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A 'New Cone' And An Old Mystery

by WILLIAM BRUCE WELLS

This is the story of a Hawaiian *conus* species that is largely unknown and neglected, yet is very old. It is also something of a malacological mystery, involving the reappearance of a long-lost member of the genus whose birth and demise occurred in the mists of antiquity.

The protagonist of our tale has no valid name, nor has a proper description ever been published, as far as I know, although the shell itself was discovered some years ago. Hence, keeping in mind John Tucker's recent discussion of the pitfalls in assigning names to new species, I am going to refer here to the Incognito Cone, for reasons that will become apparent.

The circumstances of the shell's appearance (or, more properly, its reappearance) offer some interesting thoughts on environmental and ecological disruptions.

My home is in Kailua, a residential suburb of Honolulu adjoining the Kaneohe Marine Corps Air Station on Mokapu Peninsula (see aerial photo). From time to time I shell along the wave bench cut into the slopes of Ulupau crater facing Kailua Bay and the open Pacific. Late in 1975 I began to find a new cone — always dead but never crabbed or beach worn. I was immediately struck by its distinctive form and color pattern, but puzzled by its sudden appearance in an area I had shelled for some eight years.

Photos: Bruce Carlson

Intuition told me there was something unusual about these finds, apart from the depressing realization that I couldn't identify them. Where did they come from? Why only now? And why only along this one quarter-mile stretch of wave bench?

Other shells were turning up, too, but for the most part they were obvious fossils, bleached and eroded. All the others were fairly easy to identify and except for one (*Cypraea erosa* Linne, 1758) are frequently found alive on the same wave bench.

Specimens of the Incognito Cone, along with a wide variety of manifestly fossil species, began to appear a month or two after blasting and bulldozing operations started along the northeast shore of Mokapu Point, producing a trench that at water's edge was about fifteen feet deep referred to mean sea level. This rude interruption of the local ecology and peaceful pursuits of adjoining marine mollusc life was mandated by the construction of a deep-water ocean outfall for a new and enlarged sewage system to divert effluent from Kaneohe Bay to deeper waters off Kailua Bay, northeast of Mokapu Peninsula. Shoreline height above MSL at sewer line exit is about sixteen feet. The total depth of exposed and submerged reef rock removed by blasting, etc. was from 20 to 31 feet.

All shells found were dispersed within sedimentary, sandstone and limestone beach rock, coral, and calcareous algae deposits which the blasting had exposed and converted into beach rubble and boulders. The cones in question were at first found separate among the rubble and apparently washed up by wave action, but further inspection of the area revealed a few imbedded in lithified conglomerate of sandstone, coral fragments, limestone, black lava bombs, and cemented lava ash — in other words, the remains of an old reef. This entire area contains occluded lava bombs and fragments ejected by the initial and formative eruptions of nearby Ulupau Crater, during the Pleistocene period in geologic history.

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Hawaiian Shell News

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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.

VISITORS WELCOME!

Hawaiian Shell News is issued free to members of the Society. Postage rates have been computed and added to membership dues. Single copies of any issue, $1.00, postage included. Individual copies of any issue may be obtained, free of charge, by qualified individuals for bona fide research projects.

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Advertisements are accepted at the rate of US$15 per column-inch/issue, payable in advance. Discounts are offered for six and twelve insertions. Write to the Corresponding Secretary for information.

HMS June Meeting

Frank Perron, one of the recipients of the first HMS scholarship awards, was the speaker at the June meeting of the Society. Perron, a graduate student of marine biology at the University of Hawaii, gave a slide show on the development of cone shells from the egg to the mature specimen.

Attendance was well in excess of 100, as members become familiar with the Society's new meeting room in the Hawaii National Guard headquarters on the slopes of Diamond Head.

Reefcombing

Hawaiian Malacological Society dues for 1979 will remain essentially as they are in 1978, the Board of Directors decided at its June meeting. Minor adjustments were made, however, in the case of overseas members who receive **Hawaiian Shell News** by air mail.

Details of the revision, along with comments on the Society's financial future by President George Cook and Treasurer Wes Thorsson, will appear in the next issue of **HSN.** Membership renewal notices will begin going out in August.

Ruth Halliburton Fair

The Society suffered a grievous loss with the death in June of Ruth Fair, a veteran HMS member and one-time editor of **HSN.** She had been a resident of Houston for the past three years.

An artist of considerable talent, a facile writer, and a successful mother of six boys, Ruth was largely self-taught in marine biology. Her interest in shells began during a tour of duty on Kwajalein, where her youngest son was born. The family moved to Honolulu in 1969.

Three years ago, Mrs. Fair had the distinction of seeing two of her books published almost simultaneously — **The Shell Collector's Guide** and **The Murex Book.** The latter has become a standard reference volume among collectors.

Backed by other members of the Fair family, Ruth produced a study of the shallow-water shells of a single Hawaiian reef over a period of years that received the Smithsonian Institution Award at the 1971 HMS Shell Show. She and her husband, Jim, were officers and Board members for several years.

In accordance with her wishes, Mrs. Fair's ashes will be returned to Hawaii.

* * *

HMS members living outside Hawaii: this is practically your last chance to contribute shells to the Society's forthcoming auction. See page one of **HSN** for June.

The Loss of the Lisbon Museum

Some further information on the disastrous fire that hit the Faculty of Sciences in Lisbon in March has reached us in a letter from Ilidio A. V. Felix Alves of Estoril.

The venerable Faculty of Sciences buildings were practically destroyed.

"In order to prevent destruction of the entire neighborhood, firemen had to protect the chemistry department," he wrote. "In the meantime the fire reached such proportions in the natural history department that they were unable to save it. Nothing but the walls remain of the Barboza du Bocage Museum.

"The extraordinary collection of African birds is lost, along with the very good collection of fishes, including some unique specimens of extinct species, holotypes, etc., the reptiles, the shell collection and so on. Books, papers, and personal notes of people working there, even an almost complete Ph.D. thesis, were destroyed.

"We had planned to begin with the study of Portuguese and West African molluscan fauna, as well as Dr. Monteiro and Burnay's second volume of their **Seashells of the Cape Verde Islands.** Now we have no Tryon, Reeve or Kiener, no Dunker or Dautzenberg, no proceedings, journals or abstracts, no files, nothing.

"When I read for the first time in **Johnsonia** about the destruction of the Chicago museum in 1871, when all of Stimson's papers and notes were lost, along with borrowed material, shells and books, I remember thinking that such an experience must have been like something out of this world. Now we are experiencing the same thing.

"If we are ever to resume our work here, we must have new books, at the very least. Will you ask members of the Society to send us extra copies of their papers on malacology? It is obvious that I can't pay for all this. What money is available will have to go for equipment. As compensation, however, I will try to send to everyone our future papers. But I am afraid it will take some time."

* * *

Veteran HMS member Edward Schelling has asked **HSN** to pass the word to his worldwide shell friends that he expects to spend the coming year in Korea, where he intends to continue to collect and exchange shells. His new address will be PSC Box 3979, APO SF 96366. He hopes that Korea shellers will contact him at Osan Air Base.

* * *

Mrs. Blanche Boorman, of Rockhampton, Qld., who wrote on Australia's plan to establish a Marine Park on the Great Barrier Reef (**HSN** Jan. 1978), has sent word that the new Barrier Reef Marine Park Authority recently announced it would allow no more drilling for oil on the Reef until its investigations are completed.

* * *

The New Caledonia authorities have eased their import duties on shells, according to word reaching Associate Editor Elmer Leehman. Five shells at a time can be brought in without payment of duty.

"We hope this is the initial step in completely rescinding all charges on seashells," he said. "As far as I know, New Caledonia is the only country with this illogical duty."

* * *

A note from Mary A. Dunham in Clearwater, FL says she is trying to get her travelling shell exhibits on the road again (see **HSN** June 1977). They are to go on display at the First National Bank of Clearwater shortly, and she expects to have another at the George Washington University Library in Washington, D.C. during July and August. Mary is seeking a grant or other support to assist the project.

50th Anniversary Shell Show in Tokyo

by TAKASHI OKUTANI

TOKYO — The Malacological Society of Japan has just celebrated the fiftieth anniversary of its foundation. The big convention held at the auditorium of the National Science Museum, Tokyo, April 29 and 30, 1978, included a formal celebrating ceremony, a special address by our President, Dr. Iwao Taki, celebrating messages from sister societies both domestic and foreign, and our annual meeting.

Some thirty scientific talks were also given to an audience of more than 100.

During the ceremony, our Honorary President, Dr. T. Kuroda, and five other persons were commended officially for their efforts and contributions to the Society in bringing about today's success and prosperity.

It was in 1928 when Dr. Kuroda circulated a proposal to establish the Society among thirteen professional malacologists and amateur collectors. When the first issue of **Venus** was published in November 1928, the membership was only 145. Although during and after World War II the quality of paper and the number of pages fell, the academic level of the published studies was faithfully maintained.

In its first half century, **Venus** has published a total of 8,800 pages, in which more than 800 new taxa were described.

The Society's current membership is almost 1,000, including both domestic and foreign members.

The Society has been giving a special convention and shell show almost every five years. However, the shell show for the fiftieth anniversary, held at an exhibition hall of the Tokyu Department Store in Tokyo, was the biggest and finest of all. Some 12,000 persons enjoyed seeing this show, which was open from April 28 to May 3.

A feature of the Malacological Society of Japan's extensive shell show was a display of material from the Emperor's collection. Below, the owner of one of the striking exhibits of rare and valuable specimens was Mr. Murakami. *Photos: Cardin*

by CHARLES CARDIN

TOKYO — Japanese shell enthusiasts were treated to an outstanding display early in May when the Malacological Society of Japan celebrated its fiftieth anniversary.

Although the display was publicized as the "50th World Shell Show," it might better have been described as an exhibition. There was no competition, and two leading Japanese shell dealers were major participants. The affair was obviously professionally created, with several exhibits of museum caliber.

The Emperor of Japan was represented by an outstanding display (under guard all through the show).

Generally speaking, the exhibits were not designed to catch the eye of the ordinary amateur collector.

The arrays of epitonids and buccinids were truly outstanding, however. I have never seen so many rare and gorgeous members of the Epitonidae in one place before. The Buccinidae included some of the world's rarest. The display was beautifully done.

I was terribly disappointed at the cones. Many of the specimens were in poor condition, and names frequently were not in accordance with international criteria. I noted one fair ***Conus dusaveli*** and a gem ***C. excelsus,*** however.

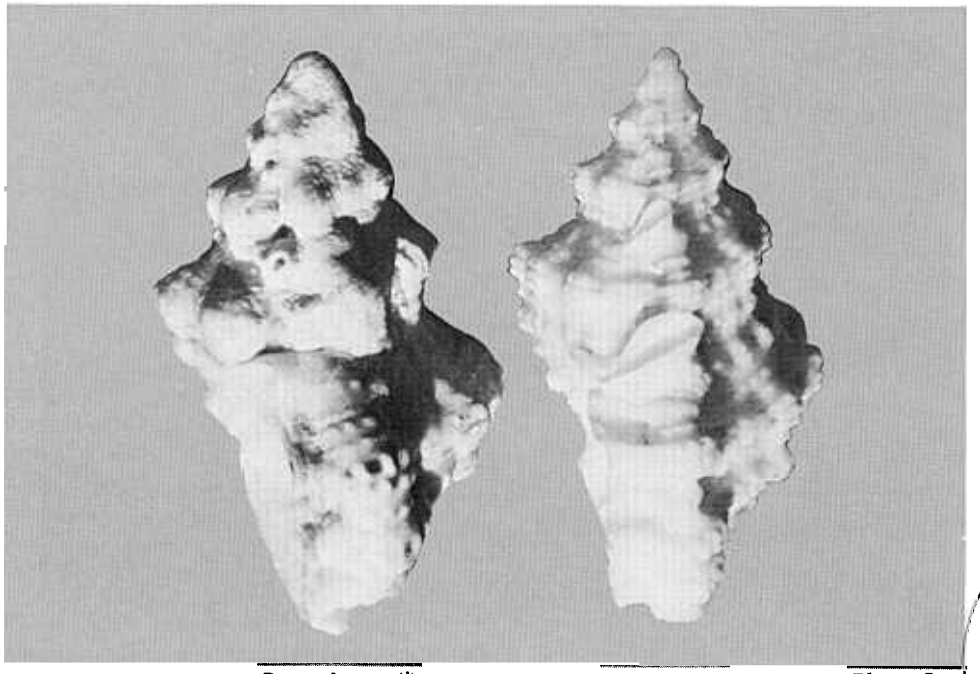
The collection of ***murex*** — my favorite family — contained poor quality shells and was not well arranged, in my opinion.

The cowry display included many ultra-rare and beautiful specimens. I counted no less than six ***Cypraea leucodon*** and ten ***C. valentia!*** But not a single specimen of Japan's endemic ***C. artufelli*** was even in sight.

Other notable exhibits included ***Latiaxus,*** ovulids and bivalves. They were not as well presented as were some of the other families, however.

This was far from the usual shell club show. While it was technically very well done, it lacked the excitement and obvious enthusiasm of a true amateur production. As is traditional in Japan, the exhibit was held in a crowded department store, guaranteeing excellent attendance. In fact, the crowds frequently made it impossible to study the individual shells.

Is *Bursa pacamoni* in Bloom?



Bursa thomae (l) *B. pacamoni* *Photo: Lee*

by HARRY G. LEE

JACKSONVILLE, FL — A specimen of ***Bursa pacamoni*** Matthews & Coelho, 1971 was named the Self-Collected Shell of the Show at the Greater Miami Shell Club exhibition early this year, just about the time my report on the distinctly rare shell was published (**HSN** Mar. 1978). The event was noteworthy in the short history of the species, and I asked the collector, Ted Kalafut of Miami, for details.

I was informed that Ted found his nearly gem specimen under rubble at a depth of fifteen to twenty feet just outside Sombrero Reef in the middle Florida keys. Russell Jensen of the Delaware Museum of Natural History confirmed the identification. I certainly agree, after seeing a fine color photo taken by the collector himself.

We thus have another leap northward in the ever-expanding range of this species — first northern Brazil, then Curacao, then Puerto Rico and now Florida. I am compelled to wonder whether the "bloom" of *pacamoni* may not reflect an actual population explosion, such as might occur with a sudden increase in veliger vitality (boosting range and decreasing rarity).

Danker Vink (**HSN** Nov. 1977) may have written the first chapter in the sequel to the ***Cypraea semiplota*** story (**HSN** Sept. 1975). Time will tell if the recently found ***B. pacamoni*** are just the result of more efficient collecting or are actually the sentinels of a great bloom.

Of particular interest right now, however, would be to know whether other specimens of ***B. pacamoni*** are hiding in museum sets of ***B. thomae*** (d'Orbigny, 1842).

Since popular books have little to say about these two members of the Bursidae, two characteristics should be noted:

Bursa thomae attains larger sizes than is generally acknowledged. Nine specimens in my collection range from 28 to 45mm, and I have seen one still larger. ***B. pacamoni,*** while generally larger than ***thomae,*** overlaps that species in size: my illustrated shell is 37mm, Kalafut's is 47mm, and Vink's 44mm.

Aside from coloration (a tenuous character in many other species), the easiest way I have found to differentiate these two is by ***pacamoni's*** elongated posterior canal (see photo).

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.

OBSERVATIONS — the Nudibranchs

Phestilla melanobrachia is an Aeolid nudibranch that occurs through much of the Indo-Pacific, although it is often overlooked by divers. This species is generally about 3 centimeters in length and is covered with long tentacle-like extensions of the body called cerata.

Although frequently overlooked, this nudibranch is easy to find if one is aware of its habits. ***Phestilla*** is almost always found feeding on the cave-dwelling coral ***Tubastraea coccinea.***

This coral comes in several color forms, but the most common is orange. When the nudibranch is feeding on orange coral, its entire body turns orange, due to an incorporation into its own body of the pigment that colors the coral. Since the cerata along the back of the nudibranch closely resemble the tentacles of the coral, the nudibranch looks very much like just another coral polyp when it is feeding. To find the mollusk, one has to look for white fresh dead patches of coral skeletons, and ***Phestilla*** will usually be somewhere nearby.

Phestilla melanobrachia can also change color. If an orange nudibranch moves to another color form of ***Tubastraea,*** it will change to that color. The second most common color form of ***Tubastraea*** is black, and occasionally one can find a black ***Phestilla melanobrachia*** eating it. The nudibranch was probably named from one of these black specimens, since its specific name means "black arms." Scott Johnson

CORALITA CAPERS

SHELLING SAFARI EXTRAORDINARY

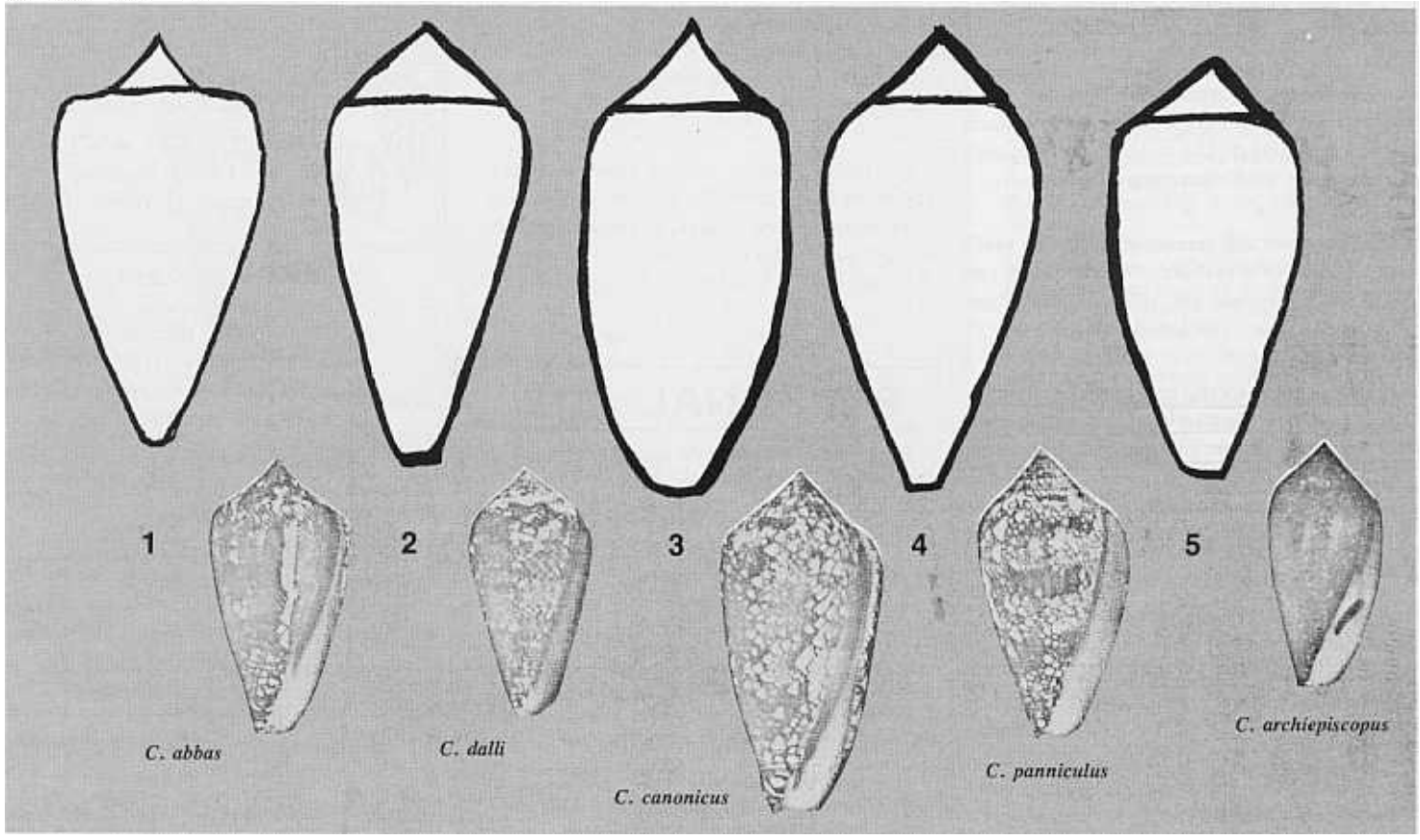
Shellers all, would you care to come shell collecting with me in the Coral Sea on the good ship **Coralita?**

This is a unique opportunity to participate in a shelling safari with a difference.

If the thought of such an adventure excites your imagination, write to me now, for further information. Please enclose $2 to cover postage, etc. K. D. Weston, P.O. Box 760, Gladstone, Queensland, Australia 4680.

Sorting Out The Textile Complex

by A. J. (BOB) DA MOTTA



BANGKOK — All cone buffs will readily rank the textile complex as the most confusing, and yet most fascinating, of all the groups within the Conidae. I have sorted and examined thousands of specimens. They are usually hard to tell apart when spread out all at once but, after eight years of constant observation, certain fixed characteristics begin to emerge and to become recognizable as reliable guides to the identity of any species or even a form of it.

More confusing than most are the five species I have selected for review here — ***Conus abbas*** Hwass in Bruguiere, 1792; ***C. dalli*** Stearns, 1873; ***C. canonicus*** Hwass in Bruguiere, 1792; ***C. panniculus*** Lamarck, 1810; and ***C. archiepiscopus*** Hwass in Bruguiere, 1792.

Some are almost impossible to distinguish when still immature, as the telltale clues do not appear prominently until fully adult. All five are valid species except for ***C. archiepiscopus*** which is conspecific with ***C. textile*** Linne, 1758. All five have tent reticulations with areas of honeycomb markings plus one or more bands of brown flammules.

The silhouettes reproduced above are all of fully mature specimens so that the differences are outlined sufficiently clearly to be recognizable. Shells Nos. 1 and 5 do not have a pink aperture, so this feature should be checked out first. The spires of Nos. 1 and 2 are unlike the other three, so that on these two points ***C. abbas*** can readily be picked out.

Next, observe the body contours. Each has sides which are individually different. Of the three with pink apertures, the straight tapering sides of ***C. dalli*** are unmistakable. The "squarish" appearance of ***C. canonicus*** will set it apart from ***C. panniculus*** with its convex bulging sides.

Another important factor is the locality where the shell is found. Except for ***canonicus,*** ranges are somewhat limited. There is no evidence that any two are sympatric. Therefore, a specimen found in the Marquesas is more likely to be ***panniculus*** than ***canonicus.*** If from Sri Lanka, it is more likely to be ***abbas*** than ***archiepiscopus.***

Now for the details:

1. ***Conus abbas*** Hwass in Bruguiere, 1792.

A solid, bluish-brown body with distinctive honeycomb reticulations; one or more interrupted brown axial flammules; flat exserted spire; shoulders angulated with bulbous sides; aperture white with thick outer lips.

Range: confined to Sri Lanka, South India and Maldives.

Specimen reviewed is 72mm x 40mm.

2. ***Conus dalli*** Stearns, 1873.

A light shell, with reddish-brown reticulations, interspersed with white tent markings, usually with 3 bands of brown flammules; spire turbinated with pronounced rounded shoulders and straight tapering sides; aperture wide and always rose-tinted.

Range: California, Central America and Galapagos.

Specimen reviewed is 70mm x 36mm.

3. ***Conus canonicus*** Hwass in Bruguiere, 1792 (of the 4 illustrations reproduced by Dr. Kohn in his "Type specimens of the described species of Conus IV. . . ." Plate 3 No. 23 can be confused with ***archiepiscopus,*** and No. 25 and 26 as ***pennaceus.*** No. 24 would be more typical and certainly closer to ***Conus tigrinus*** Sowerby, 1857, a synonym, particularly when Kohn concludes that this is a valid species.)

A solid shell, with reddish-brown reticulations widely interspersed with white triangular markings, with one or more bands of brown axial flammules; pyramidal spire slightly concave, rising to a sharp point; cylindrical body with straight sides; aperture wide, but always faint rose or peach color, thickened outer lips.

Specimen reviewed is 63mm x 32mm.

4. ***Conus panniculus*** Lamarck, 1810.

Not a heavy shell, with reddish-brown partly honeycomb reticulations interspersed with white tent markings, usually with 3 irregular bands of brown flammules; spire pyramidal rising to a sharp point; rounded shoulders with pronounced convex sides; aperture wide and always pink.

Range: Tuamotu Archipelago & Central Pacific.

Specimen reviewed is 63mm x 34mm.

5. ***Conus archiepiscopus*** Hwass in Bruguiere, 1792. (See Kohn Pl. 2 f. 2.)

A form of ***textile,*** with bluish-brown close-knit reticulations, usually having 3 bands of interrupted brown axial flammules; spire pyramidal, very slightly concave, rising to a sharp point; round shoulders with convex sides arching in towards the base; characteristic wide aperture of ***textile,*** gray-white.

Range: confined to Madagascar, Reunion and Mauritius.

Specimen reviewed is 58mm x 30mm from Nose Be, Madagascar.

Exchange

Peter Papakyriakov, P. O. Box 603, Muscat, Sultanate of Oman (near the mouth of the Persian Gulf), writes that he has shells from the Oman and Persian Gulf area that he would like to exchange for specimens from other regions.

"I have about 200 species of North Sea shells that I would like to exchange," writes Henry van Wijk, Homerusstraat 509, 3076 LC Rotterdam, The Netherlands. "Are you interested?"

* * *

We can't vouch for this one, but it sounds interesting. It came in the form of a hand-written letter from the Culion Leper Colony, Culion, Palawan 2913, Philippines.

"I write this letter to let you know that our place is full of shells and if you are interested I will gather them for you. Culion is an island which includes nearly a hundred islands and islets, many of whom are not inhabited. On each island have almost beautiful sand beaches where you will find shells of different kinds and are truly beautiful.

"As far as I have observed, there are lots of common shells, but you will also find uncommon ones. I know that shells are gathered alive and let the meat rot out before sending. Also avoid broken lips or tips in order to preserve the beauty.

"I would be very glad if you were interested in all the shells within our area and the neighboring islands, and that you would like me to gather them for you.

Iheminado Iway'

H. K. Dugdale, editor of the **Chambered Nautilus Newsletter**, P. O. Box 3937, Greenville, DE 19807 seeks to trade some *cypraea* for his spare cones and other species. He says he lacks Hawaiian and some Indo-Pacific cowries.

"During my student years in the biology department of the University of Valle (Colombia) I developed a great interest in Mollusca," writes Jaime R. Cantera K. of Cali, Colombia. "I initiated the university's reference collection of Pacific Coast specimens (presently approximately 10,000 specimens of 500 species).

"Having graduated and joined the staff of the biology department, I wish to begin the second phase of the collection — the addition of specimens from other parts of the world, through interchange. I will be grateful for indications of interest."

Cantera's address is Departmento de Biologia, Universidad del Valle, A. A. 2188, Cali, Colombia.

"I have *Cypraea friendi, C. marginata, C. rosselli* and *Notocypraea* species, plus more common shells from Australia's northwestern coast, which I would like to exchange for *C. tessellata* and perhaps other cowries endemic to Hawaii," writes Mike Lapwood, Lot 38 McCormick St., Seabird via Balga 6061, Western Australia. He adds that he might also be interested in uncommon shells from other parts of the Pacific.

* * *

Dr. Luigi Raybaudi wants a *Murex loebbeckei* and offers any of the following live-taken volutes in exchange: *Voluta adcocki, V. adcocki guntheri, V. rossiniana* (New Caledonia), *V. verconis*. Address: Casella Postale 756, Rome, Italy.

PERSONAL ADS

Langfordi moretonensis 66.6mm gem for sale or exchange for rare *Cypraea*. Please make offer. Also available other Cape Moreton shells. J. A. Wilson, 110 Palm Ave., Shorncliffe, Queensland, Australia, 4017.

For Sale: *Cypraea aurantium*, 92mm, $250. Very fine with thin growth scar. Frances Ring, No. 4 Whiting Way, Y.B.I., San Francisco, CA 94130.

Club patches and pins wanted from any and all worldwide shell clubs and societies. Please let me know what's available and price. Thanks. Chuck Spradling, RR4 Box 170, Peru, Ind. 46970.

Use **HSN** Personal Ads. Three dollars per 25 words, plus name and address. One time only. Dealers please use display ads.

The Rediscovery Of *Conus siamensis*

by DIETER ROCKEL

DARMSTADT — Every cone collector who in the 1960s bought the then standard **Cone Shells of the World** by Marsh and Rippingale was no doubt enthralled by the ***Conus siamensis*** Hwass shown on Plate XXII. What beauty in color and pattern! Large and striking, it would be a desirable addition to any collection.

But where could one get a specimen? No dealer's list included the name, and no collectors offered it in exchange. Although "Indian Ocean" was listed as the type locality, no one on the shores of that vast body of water ever seems to have owned a specimen.

Cone collectors first became aware that a mistake was being carried through generations when Dr. Kohn in his 1970 study of Hwass' types investigated *C. siamensis*. Kohn concluded that:

1. *C. siamensis* is conspecific with *C. prometheus* and *C. papilionaceus;* and, moreover

2. *C. siamensis, C. prometheus* and *C. papilionaceus* are synonyms of *C. pulcher* Lightfoot, 1786.

Conus siamensis therefore did not exist. Discouraged collectors struck the name from their "want" lists.

To be sure, Dr. Kohn's thesis on *C. prometheus*, *C. papilionaceus* and *C. siamensis* was not accepted by all experts. Many found it difficult to believe that the large *C. prometheus* and the smaller *C. papilionaceus* should bear the same name. Radula investigations by Trovao, however, definitely confirmed Kohn's view. But I shall let this question rest and turn again to *C. siamensis*.

No one wanted publicly to contradict Kohn's position that the similarity of *C. siamensis* to *C. papilionaceus-prometheus* is so striking that the existence of an independent type can no longer be seriously asserted. Nevertheless, doubts remained.

Specimens from West Africa — from Mauritania to Angola — lacked that impressive broad-shouldered aspect, the gently concave elevation of the spire, and above all the multiplicity and colorful variations of the narrow fillets. What examples did Reeve have when he described the differences between *Conus siamensis* on the one hand and *C. prometheus* and *C. papilionaceus* on the other?

"*Conus siamensis* may be chiefly distinguished from its next allied species, the *Conus papilionaceus* and *prometheus*, by the number of narrow articulated fillets which encircle its entire surface." he wrote.

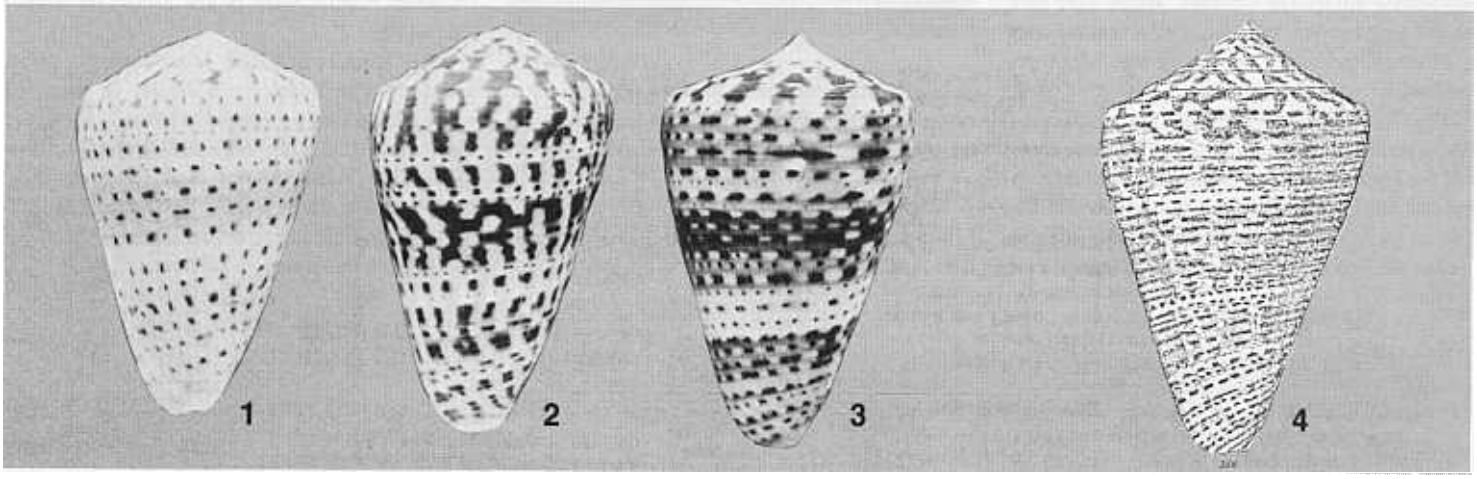
Now for the good news.

Conus siamensis apparently has been rediscovered after many decades of oblivion. HMS member Edmund Trippner brought back to Germany from a diving expedition to the Canary Islands a small series of *"papilionaceus"* specimens, which he had found at a depth of twenty-five meters. They differ strikingly from the usual West African examples of *C. papilionaceus* in form, color and pattern, but they are in complete agreement with the type of *Conus siamensis* and with the descriptions and illustrations in old literature.

There can be no doubt. *Conus siamensis* exists and its geographic locality is now established as the Canary Islands.

As Dr. Kohn definitely established, we do not have an independent species. But *siamensis* is evidently a clearly defined geographic type or subspecies of *Conus pulcher*, differing in both form and pattern.

In my opinion, the correct name is "Conus pulcher siamensis Hwass, 1792."



1. Conus papilionaceus (= pulcher Lightfoot), Mauritania; 2. C. papilionaceus (= pulcher Lightfoot), Senegal; 3. C. siamensis Hwass (= pulcher siamensis Hwass), Canary Is.; 4. *C. siamensis (from Reeve Pl. XXIX Sp 166).* *Photos: Rockel*

References:

Kohn, A. J. 1968. "Type specimens and identity of the described species of Conus, IV." **J. Linn. Soc.** (Zool). London.

Marsh, J. A. & O. H. Rippingale. 1964. **Cone Shells of the World.** Brisbane.

Reeve, L. A. 1843-49. **Conchologia Iconica.** London.

Tryon, G. W. 1884. **Manual of Conchology.** Philadelphia.

Other Shell Clubs

SANIBEL — The forty-first annual Sanibel Shell Fair was an outstanding show, according to the Sanibel **Island Reporter.**

"People are being treated to shells they've never seen before," exhibits chairman Anne Joffe told the paper. "It's the best show I've seen."

Two hundred seventeen displays were entered by 188 exhibitors. They were housed in the Sanibel Community House, home of the Shell Fair since 1931.

Judges were Fran Thorpe of Coconut Grove, FL, Rudi and Gary Magnotte of Pompano Beach, Fran Williams of Miami, and Dr. Donald Moore of Miami.

Gene Everson of Fort Lauderdale received the duPont Trophy for the outstanding exhibit in the scientific division. His twenty-foot display of worldwide miniatures included "some very rare shells, good specimens all and well presented with a different approach," as one of the judges expressed it.

The City of Sanibel Trophy for Best Shell of the Show went to Rachael Preston of Traverse City, MI for her ***Pterynotus loebbeckei*** Kobelt, 1890. A special judges' award for a shell that vied with the winner was given to Lowell DeVasure of Tekamah, NB for his ***Perotrochus atlanticus*** Rios & Matthews, 1968.

Photo: Walker

John and Judy Van Buren, holding their People's Choice and Exhibitor's Awards; being congratulated by Club President Grace Johns.

Mr. and Mrs. Stewart Armington of Cleveland, OH took the Shell of the Show rosette (worldwide) with a specimen of ***Conus crocatus*** Lamarck, 1810 from Raya Island, Phuket, Thailand. The Florida Shell of the Show award went to Reva Denson of Barrington, IL.

S.L.

Central Florida Shell Club

ORLANDO — In one of its most beautiful weekends weatherwise, the Central Florida Shell Club held its sixth annual shell show early in March at the John Young Museum and Planetarium here.

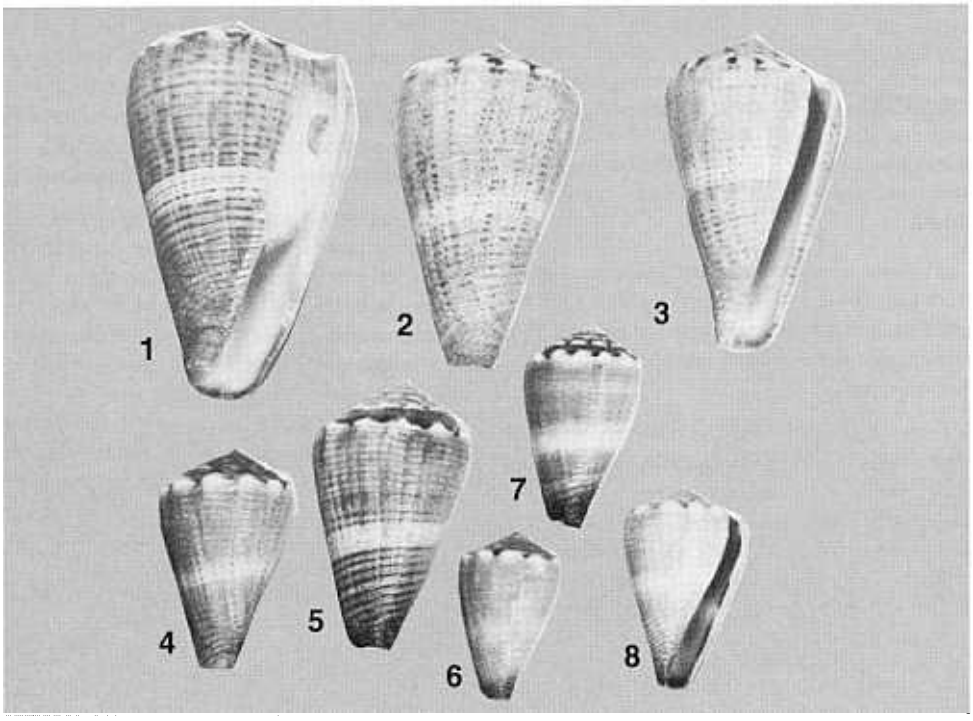
The duPont Trophy was taken by Robert Beatty with his display of cones. The worldwide Shell of the Show was Jerry Thompson's ***Cypraea marginata*** Gaskoin, 1848. The Self-Collected Shell of the Show was Beatty's ***Cypraea aurantium*** Gmelin, 1791, matched by Vera Roberts' Self-collected Florida Shell of the Show, an albino ***Fasciolaria.***

Other winners included: Most beautiful, John and Judy Van Buren for a display of pectens, which also took two special awards — People's Choice and Exhibitors' Award; One species, Ione Reed; One area, Les and Kay Easland; Self-Collected, Jim Cordy; and Most Beautiful Exhibit (Div. B), Minnie Lee and Con Campbell for their Shells from the Kingdom of Tonga.

Conus Confusion:

CONUS BILIOSUS AND *CONUS IMPERATOR* RECONSIDERED

by JOHN K. TUCKER



Figures 1-3 ***Conus biliosus*** *(localities: 1 and 2 – Ramaswaran, India; 3 – Ceylon); figures 4-8* ***Conus imperator*** *(localities: 4 and 6 – Grande Island Subic Bay, Philippines; 5 – Cairns, Queensland; 7 – North Australia; 8 – Cantilan, Surigao, Philippines). All specimens 0.90 life size.*

EFFINGHAM, IL — I read the recent articles by G. Thornley, (HSN Oct. 1977) and Walter O. Cernohorsky (HSN Jan. 1978) on the ***Conus biliosus-imperator*** complex with great interest. Since I believe that both authors made some statements that were correct and others that will require confirmation, I would like to make some comments that seem appropriate.

First, Thornley correctly pointed out that while Martini's figure 707 could be identified as ***C. mus*** it is difficult to reconcile this figure, on which Link based his ***C. parvulus***, with Australian specimens subsequently described as ***C. imperator***. She also argues that ***C. biliosus*** is a related but allopatric species.

Cernohorsky disagrees, stating that ***C. biliosus*** and ***C. imperator*** are sympatric in the Indonesian area. He acknowledges the inadequacy of Martini's figure 707 and considers ***C. roseus*** Lamarck (Thornley identified Lamarck's species with ***C. mus***), which is based in part on Martini's figure 707, a specimen of the Indonesian ***C. imperator***.

The problems that these two papers leave unanswered are important. In the first place Link's ***C. parvulus*** must be considered with Martini's figure 707 in mind. I agree with Thornley that this figure cannot be identified with ***C. imperator*** and is very likely ***C. mus***. The fact that Lamarck cited two figures, one of which represents ***C. imperator*** and the other Martini's 707, has no bearing on the identity of ***C. parvulus***.

Conus roseus Lamarck is a junior synonym of ***C. roseus*** G. Fischer. Consequently, establishing the identity of ***C. roseus*** Lamarck — while of interest — has nothing to do with Thornley's argument.

The problem with Thornley's paper is that she does not adequately define the ranges of what she is calling ***C. imperator*** and ***C. biliosus*** and also does not define her concept of ***C. biliosus***. She implies that ***C. imperator*** is restricted to Australian waters. Cernohorsky shows this to be incorrect, as Hinton (1972) did earlier. But then Cernohorsky makes what I consider to be an unsupported supposition that because ***C. imperator*** is not confined to Australian waters then it must be sympatric with ***C. biliosus*** (as in his figure 4, my figures 1-3 above). Herein lies a major problem.

The problem consists of two related parts and may be stated in the following way: 1) are shells similar to Cernohorsky's figures 2-3 and my figures 4-8 really sympatric with shells similar to his figure 4 and my figure 1-3? and (2) are these shells the same species and, if not, what are the correct names?

From the specimens that I have seen I would say that the answer to the first question is no. I have seen specimens of ***C. imperator*** (figs. 4-8) from the Western Pacific ranging from Queensland to Luzon in the Philippines and from Pacific Ocean localities in Indonesia. However, I have never seen specimens similar to ***C. biliosus*** (figs. 1-3) from anywhere in the Pacific. I have only seen this species from Indian Ocean localities.

There are, of course, a number of localities in the literature but since the names ***C. imperator, C. biliosus, C. piperatus*** (commonly used before Dr. Kohn pointed out that ***C. biliosus*** was the correct name), and ***C. parvulus*** were loosely applied it is not possible to determine the identity of the shells under question without a figure or a precise description.

As to the second problem I find several differences between specimens from the Indian and Pacific Oceans (Table 1) which suggest that two species or subspecies are present. The precise level of relationship cannot be determined from what I know as I have not seen specimens from areas where Pacific Ocean and Indian Ocean faunas meet. Thus I do not know whether these two forms intergrade or maintain their distinctness. At present I prefer to recognize them as separate species.

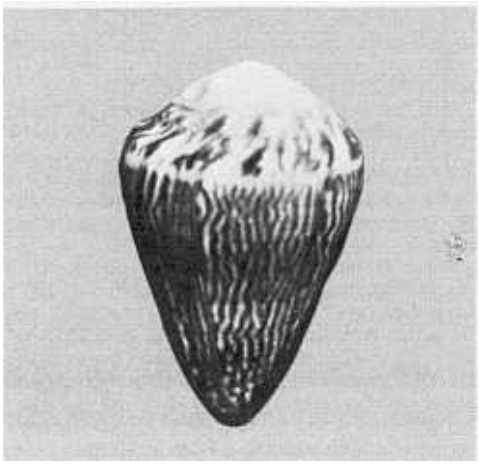
The earliest name for the Indian Ocean species is without doubt ***C. biliosus***, as Kohn showed. ***C. piperatus*** is a synonym of ***biliosus*** and cannot be used for the Pacific species. ***C. imperator*** was certainly applied to Australian populations of the Pacific species and is the earliest available name that can be unequivocally applied to the Pacific species. ***C. pigmentatus*** may be based on ***C. imperator*** and would be the correct name if this could be proved. The description is inadequate to tell whether the type is a ***C. imperator*** or a ***C. balteatus***. Until someone can examine the holotype of ***C. pigmentatus*** and unequivocally establish its identity, I believe that ***C. imperator*** should be used for the Pacific species.

TABLE 1. Comparison of *C. biliosus* and *C. imperator*

C. biliosus (figs. 1-3).	***C. imperator*** (figs. 4-8).
Commonly exceeds 60mm in length.	10 sexually mature Philippine individuals associated with egg masses averaged 25mm (range 21-35mm).
Anterior end slightly or not noticeably darker than the area immediately posterior to it.	Anterior end always noticeably and often greatly darkened compared to the area immediately posterior to it.
Extensive development of black interrupted spiral lines present between midbody and shoulder.	Interrupted spiral lines between shoulder and midbody reduced to scattered spots in most specimens.
Compared to Pacific species, nodes are small.	Compared to Indian Ocean species, nodes are well developed.
Middle spire whorls have 4 and usually more equal-size spiral cords.	Middle spire whorls have 2-3 equal-size spiral cords and may or may not have numerous small or minute cords.

AN OLD 'NEW CONE'

Continued from Page 1



Because of the deceptive "fresh-dead" appearance of most of the Incognito Cones, I concluded that, although it was probably a fossil, it would be readily identifiable. But Hawaiian Malacological Society members were baffled. Eventually, Charles Wolfe, then HMS president, offered the opinion that the new shells were relatives of *C. **chaldaeus*** not to be found in the available literature, including books on fossil shells.

Dr. E. Alison Kay, Associate Dean of the Graduate Division, Univ. of Hawaii, found several specimens in collections made by J. M. Ostergaard and H. Alexander at the Mokapu site half-a-century ago and now within the Bishop Museum. Furthermore, the species is considered extinct.

I had previously sent Dr. Alan J. Kohn, cone expert at the Univ. of Washington, fifteen or twenty specimens for possible identification. Dr. Kay also had sent specimens from the Alexander collection to Dr. Kohn. The plot thickens!

Correspondence with Dr. Kohn over the past year and a half has developed the following information:

To Dr. Kohn's knowledge, no specimens have ever been found alive, and no description of the species has ever been published. W. H. Dall wrote a description and gave it a name — Alexander's cone — in the 1930s, but his manuscript on the gastropods of Hawaii was never published.

At some time thousands of years ago larvae from some Indo-Pacific species arrived at Oahu, grew up into adults, maintained breeding populations, and differentiated into this species, Dr. Kohn went on.

Later, presumably with the relatively rapid fall in sea level that occurred 110,000-120,000 years ago, leaving what is now referred to as the Waimanalo shoreline about seven or eight meters above present sea level, this species became extinct. All other species of ***conus*** known as fossils from Oahu are still extant, although not all still live on Oahu shores.

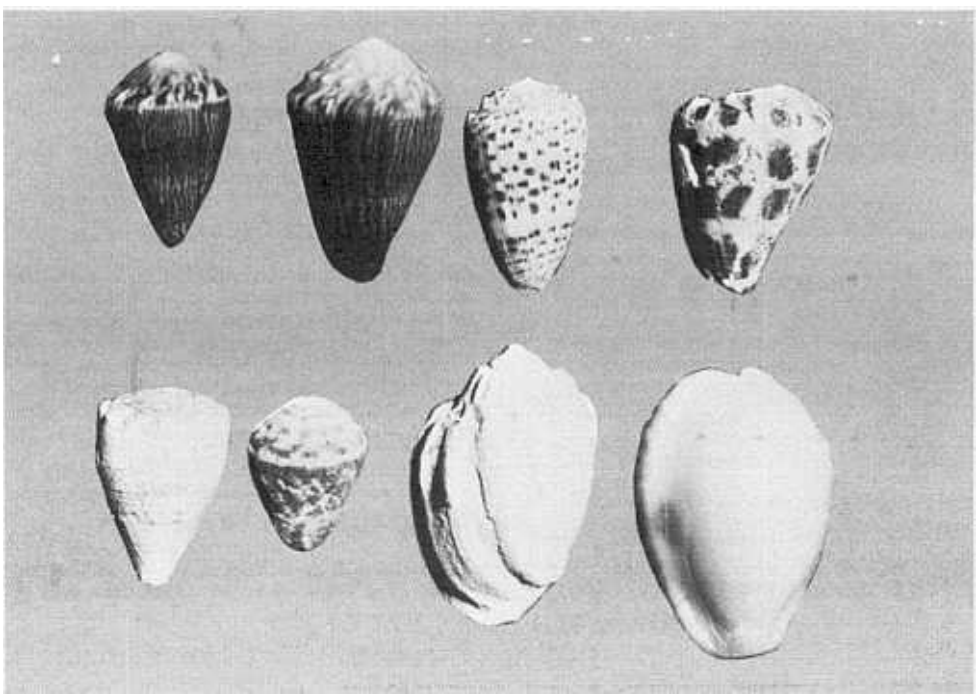
From examination of other fossil species from the same formation which I forwarded to Dr. Kohn, he has expressed the "intuitive hypothesis" that morphometric analysis of "C. incognitus" specimens will prove it to be most similar to ***C. chaldaeus***. (Charlie Wolfe, take a bow!) I am informed that Dr. Kohn's group is continuing a morphometric study of this wayward species.

Thus, the present status of our mystery story is as follows:

The species is extinct, probably endemic to Hawaii and possibly confined to a small area of Oahu. How long the living species persisted into recent geological time and can probably only be determined by modern radiogenic dating methods.

At least seven major ice ages have occurred during the past 800,000 years. Five major glacial stages have been defined in the northern hemisphere, with the periods of glacial ice sheet advances (and consequent lowering of the sea level) each lasting some 100,000 years on average, and interglacial warm periods with sea level rises from about 10,000 to 15,000 years duration. (The last major glacial advance peaked about 20,000 years ago.) The sea has been at nearly its present level

*Shells from the wave bench on Mokapu Point: (top) two specimens of the Incognito Cone, **Conus pulicarius** Hwass, 1792; **C. ebraeus** Linne, 1758; (bottom) **C. abbreviatus** Reeve, 1843; **C. chaldeus** Roding, 1798; **Harpa** sp. (probably **H. amouretta** Roding, 1798); and **Cypraea erosa** Linne, 1758.*



for at least 5,000 years, and any fringing reefs around Oahu that have developed to the normal position of coral reefs in relation to present sea level have grown within this time.

As to the paleozoic history of this *conus* species, some clues are available. Living members were evidently present at the time of the explosive eruptions of Ulupau volcano (a tuff cone) through an ancient reef submerged some fifteen to forty feet at the time of eruption. All specimens I collected were intermingled with lava bombs and fragments, coral fragments, etc. However, there is little agreement on the date of this event, which various authors place some time between 80,000 and 400,000 years ago.

Likewise, there is no assurance that the species did not survive after the formation of Ulupau. Did the lava heat and violence of the eruptions cause extinction or was it the relative sudden cooling period, and rapid fall of sea level, during a middle or late Pleistocene glacial epoch?

In any case, as an old saying almost goes, it's an ill blast that doesn't spread some goodies.

An Informal Description

Length: 33mm.
Width at shoulder, body whorl: 22mm.
Shell small but robust, sides straight, conoid except parallel near shoulder. Body whorl smooth, often with collabral growth lines; transversely striate, with tenuous striae becoming obsoletely nodose or grained raised ridges toward basal tip. Shoulder coronate, tubercles continuing attenuated on the contiguous spire whorls, nodules often obtusely elongated in direction of whorl growth. Aperture narrow, sides parallel, interior white, outer lip thin at edge. Spire moderately elevated and obtuse, apex usually eroded or decollate, sutures obscure. Color orange-brown or dark reddish brown, as many longitudinal thin lines, often wavy and randomly interrupted or branching, separated by light yellow or cream filiform lines, all extending over shoulder and onto spire. Nodules on shoulder and spire often white or cream, but may be due to erosion. Body whorl usually zonate or obsoletely fasciated with two broad, darker bands separated by a lighter band superimposed on the foregoing pattern, basally merging into solid dark color at tip. A thin cream-color line may encircle the body whorl just below and touching the shoulder. Periostracum probably thick or very dense.

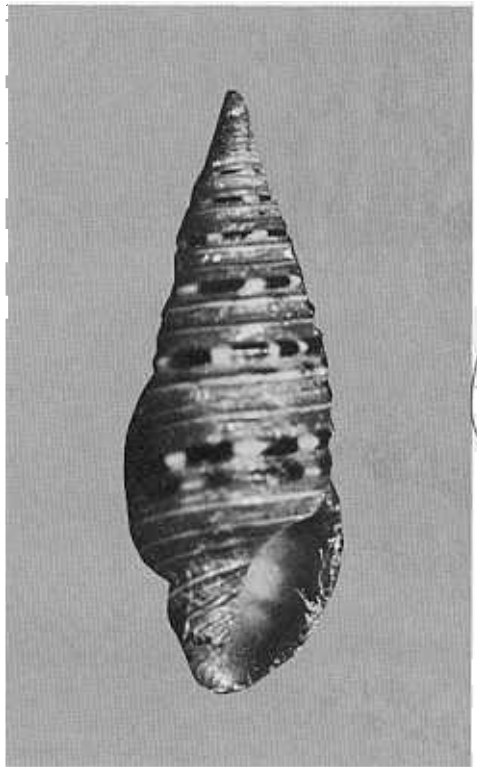
References:

Wentworth, C. K. "Pyroclastic Geology of Oahu". Bishop Museum **Bulletin** No. 30. 1926.
Pollack, J. B. "Fringing and Fossil Coral Reefs of Oahu". Bishop Museum **Bulletin** No. 55. 1928.
Miller, W. J. **An Introduction to Historical Geology.** 1916-1952.
Moore, R. C. **Introduction to Historical Geology.** 1958.
Stearns, H. T. **Geology of the State of Hawaii.** 1956.
Fairbridge, R., Columbia University. Cited in National Oceanographic Data Center Publication G-13, pg. 6. 1968.
MacDonald, G. A. and Abbott, A. T. **Volcanoes in the Sea: The Geology of Hawaii.** 1970.
Matthews, S. W. "What's Happening to Our Climate", **National Geographic Magazine,** Vol. 150, No. 5, Nov., 1976.
Calder, N. "Head South — Ice May Return in a Few Thousand Years", **Smithsonian,** Vol. 8, No. 10. Jan.. 1978.

Turridrupa astricta Range Extension

by EDWIN DeVAUL

During the summer of 1970, while scuba diving off Upper Makua Beach, Leeward Oahu (Honolulu), I found a small *Turridrupa* in sand, at about fifty feet. I could not identify it from any shell book I owned, nor could HMS members to whom I showed it.



Turridrupa astricta *Photo: Schoenberg*

Finally, I found a photo of a similar shell in **Indo-Pacific Mollusca** (p. 23-127, Pl. 305, fig. 4). The accompanying description of ***Turridrupa astricta*** ss ***astricta*** (Reeve, 1843) fit my specimen. Only one thing threw me. The subspecies was not supposed to be found outside the Tuamotu Archipelago.

A year later, a second specimen was found off Koko Head (Honolulu) in sand at sixty feet. My effort to query Dr. A. W. B. Powell, the veteran malacologist at the Auckland Institute and Museum, on the shell's range failed.

Recently I wrote to HSN Science Consultant Walter Cernohorsky in Auckland, telling him the story and enclosing photos taken for me by Olive Schoenberg.

"There is absolutely no doubt that the two Hawaiian specimens on your photograph are the species ***Turridrupa astricta*** Reeve, and that the species lives from the Hawaiian Islands to Polynesia," Cernohorsky wrote in reply.

"In addition, Powell's ***T. astricta consobrina*** is a full species and should be shown as ***T. consobrina*** Powell.

"In my Vol. III of **Marine Shells of the Pacific,** I am listing ***T. astrica*** together with illustrations, and am showing the distribution as Hawaii to Polynesia.

"I have retained (one photo) to show to Dr. Powell, who rarely comes to the office at the Museum. I will draw his attention to its existence in Hawaii and will suggest that he make changes in his manuscript."

'If I Could Save Only One Shell . . . (Continued)

TRAUNSTEIN — Which shell would I save first? It is difficult to say, but one shell in my collection has a particular story and I believe I would save that one. It is my ***Chicoreus brunneus*** Link, 1807.

Why just that shell? It was the beginning of my collection, my first shell.

One Sunday morning in 1975 I found this shell beside my place at the breakfast table. My parents had put it there for me. In my surprise, I asked them where they had got such a beautiful thing.

"In Salzburg, at a small zoo shop," they told me. "There are many more shells there which can be bought at cheap prices."

From that beginning I have built up my shell collection which today counts about 250 different species. Without that ***Chicoreus brunneus,*** I would have no shell collection today.

This is the shell I would save first, but there are so many beauties in my collection — ***Tibia fusus, Thatcheria mirabilis, Scaphella junonia, Cymbiolista hunteri*** and many more — that I feel it would be much better that my house not burn down!

Florian Rauen

Conchologists Of America Making Convention Plans

Officers and members of the Conchologists of America (COA) are preparing for their annual meeting, to be held this year in Westbury, Long Island, Convention Chairman Martin Lerner has reminded HMS. Many Society members also belong to COA.

The program of lectures, field trips, social events, business meetings and award presentations will run from Wednesday morning, 27 September, through Saturday, 30 September. The Long Island Shell Club will be host this year.

The Conchologists of America, a nationwide organization formed in 1972, is oriented to the collector interested in the beauty of shells, the scientific aspects of collecting, and conservation. Activities are primarily directed toward people interested in shelling as a hobby, but the membership includes scientists, advanced amateurs, beginning collectors and dealers.

The **COA Bulletin** is sent to members several times a year. Membership costs $3.

"Our annual meeting is held in a different locality each year," Lerner explained. "This year's will be at the Island Inn, Westbury, Long Island, New York, and it promises to be the best ever.

"Registration will take place Wednesday morning and the convention will officially start Wednesday afternoon. Wednesday evening a Get Acquainted cocktail party will be hosted by the Long Island Shell Club.

"Weather permitting, a collecting field trip is planned for Thursday to Orient Beach State Park, on the extreme northern tip of Long Island, 125 miles out into the Atlantic Ocean. Thursday evening, the Long Island Shell Club has planned a shell exhibit followed by a color film on the Great Barrier Reef.

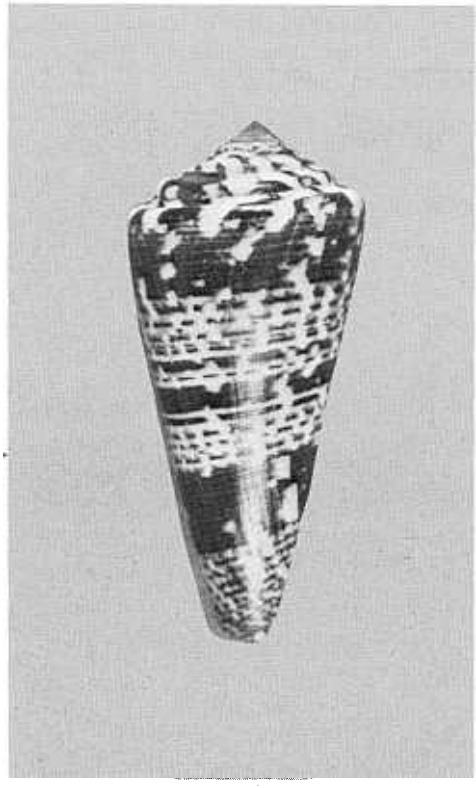
"Another field trip is scheduled for Friday, this time to the American Museum of Natural History to see the famous Hall of Mollusks. The afternoon will be spent at the Coney Island Aquarium where we hope to see the live chambered nautilus.

"Friday evening will feature our annual shell auction. Shell dealers throughout the world have been contacted for specimen contributions. Whether or not you attend, we hope you will contribute specimen shells for our auction."

Saturday morning the presentations will continue, followed by the business meeting. The convention will conclude with a banquet Saturday night with Dr. R. Tucker Abbott as the guest speaker.

"Throughout the convention and due to the efforts of member R. Wayne Stevens, we will be giving away, as door prizes, dozens of brand new shell books donated by their publishers. Remember, however, you have to be there to be lucky," Lerner concluded. For more information contact the Convention Chairman, Martin Lerner, 64 Thompson Avenue, Oceanside, New York, 11572.

The First in 150 Years



Conus thomae

by ELMER G. LEEHMAN

A gem, live-taken specimen of ***Conus thomae*** Gmelin, 1791 was collected recently by HMS member Roger Berthe on one of his trawlers working in the Andaman Sea off Thailand near the Burma border. As far as I can ascertain, this is the first gem specimen of this extremely rare shell to be collected in the past 150 years. I personally examined this shell and can testify to its phenomenal quality and beauty.

Subsequently, the shell was sold to a U.S. collector for what I believe is a record high price for a shell — in excess of five thousand dollars!

There are probably less than ten specimens of ***C. thomae*** known in world collections, although the species has been known since 1719. Interestingly, Linneaus did not bother to name and describe the shell, although he knew of its existence.

The old specimens generally have "Moluccas" as their locality.

Two fine specimens of ***C. thomae*** are in the collection of Helene Boswell in South Africa. Rear Admiral W. S. Bitler in New Jersey has another from an old collection. Two or three are said to lie in the British Museum, with possibly a couple of others in private collections.

The new shell measures 78mm. It is a light cream with numerous reddish-brown horizontal lines, dots and dashes. These brown markings tend to band around the body.

The spire is moderately tall and sharp, with brown blotches. Inside, the aperture is creamy white.

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 only two days a week; and that it does not have a telephone. Society officers are listed individually in the telephone book. If in doubt, ask the Waikiki Aquarium for names. Better still, write the Society in advance.

THE VALUE OF OBSERVATIONS

by WES THORSSON

The Hawaiian Malacological Society is a nonprofit educational organization. The key word is "educational." Our incorporation papers use it, our bylaws repeat it, and it appears on the front page of each issue of **Hawaiian Shell News.**

But education is not something doled out by the Society president, or created by the publication committee. It must come from our members in the form of articles for **HSN.** This is an organ for exchanging information among shell collectors, semiskilled naturalists, and professional scientists.

Brief notes on field observations are particularly welcome in these columns. They are what, above all else, the amateur usually can best contribute.

The "Oahu Observations" that Bob Purtymun used to contribute is an excellent model. So, too, are the reports that Scott Johnson has been writing on the shells of Kwajalein. You can do the same for your own area.

"Observations" need not be profound, but they should be brief and accurate, and preferably based on your own experience. Such things as habitats of individual species, feeding habits, dates when egg-laying was noted, length of time between various growth stages, age at apparent maturity, and total age span are worth reporting. Be as specific as possible. Clearly identify the species, locality and date or season.

Don't be put off by the fact that your observation matches that of someone else — nor that it contradicts it. After all, one report may be only interesting, but two reports may establish a fact!

A Rare Volute Specimen From Japanese Waters

NEW YORK CITY — Recently I obtained a nice specimen of ***Fulgoraria (Kurodina) smithi*** (Sowerby III, 1901). It was trawled on April 19, 1977 by a local fishing boat at a depth of 300 meters southeast of Choshi, Chiba Prefecture, Japan. The fishermen forwarded it immediately to Mr. T. Watanabe, a local collector and a good friend of the author. He took a snapshot of the shell with animal and later sent both the specimen and snapshot to me. It measures 175mm.

Masao Tabakotani

Hawaiian Specimens Needed

"I am currently working on a muricid group ***Favartia,***" writes **HSN** Science Consultant W. O. Cernohorsky. "I would like to borrow, either from you or any of your friends, some specimens of ***Favartia*** occurring in Hawaii like ***F. garretti*** Pease, and probably others. You will find what I'm talking about in Ruth Fair's **Murex Book** (Plate 20, figs 299 and 299-2). I will return the specimens within a couple of days after receipt by insured air-mail and will acknowledge the loan and also send a reprint of my paper when it is printed. Can you help?

"I am also working on a monograph of the families ***Nassariidae*** and ***Mitridae,*** as well as ***Costellariidae*** (formerly ***Vexillidae***). Any spare specimens of these families from Hawaii would be welcome."

Cernohorsky's address is: Auckland Institute and Museum, Private Bag, Auckland 1, New Zealand.

Ed DeVaul

RECENT FINDS

by LYMAN HIGA

Futenma, Okinawa

Dear Lyman:

I have a little story for you. I was diving for shells off Serigaki beach here in April, looking for ***Conus pertusus*** at about 120 feet. While turning the small rocks, I noted a different cone right out in the open about ten feet to my left. I could not identify it immediately.

As I approached the shell, I could see some tent markings through the thick brown periostracum. "***Conus magnificus,*** or something similar," I thought. But when I picked it up, I knew I had something else.

Back home, Phil Crandall confirmed that I had a live-taken 53mm gem ***Conus crocatus*** Lamarck, 1810.

Incidentally, I found a gem ***C. pertusus*** right next to it.

Phillip Bellin

* * *

Specimens of ***Cypraea musumea*** Kuroda & Habe, 1961 and ***C. teramachii*** Kuroda, 1938 have been found for the first time in New Caledonia waters, according to word reaching Elmer Leehman. The ***C. musumea*** was taken alive, while the ***C. teramachii*** was found dead.

Both shells were dredged by the French research vessel **Vauban,** under the direction of the Benthic Laboratory in Noumea, near the southern reefs of the Isle of Pines in April 1978. The water was 390 meters deep.

HMS members Bob and Gina Pierson wrote to Leehman that many other shells were collected by the dredge, but that identification will require further study.

* * *

Meanwhile, back in Honolulu, noncollector Dick Miyashiro has lent me a paper nautilus shell he found in the stomach of a bonito that he caught while trolling off Windward Oahu. The stomach also contained four recently swallowed sea horses, which are uncommon in Hawaii. Dick tells me he always studies the stomach contents of his catches to determine fish eating habits.

Four Controversial Cones From Thailand

by ELMER G. LEEHMAN

The "hottest" spot for cones in mid-1978 undoubtedly is the area around Raya Island, in the Bay of Bengal near Phuket, Thailand. As most *conus* enthusiasts are aware, several attractive "new species" have been collected there in the past year or so (see **HSN** April 1978).

There is worldwide interest in these specimens, but little agreement on their identity. It seems as if every expert has his own opinion.

Several Hawaii members of HMS had an opportunity not long ago to closely examine some specimens of the new shells being carried by H. Roger Berthe, of Gulf Sea Shells in Phuket. After the viewing, there still was no consensus as to identifications, but it was quite easy to see why there has been so much interest regarding these beautiful shells.

The four most important of the new Raya cones are figured here. The shell on the left (1) seems to be a new species, not yet validly described and named, but known in Thailand as the "Chusak cone" for its discoverer. It has features that resemble both ***Conus striatus*** Linne, 1758 and ***C. circumcisus*** Born, 1778. According to Berthe, however, the Chusak cone's animal is black, whereas ***C. striatus*** is red. The interior of the aperture is golden yellow, which is not true of either ***C. striatus*** or ***C. circumcisus***.

The second specimen (2) is a ***Conus bullatus*** Linne, 1758 with a blood-red interior as opposed to the normal yellow. In Thailand this is being called the "acicularis variation," on what basis I do not know. Some time ago cone expert William Old Jr. of the American Museum of Natural History in New York examined a comparable specimen from Mozambique. He called it merely ***C. bullatus***, not recognizing any difference because of the interior coloration.

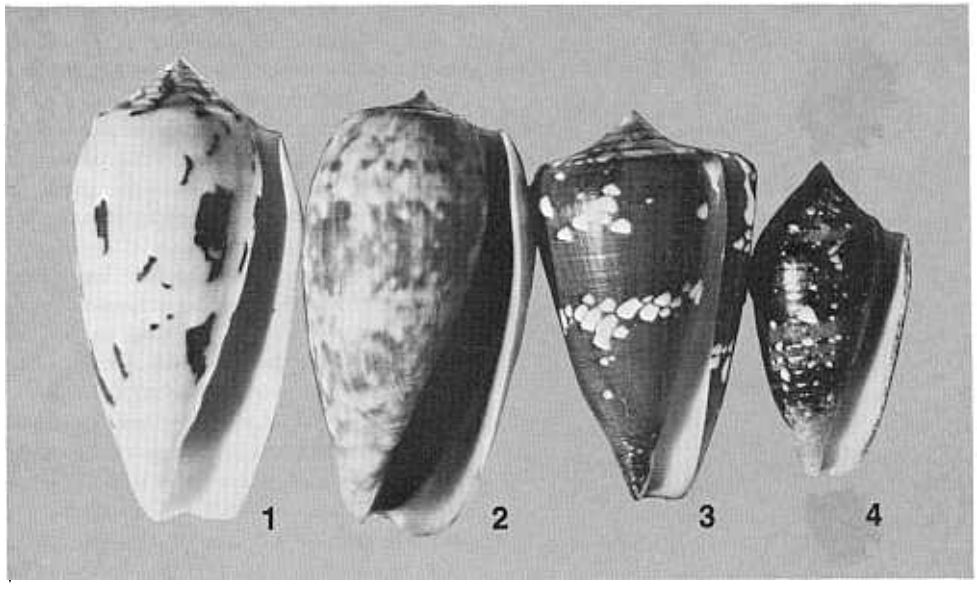


Photo: Schoenberg

Shell No. 3 is known in Thailand as the deadly cone." It was in search for this shell that a number of Thai divers contracted "bends," from which at least five subsequently died. Both Old and Walter O. Cernohorsky in Auckland consider this shell to be ***Conus crocatus*** Lamarck, 1810, but a substantial difference of opinion remains. When closely compared with specimens of ***C. crocatus*** received recently from Iain Gower in the Solomon Islands, clear and consistent differences are apparent. But I am not prepared to offer any conclusions on this matter.

The Raya cone is much heavier, with strongly rounded shoulders, has a wider body and a much flatter spire than the Solomons type. The Thai shell is often referred to in Thailand as the "Raya-Berthe cone."

Finally, a specimen of the rare ***Conus architalassus*** Solander, 1786 is figured (4). It is from the same area as the "Raya-Berthe cone," and is certainly a spectacular and beautiful species. As far as I can learn, no popular name has been given to this one.

Bangkok cone enthusiast A. J. (Bob) da Motta (see page five) tells me that all the above shells are being studied by competent people. He is confident that most, if not all, will prove to be new species. If so, names will be proposed and descriptions published.

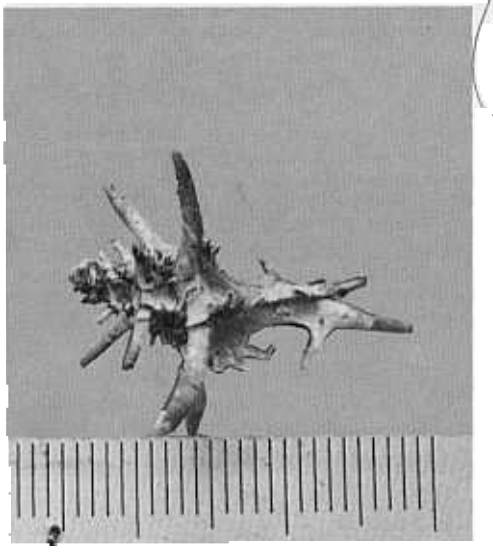


Photo: Lyn

The shell figured above, a fine specimen of ***Typhis tosaensis*** Azuma, 1960, was trawled recently from deep water north of Taiwan. It is now in the possession of HMS member Galen C. T. Lyn of Kaohsiung.

This fragile member of the Muricidae measures only 26mm. The fronds are in good condition. After thorough cleaning, the shell is pure white and slightly iridescent. E.G.L.

Rare Shells Received For HMS October Auction

HMS Shell Auction Chairman Andy Adams reports that some very desirable shells have been received from Society members in far corners of the world, but that Hawaii folks have been slow to send in their contributions to the forthcoming sale.

"We could use more endemic Hawaiian species," he said. "I realize that there's 'plenty of time,' but we need to get lists made up and publicity prepared.

"Our Hawaiian shells traditionally are important money-earners at HMS auctions. So bring them in now!"

The auction is scheduled for Saturday, October 7, in Honolulu. Proceeds this year will go to the HMS Scholarship Fund.

"The first important package of shells received was from Peter Board of Western Australia (see **HSN** June 1978), who sent nearly 100 shells representing some fifty-six species!

"Another early supporter was Melania of New Caledonia, with a nice parcel of gem and hard-to-collect cowries. Among them were melanistic ***C. cribraria*** and ***C. caurica***," according to Adams.

A "very large group" of specimens of ***Murex stainforthi*** was received from J. F. Singleton of Western Australia, as well as a fine selection of miscellaneous shells from Galen Lyn in Taiwan.

"W. M. Ames of San Diego forwarded a good assortment of ***cymatium*** and ***murex***," said Adams. "Among them I noted a ***C. tenuiliratus*** and a ***M. mindanaensis***.

"I understand that several other contributions are en route, and I will report them next month."