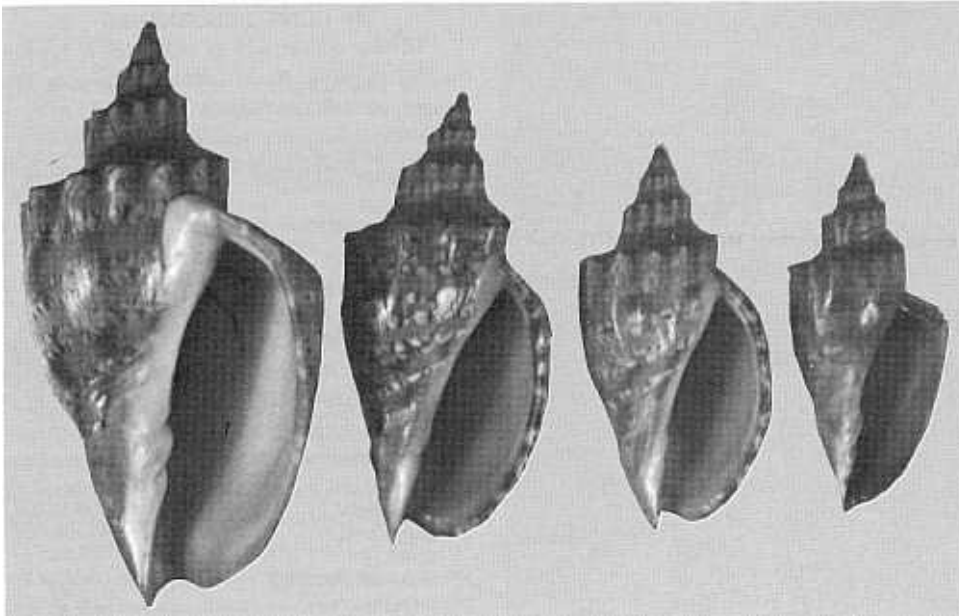
Although they were stark naked and there was no shelter, the sun seemed to have no effect on them. The terrible dazzling light did not seem to affect their sight. They were apparently in a hypnotic state. But not merely did the acquisition of the shells which they constantly picked up not calm them at all; it seemed on the contrary to aggravate

their condition in a sort of geometrical progression towards some craving ultimately, no doubt, to possess all the shells in the world. . . . Yes, there was no doubt about it, we were badly caught.

When daylight waned, we were still crouching on the sand, marvelling at the trophies spread out before us; and the following days were spent in the same way. Day after day the waves continued depositing these dazzling jewels on the beach; alone on our desert island we seized on them. . . .

from *Moana Returns*, by Bernard Gorsky (Elek Books, London. 1959)

A Rare Deep-Water S. African Volute



Voluta ponsonbyi 0.9X actual size
 One of the rare deep-water volutes from South Africa is *Voluta ponsonbyi* Smith, 1901. These shells are occasionally found in trawl nets by shrimp and prawn draggers. Figured above is a growth series of four from the famed collection of HMS member Helene Boswell of Valhalla, South Africa. The largest specimen measures 87mm. Mrs. Boswell reports that few specimens of this species are being found in the trawl nets.

E.G.L.

Life Among Hawaii's Sea Bunnies

Society members were given a substantial dose of science at the February meeting when Steve Kempf, one of last year's HMS scholarship recipients, reported some of the results of his recent studies with nudibranch embryos and larvae. Kempf is in the fifth year of a Ph.D. program at the University of Hawaii, working at the Pacific Biomedical Research Center in Honolulu.

The object of his research, he explained, is to look at larval food reserves, like fat, and to determine the effects of changes in the amount of these reserves on animal growth rates and shell development. Using staining techniques he recently developed, Kempf was able to make microphotographs of food reserves in larvae at different points during their growth to metamorphosis. From this it was possible to see that opisthobranch larvae emerge from the egg stage with a substantial supply of food within their system. This food reserve may be added to planktonic feeding prior to metamorphosis.

Starvation for considerable periods is not fatal, he discovered, but it has the result of preventing complete metamorphosis if continued for sufficient time. Later, if normal feeding is possible, the larva can resume its advance toward maturity.

Nudibranchs and the ubiquitous sea hares are good subjects for many kinds of experimental work, not because their progress through life is important in itself, but because they are relatively easy to study. The results provide an insight into the

physiology of many more complicated animals, possibly including humans, Kempf declared.

As a byproduct, the research has revealed an unexpected capacity of some molluscon larvae to survive long periods in the veliger stage before settling to a suitable habitat.

"This may explain how these species were able to colonize relatively remote areas such as the Hawaiian islands," declared Kempf.

He opened his talk by showing slides of a new muffle furnace and calibration pyrometer at the PBRC, bought with funds granted by the Hawaiian Malacological Society. The equipment has been of use to several graduate students in their research, said Kempf.

He has promised an article — "scholarly, but not too technical" — for HSN on the progress of his study.

Earlier in the meeting, Program Chairman John Earle discussed with members the question: "What kind of programs do you like?" He listed several possibilities, such as travel talks, science lectures of the sort to be given by Kempf, symposiums, shell identifications, and no program at all, just "socializing."

Mrs. Beatrice Burch continued a recently introduced feature to the monthly meeting, a display of *Coralliophila* and other lesser-known molluscs to be found on the coral growing in Hawaiian waters.

Her previous display dealt with the brachiopods.
 S.L.

COME CLEAN! QUI L'ENVOI CETTE CHEQUE?

By WES THORSSON

As the Society's treasurer, I am holding a bank transfer notice for US\$60 from Credit Agricole, Paris. We do not know what the money was intended for — whether for someone's 1980 dues, or for HSN advertising, or perhaps for a substantial order of HSN back issues. The document doesn't say.

What's more, we don't know who sent it. Two names appear on the face, a M. Lanternier and Raymond La Valetta, but we suspect that they merely signed the paper on behalf of the bank. But maybe both wish to become members. Who knows?

If any of you out there can relieve us of this worry, we would appreciate hearing from you.

When members living outside the United States send money to the Society for any reason, we urge them to make the payment in U.S. dollars, an International Money Order, a bank check, or a personal check payable through a U.S. bank.

This request isn't based on mere chauvinism. Honolulu banks are poorly equipped to handle foreign instruments. They embroil us in endless acrimonious correspondence with head cashiers.

Principal banks in most countries maintain a dollar account in some U.S. bank, on which they can write checks to cover your HMS membership. Those payments go through easily. Best of all, have the bank give YOU the check, which you then can mail to the Society with your renewal.

If the bank insists on sending the check for you (some do, for reasons that defy analysis), then ask it to enclose a note from you making clear what the funds are for.

Regardless of its promise to do so, the bank probably will neglect to enclose your note. So drop us a friendly letter saying the money is on its way (and how much) and what it is intended to cover. This gives HMS a clear shot at doing what you want.

The least productive way to send money is by a bank-to-bank transfer of funds. Somewhere along the way, some functionary eliminates all reference to the original sender. We get the money. Period.

Occasionally a member asks his bank to send a check in U.S. dollars, but the bank fails to make the check payable by an American bank. (Your bank knows perfectly well how it should be done, but has a lapse of memory.) When that happens, the whole system breaks down. Our bank won't give us credit for your payment, but sends the check all the way back to your bank, requesting funds from a U.S. account.

The odds are high that, by that time, one of the banks will have lost our address!