

GUAM'S NASSARIUS COMMUNITY

By **RICHARD SALISBURY**

The Nassariidae, commonly called the dog whelks or basket shells, includes more than 250 species worldwide. The majority live in tropical waters, many in association with mud flats, sand or mangrove swamps where they usually are intertidal scavengers and predators. Only a few species have adapted to depths below 100 meters (328 feet).

Dog whelks live by burying themselves in silt, sand or mud, emerging on the incoming tide or at

night. They prey on other molluscs, crustaceans and invertebrates.

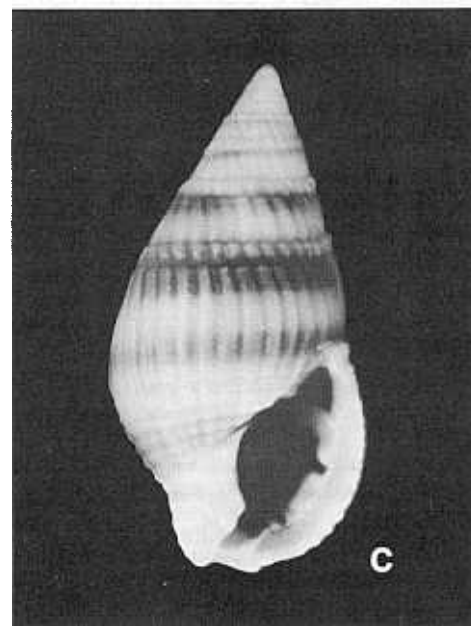
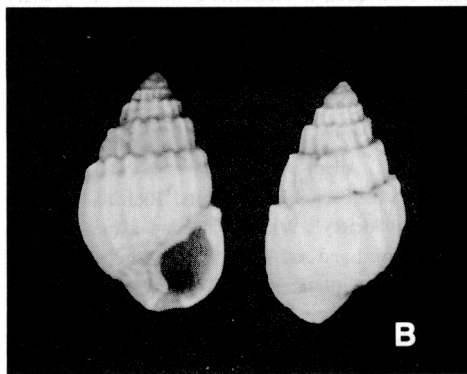
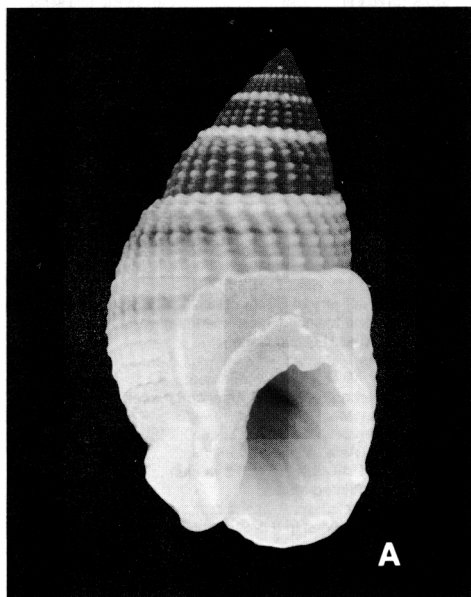
Many dog whelks have prominent callus shields covering the columella. The oval aperture is denticulate or lirate within. The operculum is corneous, circular and often has a serrated margin.

The animals of the Nassariidae are extremely active when uncovered or exposed. A scent of food or prey will bring them popping out of the muck, their siphons waving as they seek their next meal. They can be baited like olive shells and are found in large colonies.

The island of Guam, in the western Pacific at about the same latitude as Manila or Mexico City, seems to have a sparse *Nassarius* population compared with the rest of the Pacific. The lack of mangrove swamps may be one reason. Only 13 species are known there.

Hawaii has even fewer species — seven. Four of these also have been found on Guam where most *Nassarius* are collected in shallow water. Deep-water shells are poorly known on Guam.

The island, however, is surrounded by well-developed fringing reefs. Behind these reefs are large sandy areas ideal for *Nassarius*. In a few places rivers have formed muddy deltas in which the genus thrives.



Photos: Salisbury

The 13 species reliably reported from Guam are:

Nassarius (Niotha) albescens albescens (Dunker, 1846) (Fig. A) (17mm). This species, relatively rare on Guam, is found in very shallow tidal pools. The periostracum is a unique fluffy white, covering the entire shell, and obscuring its color pattern, shape and identity. The animal lives in white sand and emerges at night.

Nassarius (Profundinassa) babylonicus (Watson, 1882) (Fig. B) (7mm). One of four deep-water dredged species found around Guam, this tiny white *Nassarius* was dredged by the University of Guam at a depth of 350 meters. It was in silty sand mixed with coral rubble, coralline algae and skeletons of large foraminifera.

Nassarius (Zeuxis) concinnus (Powys, 1835) (Fig. C) (12.5mm). During my first years on Guam

I could find only crabbed and beach-worn examples. We finally found them alive among rocks and coral rubble, along rock-filled breakwaters, buried in silt 100 to 150mm (6 inches) deep, just above a black mud layer. The shell has a row of golden beads along the suture.

Nassarius (Plicarcularia) graniferus (Kiener, 1834) (Fig. D) (19mm). The second most common whelk on Guam, *N. graniferus* lives in all intertidal areas in white sand. It is also found on the sloping fronts of reefs, in shallow sand pockets, at scuba depths. It is heavily callused. This species gives way to *Nassarius oeratus* at greater depths.

Nassarius (Hebra) horridus (Dunker, 1847) (Fig. E) (11mm). I discovered these uncommon (on Guam) little shells while snorkeling at night near shore. As I lay in the shallows with my flashlight

sweeping ahead, I saw a file of *Nassarius* trooping along just in front of my light. Half a dozen of these little fellows, their siphons waving like flags, were swiftly trailing each other, like a herd of elephants on their way to their favorite water hole. As there is very little sand on these flat coral terraces on Guam's windward side, these shells apparently live in cracks on the hard substrate, burying in the sand for protection during low tides and emerging at night or on high tides to feed on the animals trapped in these shallow tidal pools.

Nassarius (Zeuxis) margaritiferus (Dunker, 1847) (Fig. F) (21mm & 23mm). This species can be found in huge colonies on muddy tidal flats. It becomes active on incoming tides, seeking animals trapped by the day's low tide. The shell usually is stained black.

(Cont'd on Pages 8&9)

REEFCOMBING

Members' attention is called to the financial report for 1983 by Treasurer Wes Thorsson appearing on page 12 of this issue. Despite some unusual expenses, we ended the year comfortably ahead of 1982. For this we can thank a dedicated treasurer and a coldly realistic Board of Directors.

The Society ended 1983 with 1,592 members. That was almost level with 1982, but about 100 fewer than in 1980, our banner year.

About 1,000 members reside in the United States. The remainder are scattered all over the world.

Present indications are that the 1984 membership will about equal 1983's.

Plans for HSN in the year ahead call for three issues in color. We probably will remain at 12 pages, in view of the substantial increase in postage when mailing weight exceeds two ounces. One consequence is a rather strict limit on advertising. We do not allow ourselves to accept more than 20 percent in ads. (It is frustrating, but Advertising Manager Olive Schoenberg frequently must tell potential advertisers to wait a month or two for lack of space.)

The Society is braced for an increase in U.S. first-class postage rates. We probably can absorb the added cost this year. Next year may be different.

In common with most enterprises, we foresee a modest increase in expenses. The Social Security tax for our office secretary is up, and we expect a boost in our office rent when the lease comes up for renewal in midyear. Despite our efforts to economize, printing costs rise.

Although the Board has not formally adopted the 1984 budget as this is written, the HMS Scholarship and Grant Program is expected to continue.

John K. Tucker, that sharp-tongued observer of the *Conus* scene, has been appointed director of the Brevard Museum in Cocoa, FL. He describes it as "a small nonprofit educational research institution" whose "main areas of interest are history, pre-history and natural history."

Cocoa is close to the ocean and adjacent to Cape Canaveral.

On the subject of cone shells, we have to report a limerick submitted by Bruce Crystal of Longmont, CO that deals with the matter:

Getting a *Conus* to come out of its shell
Is tougher to do than to tell.

The clam is outside

When its hinge opens wide

While the *Conus* retracts there to smell.

Shelling Philosophy

"One disadvantage (suffered by the Hawaiian Malacological Society) is that it is so isolated," comments Donald Dan of Oak Brook, IL in discussing the Society's recent decision to defer its 1984 Shell Show. "It gets virtually no participation

from other clubs. Most Mainland clubs socialize with other clubs, especially neighbors. This acts as a tremendous reinforcing factor.

"The very useful support one club gives another is one reason the small clubs survive and even prosper.

"Clubs that are scientifically oriented and stiffened by business formalities, as some big-city groups are, have a tendency to lose the human touch. Members tend to participate less and less enthusiastically.

"The coffee-and-doughnut aspect of a club meeting can be just as important as having a good formal program. Let's hope we never forget the fun part of shelling."

Hollis Boone

Society members were saddened to learn of the death last October of Hollis Boone, husband of long-time HMS member Constance Boone of Houston. He had been retired from the FBI. All extend condolence to Connie.

Dr. Joseph Morrison

Dr. Joseph P. E. Morrison, who retired some years ago from the Department of Invertebrate Zoology of the Smithsonian Institution — National Museum of Natural History in Washington, D.C., died in December. He was 78. Dr. Morrison had been active in the National Capital Shell Club and in other malacological organizations, and was a frequent contributor to scientific journals. His specialty was the classification and zoogeography of freshwater molluscs.

HMS January Meeting

HMS members John Ross and Richard Salisbury gave the Society's January meeting a run-down on the fish, bird and seashell life on Midway and Kure islands, two little-appreciated points of land in the Pacific Ocean some 1,200 miles northwest of the main Hawaiian chain. Attendance totalled nearly 70, including visitors from many parts of the Mainland.

Access to Midway is limited to those with a strong connection with the air and sea navigational aids maintained there by the U.S. Government. Both Ross and Salisbury have been stationed there, and return occasionally on duty.

The marine mollusc population is essentially the same as that of Hawaii proper, they reported, although some species are rare. Several are remarkable for their size, however. They speculated that this may be a consequence of colder water.

Shelling in both shallow water and in the deeper parts of the lagoon and off the leeward reef is good, said Salisbury. In part, this may reflect the scarcity of shellers, he added. Few of the service men stationed there have been seriously interested in collecting.

S.L.

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The Society meets the first Wednesday of each month at the First United Methodist Church, Beretania & Victoria Streets, in Honolulu.

VISITORS WELCOME!

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

Members outside the United States are asked to pay with a bank cheque (not a draft) payable to HMS on a U.S. bank. (Be sure your name and address appear on the cheque.)

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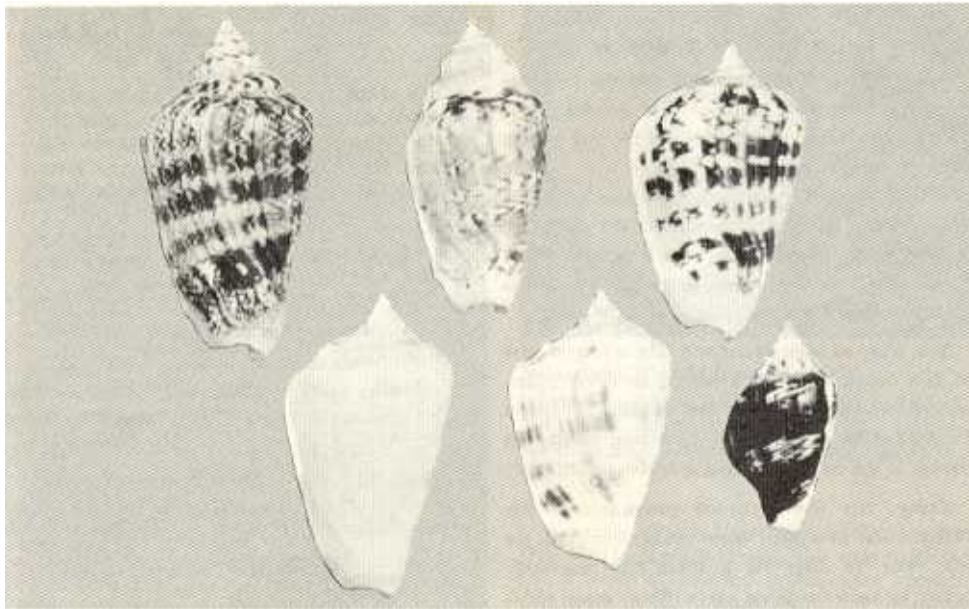
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Typesetting, composition and printing of Hawaiian Shell News is done by Fisher Printing Co., Honolulu.

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. The Museum's Karl Greene Shell Room has a good display of both Hawaiian and Indo-Pacific species.

New Species in the Mediterranean: 2 Reports



Variety in *S. decorus persicus*

Photo: Blöcher

By MANFRED BLÖCHER

DUISBURG — The finding of a specimen of *Cypraea gracilis* Gaskoin on the Mediterranean coast of Turkey was reported in HSN March 1983. A subsequent revisit to the town of Silifke (of which I will say more later) fully confirmed my finding.

In my original report, I did not mention that I had found in the same area some live, juvenile *Strombus* specimens of a species not previously known in the Mediterranean, to my knowledge. I sent these to my collector friend in Australia, Thora Whitehead, for help in identification. By chance she had some juvenile *Strombus decorus persicus* Swainson in her collection, showing close similarity to my discovery.

Since it was my intention to return to Turkey later in the year, I thought it best to refrain from publishing until I could determine the availability of adult specimens and could identify them positively.

My recent second visit to the Mediterranean coast of Turkey east and west of Silifke was very interesting indeed. I found *S. decorus persicus* in all possible habitats except on clean white sand. Individuals were clinging in small crevices on steep rock walls, as well as on solid stone rubble well removed from sand. The preferred habitat, however, seemed to be slightly muddy sand even without growth.

On a shoreline extending only 500 meters I observed four *Strombus* colonies, all well separated. Two consisted of juveniles exclusively. In one of the latter, all shells were of equal size.

During my five weeks in the area these colonies did not move more than about three meters. Although individuals were active most of the time (as was shown by their tracks in the sand), they remained within the relatively small area of the colony.

One gathering included hundreds of animals, covering the sea bottom as far as I could explore.

It was notable that specimens with fully mature lips were very scarce. I estimate that at least 90 percent of the full-size shells still had thin and even transparent lips.

There must be a particular reason for this slower completion of shell solidarity. It might be the relative lime content of the seawater or perhaps the water temperature.

In addition, specimens varied greatly in shape and color pattern, as is clear from the photo (above). At least two shells closely match two specimens of *S. decorus persicus* from Muscat in the specialized collection of Dr. S. Petz of Dusseldorf, West Germany.

(I would be grateful for any information from HMS members who may have collected *Strombus decorus persicus* on Arabian shores. Is there similar variability within other populations? My address is Postfach 21 01 10, 41 Duisburg 1, West Germany).

Returning to the subject of the *Cypraea gracilis* from Turkey, on my second visit I came upon a live individual some 45 km west of the spot where I found the dead shell previously. This was slightly subadult.

The animal had its red mantle fully extended, exactly matching the sponge on which it was sitting. It was clinging to the underside of a stone in about three meters of water.

I discovered it only because it was close to a *C. spurca* which I started to collect, whereupon the *C. gracilis* got into motion.

In view of this habitat I suspect that specimens will be hard to find. Nevertheless I feel that my find is proof that the species is established at least on the Mediterranean coast of Turkey.

By HENK D. MIENIS

JERUSALEM — Recently Manfred Blocher reported the finding of an empty shell of the Indo-Pacific *Cypraea gracilis* Gaskoin, 1849 on the south coast of Turkey between Silifke and Mersin (HSN (31-3) March 1983).

A first find, like this one, of an Indo-Pacific species in the Mediterranean is always difficult to interpret. Are we really dealing with a species which succeeded in settling and reproducing in a new environment? Is it an occasional migrant from the Red Sea encountered now and then at various points in the Eastern Mediterranean? Or is it just another case of an exotic species dumped as ballast in the neighborhood of a harbour?

Examples of all three groups are not difficult to trace in the literature. Indo-Pacific species now permanently living in the Mediterranean Sea include: *Diodora ruppellii*, *Minolia nedyma*, *Rissoina bertholleti*, *Diala varia*, *Rhinoclavis kochi*, *Cerithium scabridum*, *Cypraea caurica*, *Murex* sp. (= *tribulus* auct. from the Red Sea, but not the species described by Linnaeus), *Thais lacera*, *Quoyula madreporarum*, *Zafra savignyi*, *Fusinus marmoratus*, *Chrysallida maiiae*, etc.

To the second category, occasional migrants, belong without doubt: *Haliotis pustulata*, *Cellana radiata*, *Cerithium nodulosum adansonii*, *Cerithium nesioticum*, *Cypraea pantherina*, *Rapana rapiformis*, and *Nassarius arcularius plicatus*. These lists — far from complete — are restricted to shelled gastropods.

The third category — exotic species that arrived on Mediterranean beaches in one way or another, most probably mainly as ballast — consists for example of: *Strombus lentiginosus*, *Cypraea moneta*, *Conus arenatus* (all reported from the coast of Israel), *Diloma atroviens*, *Nassarius glans* (both found once in Greece), and *Clelandella infusata* (found recently in Italy).

So to which category belongs Blocher's specimen of *Cypraea gracilis* from Turkey? We do not have to wait long for an answer. According to data I was able to collect in the last two months, *Cypraea gracilis* is definitely living today in the Eastern Mediterranean. This statement is based on the following records of *C. gracilis* from the Mediterranean coast of Israel.

In the mollusc collection of the Tel Aviv University is a specimen collected alive near Hadera in 1981. This seems to be the first specimen of *C. gracilis* from the Mediterranean.

The summer of 1983 yielded a large number of records. Benjamin Singer, a member of the Israel Malacological Society, collected in June 1983 three empty shells near Palmahim. In the same period he collected four other specimens near Akhziv and one near Nahariya. These specimens were empty but still very fresh.

Dr. Ze'ev Lewy of the Geological Survey collected three similar shells near Bustan Hagalil in the beginning of August 1983 followed by three other shells near Palmahim which were found again by Benjamin Singer. At the end of September he collected another five specimens south of Shiqmona near Haifa.

To these 20 specimens of *C. gracilis* from the Mediterranean coast of Israel, we may add still another specimen which was offered by a local fisherman to a member of the Israel Malacological Society. This offer was refused since at that time the proper Mediterranean locality of that specimen was questioned by the prospective buyer.

From these data it is clear that *C. gracilis* is most probably already a quite common species along the coast of Israel. Additional records may be expected therefore in the near future.

Juvenile *Latiaxis*?

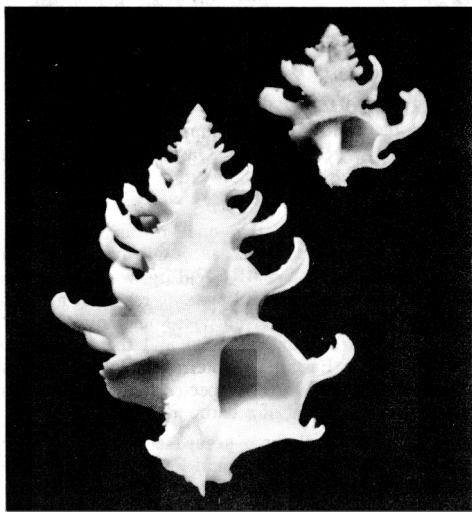


Photo: Richards

RABAUL — I was impressed by the pretty picture of *Latiaxis diadema* Adams taken by Mr. Saito of Tokyo (HSN October 1983). Although we are told that this super specimen measures 40mm (could this be checked again?), I believe it is actually a juvenile.

To support my view, I enclose portraits of two *Latiaxis diadema*. The smaller is a juvenile measuring 14mm (not 40mm!), apparently identical to the one shown in Saito's photo. It has seven whorls plus protoconch. My specimen was taken alive in nets 100-200m. deep at Punta Engano, Philippines, in 1982.

In the same picture, we can see what the actual adult looks like. It has nine whorls, the last two much larger, and it measures 34mm. Such specimens come up occasionally from great depths well beyond scuba range, in our bay of Rabaul, East New Britain, mostly after stormy weather.

Aurora Richards

QUICK! THE CALIPERS

Since world record shell sizes are always good for lively discussion, I offer the following possibilities from my collection:

<i>Conus bullatus</i> Linne	75.1mm
<i>Conus moreleti</i> Crosse	54.7
<i>Conus striatus</i> Linne	129.3
<i>Conus textile</i> Linne	150.0
<i>Purpura affinis</i> Reeve	77.3
<i>Terebra gouldi</i> Deshayes	94.4
<i>Conus pennaceus</i> forma <i>elisae</i>	50.5
<i>Murex anatomicus</i> Perry	73.5

Chris Takahashi

(Due to a regrettable printing error in the last **Standard Catalog of Shells**, the record on maximum shell sizes is confused. Pending clarification, claims of championships should be regarded as tentative. Ed., HSN)

Give That Shell A Break, Fellows

By DR. DONALD T. BOSCH

MUSCAT — It seems to me that the time has come for someone to say a word in defence of the poor mollusc who unfortunately has the odd growth mark or worm hole.

It's not really the mollusc's fault, you know. He is a perfectly respectable member of the molluscan society despite minor defects which seem to grieve human beings so deeply. And he is captured alive as a totally acceptable representative of his species.

But, alas, no shell dealer will take a second look at him because he has a defect, however infinitesimal. The dealer rejects him because the dealer knows that the collector will reject him, making his demise in the cause of science a double catastrophe.

Sadly, the shell cannot communicate his defectiveness to a diver about to take him from the sea, since the diver has to clean him thoroughly before he knows a defect exists. Thus, many of his friends have lost their lives quite uselessly because they are ultimately rejected, albeit not the fault of themselves or of their captors.

Take the case of the large and rare *Cymatium ranzanii*. Not more than 10 percent of these creatures can reach adulthood without having some growth accident or external blemish caused by other sea animals. This means that in order to provide 10 acceptable specimens to interested collectors, 100 specimens have to give up their lives. Does that really make sense?

Then there is the mania for gigantism. Every shell has to be hormonally rigged so that he will be the undisputed outsize member of his clan. Human perspective evidently cannot recognize the fact that smaller specimens frequently — in fact, almost always — are more beautiful. Looking at it from the molluscs' viewpoint, it is hard to arrange their offspring so that each one is a six-foot movie star.

How about it, fellow shell collectors? Can't we accept an adult live-collected shell as a legitimate representative of his species, even though a worm may have damaged his exterior? Let's give the molluscs a break!

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CONE SHELL NAMES III

The Species Described by da Motta and Co-workers

By JOHN K. TUCKER

Recently I published a paper concerning newly proposed names in the Conidae (HSN July 1983). Its purpose was to point out problems that exist in the current new species descriptions of the Conidae. An appended table of proposed new names I consider to be invalid species precipitated some understandable recriminations.

In order to give the authors involved a chance to

reply in detail, if they wish, I have prepared a series of papers on each group of species. The first, dealing with the species proposed by Coomans and co-workers, appeared in HSN Nov. 1983. The second considers the species described by da Motta and co-workers.

Table 1 below contains the names proposed by da Motta *et al.*, my opinion of the names as either valid species or synonyms of previously proposed species, and notes.

Table Species group names proposed by da Motta and coworkers

Name and author(s).	Disposition	Note
<i>Conus arbornatalis</i> da Motta, 1978	<i>C. amadis castaneofasciatus</i> Dautzenberg	Coomans <i>et al.</i> , 1980
<i>C. auratinus</i> da Motta, 1982a	valid species	
<i>C. chusaki</i> da Motta, 1978	<i>C. floridus</i> Sowerby	note 1
<i>C. cebuganus</i> da Motta & Martin, 1982	<i>C. laterculatus</i> Sowerby ?	note 2
<i>C. textile dahlakensis</i> da Motta, 1982a	<i>C. textile</i> Linne	Tucker, 1983
<i>C. episcopatus</i> da Motta, 1982a	<i>C. magnificus</i> Reeve	note 3
<i>C. fulvobullatus</i> da Motta, 1982a	? valid species	note 4
<i>C. gabelishi</i> da Motta & Ninomiya in da Motta, 1982a	valid species	
<i>C. garciai</i> da Motta, 1982a	? valid species	note 5
<i>C. graciosus</i> da Motta & Blocher in da Motta, 1982a	<i>C. aulicus</i> Linne	note 6
<i>C. kantanganus</i> da Motta, 1982a	subspecies <i>C. milesi</i> E. A. Smith	note 7
<i>C. krabiensis</i> da Motta, 1982a	<i>C. generalis</i> Linne	note 8
<i>C. lapulapui</i> da Motta & Martin, 1982	<i>C. bohovens</i> Petuch	note 9
<i>C. leehmani</i> da Motta & Roeckel, 1979	valid species	note 10
<i>C. lenavati</i> da Motta & Roeckel in da Motta, 1982a	valid species	
<i>C. leobrerae</i> da Motta & Martin, 1982	<i>C. laterculatus</i> Sowerby ?	note 2
<i>C. textile neovicarius</i> da Motta, 1982a	<i>C. textile</i> Linne	Tucker, 1983
<i>C. orri</i> Ninomiya & da Motta in da Motta, 1982a	? valid species	note 11
<i>C. patonganus</i> da Motta, 1982a	<i>C. pennaceus</i> Born	note 12
<i>C. phuketensis</i> da Motta, 1978	valid species	
<i>C. pseudokimioi</i> da Motta & Roeckel, 1982	<i>C. kimioi</i> (Habe)	note 13
<i>C. pupillaris</i> da Motta, 1982b	<i>C. magnificus</i> Reeve	note 3
<i>C. quasimagnificus</i> da Motta, 1982a	<i>C. pennaceus</i> Born	note 12
<i>C. ranonganus</i> da Motta, 1977	valid species	
<i>C. rawaiensis</i> da Motta, 1978	valid species	
<i>C. rogmartini</i> da Motta, 1982c	<i>C. otolithae</i> Kuroda & Ito	Tucker, 1983
<i>C. rubropennatus</i> da Motta, 1982a	<i>C. pennaceus</i> Born	note 12
<i>C. samiae</i> da Motta, 1982a	? valid species	note 14
<i>C. skinneri</i> da Motta, 1982a	subspecies <i>C. nobilis</i> Linne	note 15
<i>C. thailandis</i> da Motta, 1978	subspecies <i>C. crocatus</i> Lamarck	note 16

NOTES

1. Richard (1981) illustrated the type specimen of *C. floridus* Sowerby. This specimen is conspecific with da Motta's *C. chusaki*. Therefore the more senior name, *C. floridus* Sowerby, should be used for this Thai species. It should be noted that this type specimen has orange coloration in the interior but not the exterior of the aperture as is the case in *C. chusaki*. Petuch (1979) reached a similar conclusion. The name *C. floridus* is not applicable to the Sri Lankan-Indian specimens of *C. gubernator*, as was suggested by da Motta (1979).

2. Da Motta & Martin (1982) presented very inadequate figures and descriptions of these two species (*cebuganus* and *leobrerae*). These appear to be specimens of the *C. australis-laterculatus* complex. Specimens from Philippine commercial sources that I examined were *C. laterculatus*. It is possible that these are misidentifications and that da Motta &

Martin had other shells in mind. However, without objective comparisons to other related species, these two names must be considered at best to be *nomina dubia*.

3. *C. pupillaris* was proposed as a replacement name for both *C. elongatus* Dautzenberg, 1937 and *C. oblongus* Fenaux, 1942. Since da Motta (1982) did not designate one of these two specimens as primary type, Dautzenberg's and Fenaux's specimens should be considered syntypes of *C. pupillaris* da Motta, 1982. Such specimens are juveniles of the species once known as *C. episcopus Auctorum* (not of Hwass). Hinton (1972) showed a growth series that included juveniles of the type renamed *pupillaris* by da Motta.

The name *C. episcopatus* was also proposed for this species by da Motta (1982a). This name is based on an adult specimen. Since *C. episcopatus*

and *C. pupillaris* are based on different growth stages of the same species, they are synonyms of each other.

The name *C. magnificus* Reeve has had a rather confused nomenclatural history. Tucker (1980) considered it to be a possible synonym of *C. crocatus* that was based on a fully adult specimen. This is now an untenable hypothesis since fully adult *C. crocatus* are now known (see Estival, 1981) and they do not resemble the type specimen of *C. magnificus*. Recently I examined a series of specimens from the Solomon Islands that contained an apparently gerontic specimen similar to the type of *C. magnificus*. Such a specimen was also illustrated by Wagner & Abbott (1978 Pl. 2, fig. 11). These are a continuation of the growth pattern of *C. episcopus Auctorum*. Consequently, the name *C. magnificus* being the oldest name available should be adopted for this species.

Collectors will no doubt know that both names (*episcopus* and *magnificus*) appear on dealers' lists as though they are separate species. The basis for this is obscure. Authors who have considered them to be separate species provide no objective means to distinguish them. For instance, da Motta (1982a) when comparing his *C. episcopatus* to *C. magnificus* states "that the latter (*magnificus*) is more solid and a heavier shell with less tapering sides as well as its unique maroon coloration and pattern consisting of much smaller tenting marks." These features are worthless. The first two are subjective; without numerical comparisons that are significantly different statistically they are meaningless. The third, coloration, is a particularly variable feature in this and other tented cones. Considering that most of these species range from purple brown to golden brown or yellow, it is difficult to see how any coloration could be unique.

The main identifying features of *C. magnificus* are the elongated shell and the presence of nodulose early whorls. Species such as *C. pennaceus* and *C. crocatus* do not have nodulose early whorls.

It is concluded that *C. magnificus* is the earliest available name for *C. episcopus Auctorum*. This same conclusion was reached by Cernohorsky (1978) and by Walls (1979).

4. This name was applied to a *C. magus*-like shell. It could well be a colorful variant of that species. I consider it tentatively valid, but it certainly needs critical study based on objective criteria along with the other variants of *C. magus*.

5. Although recognized as a tentatively valid species, *C. garciai* is a member of a complex of forms probably actually subspecies of a single polytypic species including *C. garciai*, *C. largillierti*, *C. sennottorum*, and *C. philippi*. Although typical specimens of these four are easily separable, significant numbers of specimens from all populations are not objectively identifiable. Being subtidal these species are at present poorly known. All appear to be basically allopatric, with *C. garciai* occurring in Honduras, *C. sennottorum* in Yucatan, *C. philippi* in Florida along the Gulf Coast to West Palm Beach, and *C. largillierti* in Florida from St. Augustine north to North Carolina. The following key will separate typical specimens.

1. Anterior end darkened with brown . . . *C. largillierti*.
Anterior end light color . . . 2.
2. Ridges reach shoulder or midbody at least . . . *C. garciai*.
Ridges do not reach midbody . . . 3.
3. Spiral lines clouded by brown to pinkish brown markings . . . *C. philippi*.
4. Spiral lines not clouded by blotches . . . *C. sennottorum*.

6. There is no objective way to distinguish this shell from *C. aulicus*. Martin (1983) confused this shell with *C. auratinus*, which is a valid species apparently restricted to French Polynesia. Martin's *C. auratinus* appears to be identical to da Motta's *C. gracianus*. Both look to be *C. aulicus*.

7. This is a complex problem not adequately reviewed by da Motta (1982a) or by Walls (1979). It appears that there are two species. The first (Walls, pg. 53 top) is a shell with relatively angular shoulders and nonnodulose spire whorls. The second (Walls, pg. 53 bottom & pg. 54) has relatively rounded or indistinct shoulders and nodulose spire whorls.

Walls (1979) considered these to represent a single variable species, *C. aculeiformis*. Da Motta on the other hand maintained that they represent two species, with *C. aculeiformis* Reeve, *C. longurionis* Kiener, *C. delicatus* Schepman, *C. gracilis* Sowerby, and *C. hopwoodi* Tomlin, all based on the first (Walls, pg. 53 top) and no available name for the second (Walls, pg. 53 bottom & pg. 54). Up to this point I am in agreement with da Motta.

However, I believe that there is another available name for the second species. This is *C. milesi* E. A. Smith which is based on a juvenile of the East African-Red Sea population. Kaicher (1976-77) illustrated the type of *C. milesi*. As she implies, it is not a specimen of *C. acutangulus* as most authors have maintained. This specimen, unlike *C. acutangulus*, has a large central cord on the spire whorls. *C. acutangulus* has 3 or 4 equal-sized cords on the spire whorls. Walls (1979) also noted this distinctive feature. The type of *C. milesi* is therefore considered to represent the species later described by da Motta as *C. kantanganus*.

African-Red Sea specimens may, however, be subspecifically distinct from Indian populations. These two seem to differ in that the Indian specimens lose the nodules in the second or third postnuclear whorl while the Red Sea-African populations retain them into at least the sixth postnuclear whorl. Consequently, two subspecies should be recognized — *C. milesi milesi* Smith from the Red Sea and East Africa and *C. milesi kantanganus* from India and Thailand.

8. Considering how variable *C. generalis* is, there seems to be little use in recognizing every population as a separate species if size alone is to be the basis for separating them. *C. krabiensis* cannot be distinguished objectively from *C. generalis* and is a synonym of that species.

9. *C. lapulapui* is identical to the species previously described as *C. bohohensis* by Petuch. Further mention of this species will be made in another part of this series.

10. Richard (1981) suggested that *C. frauenfeldi* Crosse was the earliest available name for this species. This does not appear to be correct. The type specimen of *C. frauenfeldi* has a white aperture, has solid-color blotches on the spire, and has opaque white dashes in the color blotches on the body. None of these are features of *C. leehmani* which has an orange blotch inside the aperture, has blotches containing thin longitudinal lines on the spire and has no opaque white dashes in the body coloration. *C. frauenfeldi* is a specimen of *C. magus* and should be considered a synonym of that species (see Walls, 1979).

11. Although recognized as valid, it is possible that *C. orri* is a subspecies of *C. mercator*. It differs from *C. mercator* only in body proportions. Da Motta (1982a) did not objectively demonstrate this and more random samples may show that this is not true. The overall tented pattern occurs in *C. mercator* as well as *C. orri*. Until populations from areas between Senegal and Gambia are examined objectively, it seems best to consider *C. orri* a tentatively valid species.

12. *C. patonganus*, *C. rubrapennatus*, and *C. quasimagnificus* are representatives of the *C. pennaceus* complex. Da Motta (1982a) provided no objective means to distinguish these forms from other previously described variants of *C. pennaceus*. Simply to maintain that these are different because they are sympatric with an undefined "pennaceus" is not a valid basis for species recognition. One must be able to differentiate them objectively.

13. This shell is not recognizable. It is within the range of variation of *C. kimioi* available from Philippine commercial sources.

14. *C. samiae* is closely related to *C. grangeri* Sowerby. These two can be distinguished by coloration and details of shell structure. *C. samiae* has three color bands — one each at the shoulder, midbody and between midbody and the anterior end. *C. grangeri* on the other hand has only two color bands — one at the shoulder and one at midbody. There is no color band between midbody and the anterior end. Besides coloration, *C. samiae* has significantly fewer nodules along the shoulder than does *C.*

grangeri. The former average 10.92 while the latter average 15.67. The nodules of *C. samiae* are large and hemispherical while those of *C. grangeri* are small and more or less ridgelike.

Even though these two are distinguishable, they could well be subspecies of a single polytypic species. They are apparently allopatric. Certain records of *C. grangeri* are from Tayabas and Batangas areas of Luzon, while *C. samiae* is known from the Central Philippines (Cebu) and the Southern Philippines (Mindanao). Specimens from intervening areas could well show that these two intergrade.

15. This shell may well be recognizable as a subspecies of *C. nobilis* but da Motta (1982a) provided no evidence that it is specifically distinct, let alone that it should even be recognized as a valid race of *C. nobilis*.

16. This Thai shell is allopatric with *C. crocatus*. Since it differs from *C. crocatus* only in body proportions, it would seem best to consider it a race of *C. crocatus*. Abbott & Dance (1982) considered it to be a form of *C. colubrinus* Lamarck. It should be noted that Kohn (1981) established that the name *C. colubrinus* is a member of the *C. pennaceus* complex and not the correct name for *C. crocatus*. Walls (1979) considered *C. crocatus* to be a synonym of *C. ermineus*. This is also incorrect. Kohn (1981) clearly demonstrated that *C. crocatus* Lamarck and *C. crocatus* Auctorum were the same species. The Thai populations should be referred to as *C. crocatus thailandis* and the nominate race as *C. c. crocatus*.

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LITERATURE CITED

- Abbott, R. T., & S. P. Dance. 1982. *Compendium of Seashells*. E. P. Dutton, Inc., New York. 410 pp.
- Cernohorsky, W. O. 1978. *Tropical Pacific Marine Shells*. Pacific Publications, Pty., Ltd., Sydney. 325 pp.
- Coomans, H. E., R. G. Moolenbeek & E. Wils. 1980. "Alphabetical revision of the (sub)species in Recent Conidae 3. *albus* to *antillarum* with the description of *Conus algoensis agulhasi*, nov. subspecies." *Basteria* 44:17-49.
- da Motta, A. J. 1977. "Controversial '*Conus ranon-ganus*'." *HSN* 25(5):5.
- . 1978. "Six new cone shells (Gastropoda: Conidae) from Thailand." *Centre Thai Nat. Study, Supplement*:1-8.
- . 1979. "Those new cones from Thailand." *HSN* 27(7):3-4.
- . 1982a. "Seventeen new cone shell names (Gastropoda: Conidae)." *Publ. Ocas. Soc. Port. Malacol.*, #1:1-20.
- . 1982b. "An examination of the *Conus textile* complex, part VI." *La Conchiglia* 14 (158-159): 20-21.
- . 1982c. "A magnificent new *Conus* species found in the treasure islands of the Philippines (Gastropoda: Conidae)." *Carfel Phil. Shell News* 4(2):cover, 3.
- da Motta, (A. J.) & (R.) Martin. 1982. "Four new *Conus* species found in waters around Cebu and one from Balut in the Sarangani group." *Carfel Phil. Shell News* 4(3):1, 3-4, 9.
- da Motta, A. J. & D. Roeckel. 1979. "New cone from Indian Ocean (Gastropoda: Conidae)." *La Conchiglia* 11(122-123):17-18.
- Estival, J. C. 1981. *Cone shells of New Caledonia and Vanuatu*. Les Ed. du Cagon, Papeete, Tahiti, 126 pp.
- Hinton, A. 1972. *Shells of New Guinea and the Central Indo-Pacific*. R. Brown & Associates, Pty, Ltd, Port Moresby, 94 pp.
- Kaicher, S. D. 1976-1977. *Shell identification packs-Conus*. S. Kaicher, St. Petersburg, Florida.
- Kohn, A. J. 1981. "Type specimens and identity of the described species of *Conus*. 6. The species described 1801-1810." *Zool. J. Linn. Soc.* 71:279-341.
- Martin, R. 1983. "*Conus aulicus-auratus-auratinus*." *HSN* 31(8):4, 5.
- Petuch, E. J. 1979. "Those new cones from Thailand." *HSN* 27(7):3-4.
- Richard, G. 1981. "Révision systématique des Conidae." *Xenophora* #3:7-12.
- Tucker, J. K. 1980. "Comments on the identity of certain tented cones." *HSN* 28(6):7.
- . 1983. "Views of new species: Why are so many new cone names invalid?" *HSN* 31(7):3, 4.
- Wagner, R. J. L. & R. T. Abbott. 1978. *Standard catalog of shells*, ed. 3 (with supplements). American Malacologists, Inc., Greenville, Delaware.

HAWAIIAN RARITIES

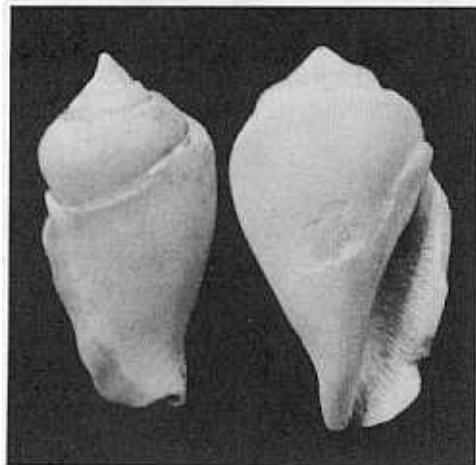


Photo: Gage

Strombus gibberulus gibbosus (Röding, 1798) a common Pacific Ocean species is not found alive in Hawaii. It is characterized by its smooth columella and pale or white aperture.

We have collected dozens of fossil specimens from the beach gravel at Sand Island, Honolulu Harbor. Pleistocene fossil specimens have been reported from Lanai, and from Honolulu Harbor. (Indo-Pacific Mollusca — Vol. 1, No. 2).

The largest specimen we have found is 40.2mm. The two specimens pictured are 34.5mm and 35.5mm.

Walter Haas
Mabel Haas

Notes on *lischkeanus*

The "Hawaiian Rarities" figured in HSN Oct. 1983 is *Babelomurex lischkeanus* Dunker.

It is now known that several *Babelomurex* species which had seemed to be confined to Japan and Taiwan are, in fact, quite widespread in the Indo-Pacific. For example, *B. pagodus* A. Adams is found not only in Japan and Taiwan but also in the Philippines, Indonesia, Papua New Guinea and Queensland.

The species *B. tosaensis* and *B. japonicus* are known to occur in Hawaii, also.

It was news that *B. lischkeanus* is found in Hawaii. It was known previously, however, that *lischkeanus* occurs in the Philippines, PNG, and New Britain, while two separate races are found in Queensland and New Zealand.

Interestingly, I also have *lischkeanus* from South Africa (Natal) and Mozambique.

Jons Gratz

THE OTHER SHELL CLUBS:

Two First-Time Shows Win Plaudits

By DONALD DAN

OAK BROOK, IL. — As a dealer, I was able to attend 12 shell shows in 1983, some down South, some in the Midwest and one on the East Coast. Each show is worth reporting on its own, but two (both first timers) stand out as worthy of special mention.

The Crown Point Shell Show, held in September at Merrillville, IN, was the Greater Chicago area's first major show. It was a full-fledged, juried show.

Major awards included the COA and the (new) du Pont trophies, as well as prizes in numerous divisional categories. Participation greatly exceeded expectations.

The relatively small Crown Point Shell Club did an incredible job of setting up a very classy affair. There were 123 competitive entries, occupying some 450 feet of space. Attendance included collectors from Illinois, Kentucky, Ohio and, of course, Indiana with very strong support from the Indianapolis Shell Club. The Chicago Shell Club also made a very good showing.

It is hoped that the Crown Point show can become a biennial affair, alternating with the Tri-State Shell Show held in Cincinnati.

The major prize winners at Crown Point were:

COA Trophy	Carol Bodine
du Pont Trophy	Lee & Jan Kremer
Best display technique	Judy Brooks

People's Choice	Ron Cunningham
Exhibitors' Choice	Lee & Jan Kremer
Shell of the Show	Lee Kremer's

Best Shellcraft	<i>Conus cervus</i>
Most artistic	Marion Brzana
Best Collectibles	Laura Barnes
	Bill & Myrna Crissinger

The Philadelphia Shell Show, held in October at the Drexel University, was the Philadelphia Shell Club's first effort to promote a major show with the objective of attracting collectors from the Northeast Corridor. We can all agree that it was an unqualified success.

Among the 1,300 paid admissions were collectors from New York, New Jersey, Maryland, Delaware, Virginia and many parts of Pennsylvania. At the show, the formation of a new shell club in central Pennsylvania was announced.

The quality of the displays — noncompetitive — was very high. Above all, individual efforts plus teamwork made this show look like it had been put together by old pros. Plans are already in motion to hold another show in 1984, with a tentative date for the third week of October.

The 1984 Florida Shows

By the time this issue of HSN reaches most

members, the Southwest Florida Shell Show at Fort Myers, the Greater Miami Shell Show, the Sarasota Shell Show, the Broward County Shell Show at Pompano Beach, the Palm Beach County Shell Show at West Palm Beach, and the Naples Shell Show probably will be history.

Others scheduled for the near future include the Sanibel Island Shell Show (1 to 4 March), the St. Petersburg Shell Show (16 to 18 March) and — a bit to the north — the Georgia Shell Show (23 to 25 March) at Atlanta.

These shows are major activities for collectors during the winter months down south. Their quality has improved greatly in recent years. Many displays are simply spectacular.

The shows are great meeting places for seasoned collectors and novices alike. This is particularly true for northerners who spend winter vacations in the South. Visits to the shows turn out to be special treats.

If I missed any shows in the foregoing list, I apologize in advance.

Changes at Chicago

The Chicago Shell Club, "grand old man" of the Midwest collector groups, has gone through some significant changes in the past year or so.

First off, the club has adopted new bylaws intended to encourage greater participation in club activities by members. Already there are signs of strong and fresh interest.

Second, starting in November the club's meeting place was moved to the Shedd Aquarium — a more suitable environment. The club meets once a month except during July and August. Visitors are always welcome.

A flier listing programs planned for the next few months, including active participation in the 1984 "Our World Underwater" in May, is available from Lee Kremer, 68 Dole Ave., Crystal Lake, IL 60014. "Our World Underwater" is a very popular annual convention of scuba divers in Chicago.

* * *

Tekamah NB

Braving a windchill index approaching the -80°F of a few nights previously, all four members of the "Tekamah Shell Club" enjoyed a holiday get-together at the home of Dotty and Lowell DeVasure.

Although active, we are not yet ready to issue an invitation for the annual COA convention. This is particularly true because our single motel has only eight units, and none of the local cafes seem capable of serving a banquet.

Instead, we enjoy annual trips to Florida and attendance at COA conventions, where we can talk shop with many good friends across the United States.

Bernard T. Pinher



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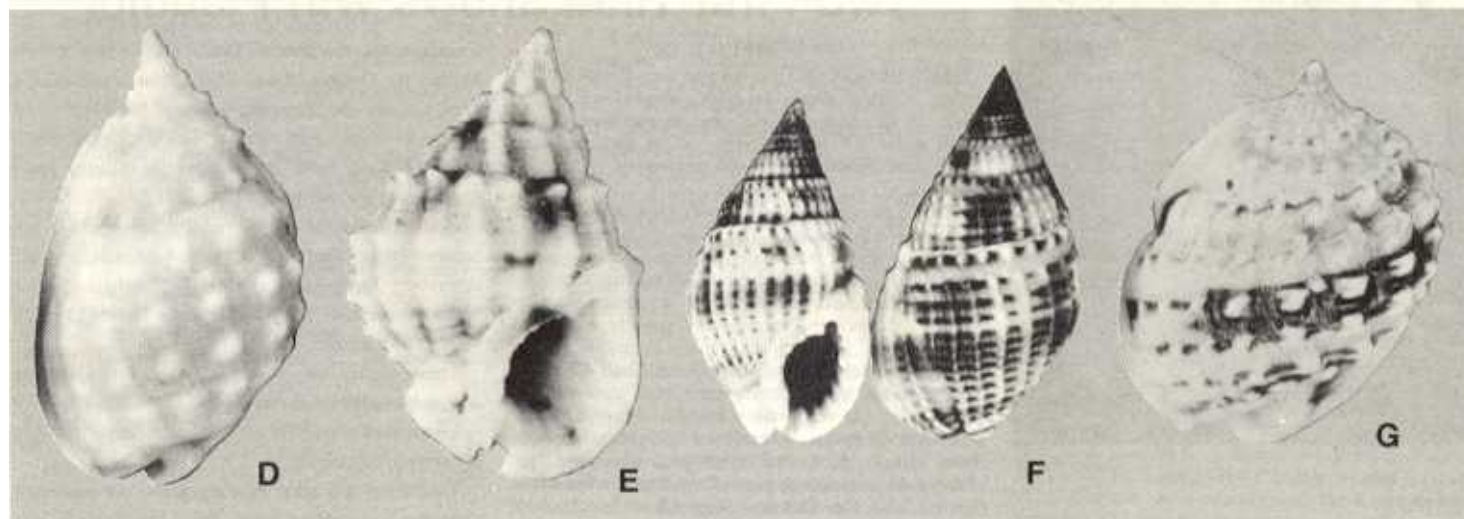
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The Nassariidae of Guam (Cont'd from Page 1)



Nassarius (Plicarcularia) oneratus (Deshayes, 1863) (Fig. G) (14mm). One of the more heavily callused dog whelks, *N. oneratus* is a colorful yellow species marked with brown and black bands. It lives in shallow sand pockets on sloping reefs at scuba depths. This species is often found with *Nassarius graniferus* at scuba depths, but is rare in tidal pools and shallow water.

Nassarius (Alectrion) papillosus (Linne, 1758) (not figured) (39mm & 36mm). The largest of Guam's *Nassarius*, this species commonly lives in coarse sand and rubble at depths below 10 meters,

preferring to bury itself deeply into sand channels and open sand patches. It has earned the title of "clown of the aquarium" for its antics in captivity. The animal is bright yellow with black spots. It will often crawl up the aquarium glass and zoom around the sides like a car on a race track looking for an exit.

Nassarius (Hima) pauperus (Gould, 1850) (Fig. H) (8 to 10mm). The most abundant *Nassarius* on Guam. Living under rock and coral in silt, it can be found down to 50 meters, in just about every habitat.

Nassarius crebricostatus (Schepman, 1911) (Fig. I) (16mm). This specimen was taken at 200 fathoms near Cabras Island, Guam in a pipe dredge operated by the University of Guam. The finding represents a range extension. The previously known range ran from the Red Sea to Tuamotu archipelago in the South Pacific.

Nassarius (Telasco) shackelfordi (Melvill & Standen, 1896) (Fig. J) (7mm). The colorful shell figured here is from Hawaii. Only a couple of faded specimens have been dredged on Guam, both by



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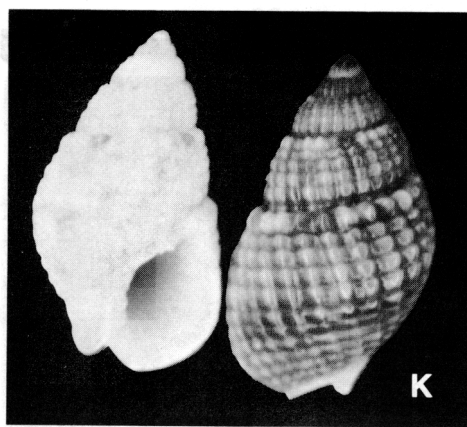
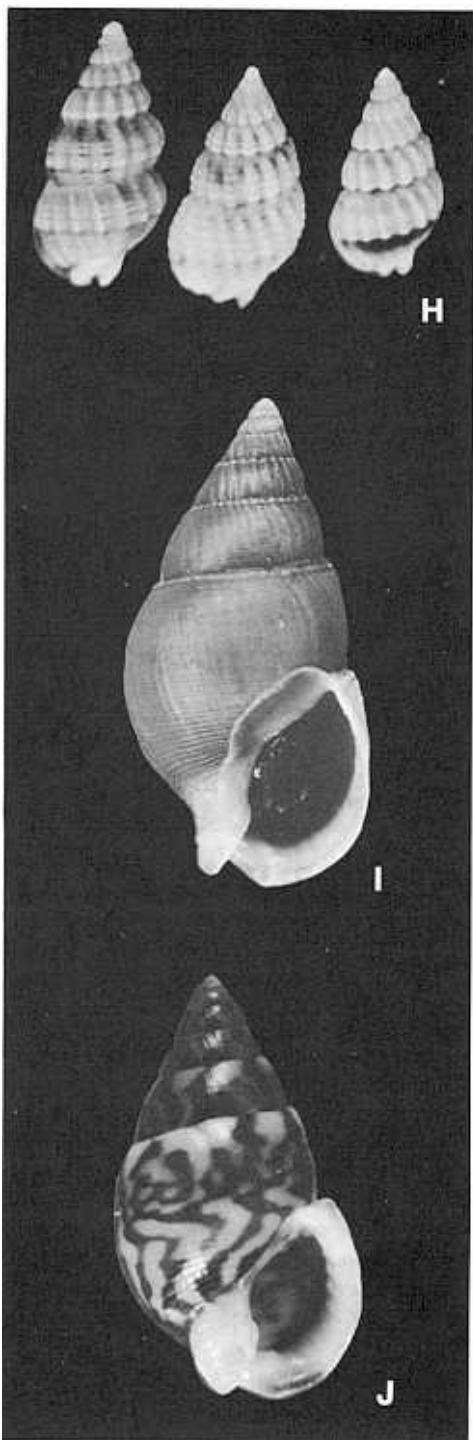
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Nassariidae (Cont'd from Page 8)

University workers. Again this species was found at 200 fathoms. Guam is a new locality for the species but not a range extension as the type locality is the Philippines.

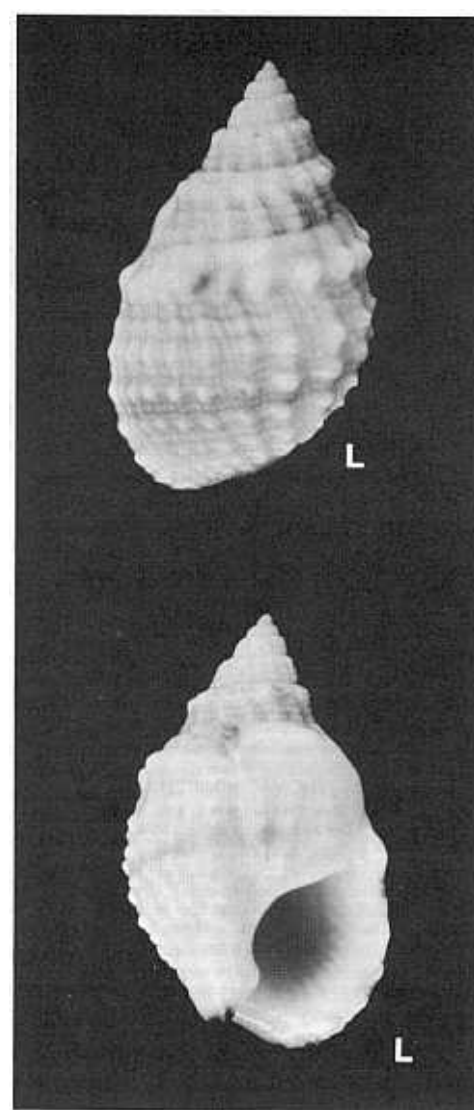
Nassarius (Niotha) splendidulus (Dunker, 1846) (Fig. K) (10.5mm & 11mm). This Indo-Pacific species is found in sand from scuba depths where it is rare down to 100 fathoms where it becomes more common in dredge hauls. The shallow water shell (white) blends well with the white sand in which it is found. The dredged shell (right) — identical except for its dark-brown color — apparently lives in a dark muddy environment in deeper water. This species was erroneously synonymized with *Nassarius crematus* (Hinds, 1844) — a distinct species — in *Hawaiian Marine Shells* by Dr. E. Alison Kay.

Nassarius troendleorum Cernohorsky, 1980 (Fig. L) (18mm). This newly described species is represented on Guam by a single specimen. The shell is slightly immature and does not exhibit the denticles normally found on the anterior edge of the outer lip. Nevertheless the dark black stain bordering the siphonal canal is visible. This species differs from *Nassarius graniferus* by being larger, much more sculptured, less strongly calloused and distinctly colored. The known range of this species must be extended from the Kingsmill Group, Kiribati (Gilbert Islands) and the Tuamotu Archipelago to Guam.

The figures on the right are the only ones published of this species since Cernohorsky's 1980 paper.

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* * *

Patrice Bou, 2 Anse Macabou, 97280 Vauclin, Martinique is interested in exchanging Martinique shells for worldwide *Conus*, and lists *C. daucus*, *C. attenuatus*, *C. mindanus*, *C. regius*, and *Murex pulcher* as available for trading.

* * *

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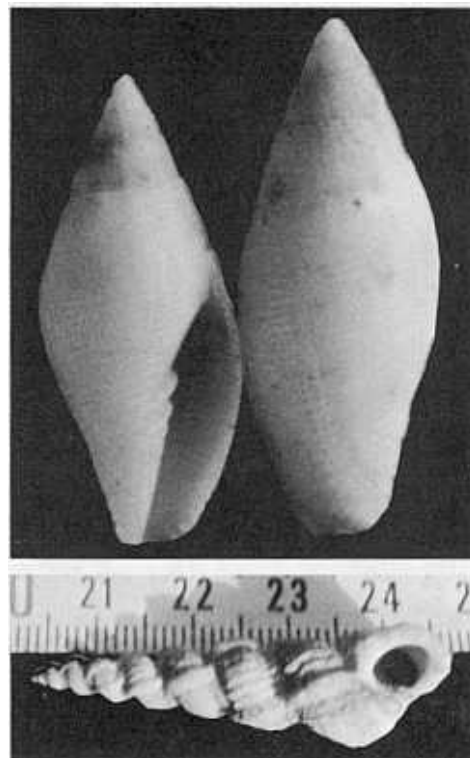
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A Gathering of Strangers



Dale Stingley of La Belle, FL asks help in naming the above bivalve, dredged in 45 feet off New Caledonia. "It's probably a *Lopha* sp.," he says. It is about 35mm wide and the shell is translucent. Upper right, two shells collected on top of a reef in the Broome (W.A.) area at low tide. "White with very faint brown blotches, punctate spiral grooves over entire shell, 28-30mm," is Kerry Sharpe's description. Right, a 43mm *Epitonium* from Martinique, found by M. Mailly. Any guesses?



THE BATTLE OF THE INVALIDS

By ROGER MARTIN

CEBU — Is *Conus rogmartini* da Motta "nothing but a pustulose form" of *C. otohimeae* Kuroda & Ito, as John Tucker declares (see HSN July 1983) or are the two separable as valid species?

According to Tucker, Dr. Coomans in his 1973 paper "aptly demonstrated that, while pustules come and go, species stay the same."

First of all, Dr. Coomans' paper does not have the character of a demonstration, with a definite conclusion. It is more the expression of a personal opinion. Dr. Coomans all along uses wordings such as "we consider . . ." or "the authors consider . . ." No absolute affirmation, as implied by Tucker. In fact, in his comparison of smooth and granulated specimens of a number of species, in all cases but one Dr. Coomans considers both to be specimens of the same species.

To illustrate the exception, let me quote Dr. Coomans:

"Two West Indian species, the smooth *Conus mappa* Lightfoot (syn. *cedonulli* Hwass, *dominicanus* Hwass, *insularis* Gmelin) and the granulated *Conus aurantius* Hwass are considered by some authors (von Mol, Tursch and Kempf 1967; Hokman and Kohn, 1970) as one single species. However, after studying a large number of specimens in several museums and private collections, Maier (1969) and the author are convinced that they represent two distinct species."

Then follows a parallel listing of characteristic features of *C. mappa* and *C. aurantius*, stressing the differences.

I feel that this exception, and the reasons for it, lift a lot of weight from Tucker's prime argument against da Motta's *rogmartini*.

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Speaking of Books:

SEASHELLS OF THE ARABIAN GULF BY
KATHLEEN SMYTHE: 17 pp + index. Winchester
MA: Allen & Unwin Inc. \$25.

Reviewed by STUART LILICO

Perhaps it is the petroleum crisis or it might be the product of long-delayed research on the natural history of the Middle East. At any rate, recently there has been a welcome flow of new books on the seashells of the Arabian Peninsula. The latest to appear in American bookstores (although it was published almost 18 months ago in London) is Kathleen Smythe's *Seashells of the Arabian Gulf*, one of a series of volumes in a Natural History of the Arabian Gulf series.

The most obvious comment is that this is a valuable addition to the literature. Without putting down Dr. Donald Bosch's *Seashells of Oman*, or Doreen Sharabati's *Saudi Arabian Seashells*, both published within the past 12 months, this does more to catalog the molluscs of the entire Gulf.

Ms Smythe's credentials are impressive. Born in India and a persistent visitor to the nations of the Near East and South Asia, she has devoted the past decade and a half to spare-time study of the seashells of the Arabian Gulf. In addition, she has studied collections in the leading museums of Europe and worked closely with H.E.J. Briggs, a leading authority on Arabian Mollusca. An occasional contributor to *Hawaiian Shell News*, Ms Smythe writes frequently in the *British Journal of Conchology*.

The 334 species listed in the new volume are all comparatively large and visible shells. The "teeny weenies" are not treated. Neither the descriptions nor the index mention synonyms — often of great assistance in researching a strange species. And at \$25, the volume seems a bit "pricey."

The foregoing notwithstanding, *Seashells of the Arabian Gulf* is a welcome addition to any collector's library. As correspondence with collectors in the area makes clear, an authoritative study has been high on the "wanted" list.

CARD CATALOGUE OF WORLD-WIDE SHELLS Pack 36 — Cassidae & Oocorythidae. Sally D. Kaicher, ed. St. Petersburg, FL. 100 cards. \$9.93 incl. postage.

Continuing her valuable work to provide authoritative photos of "collectible" shells, Sally Diana Kaicher has mailed out Pack 36, including the Cassidae and the Oocorythidae. She has chosen to treat the latter group — comprising a short list at best — as a valid family within the Tonnacea, on a par with the far better known Cassidae.

Ms Kaicher admits that this is a hasty substitute pack. Photos for the previously promised cards on the Neritidae are safely stored SOMEWHERE, she insists. The present pack was brought together at the last minute with the help of friends.

Pack 37 will deal with the Columbellidae.

S.L.

Publication Notices

The Sociedade Brasileira de Malacologia has sent HMS a series of lively publications under the rubric **Informative S B M**. Written in Brazilian Portuguese, the newsletter offers a pleasant range of topics, ranging from news of the society's activities to reviews of molluscan families found off southern Brazil and a series of exotic seafood recipes (anyone for *Berbigao ao Leite de Coco*?) The papers on shell families are illustrated in color.

The society can be reached through Departamento de Zoologia, Instituto de Biociencia U.S.P., C.P. 20,520, CEP 01000 Sao Paulo, Brazil.

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HMS Ends 1983 In the Black — And Computerized

By WES THORSSON

The Hawaiian Malacological Society ended 1983 with \$562 more in the bank than it had at the start of the year. Income was \$57,777; expenses were \$57,215.

The bulk of our income (\$37,380) came, as in the past, from dues. The next largest source remained advertisements in **Hawaiian Shell News** (\$9,625).

Sale of **HSN** back issues brought in \$1,628, while Index sales added \$627. The total of these items (\$49,260) is in direct support of **HSN**.

Production and mailing of **HSN**, back issues and Index cost a total of \$43,686, leaving a surplus of \$5,575. Of that sum, slightly over \$4,000 was spent to purchase and program a computer system, and \$988 went for local activities.

Interest on HMS bank accounts netted \$6,109, supporting \$5,286 in scholarship awards, \$900 to assist the Bernice P. Bishop Museum of Honolulu in curating malacological collections that otherwise could not be handled in the foreseeable future, and \$100 for Hawaii State Science Fair awards to high school students. This left a deficit of \$177, made up from prior surpluses in interest and shell auction proceeds.

As stated above, the Society now is the owner of a computer system. Until this month, all 1,600 mailing envelopes for **HSN** were addressed by an Addressograph machine from embossed metal plates. At the same time, records were kept on file cards by hand, following a routine set up when the Society had about 250 members.

For several years it has been obvious that a better system was needed. The Addressograph equipment itself is very old, having been acquired many years ago second hand. Parts are badly worn and replacements no longer are easily available, necessitating liberal use of filament tape to hold things together.

Also, many of the address plates are old, requiring replacement at more than \$1 each.

At the same time the record keeping — dues payments, changes of address, **HSN** advertising contracts, and associate memberships, for example — was demanding increasing hand work and memory flexing. Clerical time had become costly.

The options eventually narrowed down to replacing the Addressograph machine or, for about the same cost, buying a computer. After more than a year of discussion, the Board of Directors in 1983 decided to take the latter route. Installation and training started late in November.

The computer system, when completed, will maintain an up-to-date mailing list at the same time that it keeps all our financial records.

About half our members received the January issue of **HSN** with computer-generated mailing labels. With the February issue, all will be served.

Where Scallops Grow In Baskets



By BEATRICE BURCH

About 100,000 tons of natural and cultivated scallops are harvested annually in Japan, and distributed nationally (as well as overseas) raw, dried, smoked, canned and frozen. Scallops contain much protein and little fat.

Most of these *Patinopecten yessoensis* are reared in long, float-suspended, multi-tiered wire baskets in calm, enclosed Mutsu Bay at the northern tip of Honshu, Japan's "main island." In this protected environment, larvae grow from about 3mm to 12cm in two to two-and-a-half years.

Artificial feeding of cultivated scallops is not necessary. Scallops are filter-feeding molluscs, capturing floating diatoms and protozoa from the open water.

Free-swimming *Pecten* larvae are steadily supplied in large quantities by the "wild" scallops lying on the coarse rubble bottom of shallow Mutsu Bay. Natural seeds readily settle on nets suspended in the shallow water.

The natural habitat of *P. yessoensis* is in coastal water less than 40 meters deep. Trawlers can operate well in this area. The hanging baskets of cultivated scallops are anchored farther from shore, although at about the same depth.

Because there are abundant natural populations of scallops in Mutsu Bay, artificial seed production doesn't seem to be necessary. A massive and highly successful system of open-water harvesting of natural seed provides plenty and permits the excess to settle to the bottom, to the benefit of the sea trawlers and for natural replacement of the species.

Some spat (baby scallops), when 3 to 4cm in length and about one year old, are transported to

areas where conditions are less favorable for primary settlement.

Japan's scallop industry operates on a three-step system. Seed spat are collected on cedar twigs placed in grocery store-type plastic-string "onion bags" suspended from free-swinging buoyed lines which in turn extend along a series of long lines anchored at either end.

The second step is intermediate rearing in fine-mesh (4mm) nets for a year. Finally the juvenile scallops go into "chicken-wire" cylinders (see photo) until they are ready for harvesting at 12 or 13cm.

The entire industry is guided by the Aomori prefectural (State-level) government. A fishery cooperative participates and encourages conservation.

The young industry has not been without problems. A decade ago the death rate among cultivated scallops reached alarming proportions — 31 percent in 1973 and 57 percent two years later, with almost 100 percent loss in certain operations. At the same time, uncultivated bottom-growing shells were not affected.

The universities, and national, regional and prefectural research facilities, all cooperated to find the cause of the mass mortality. It turned out to be largely lack of experience on the part of the increasing number of fishermen. Optimum areas of placement, numbers of shells per basket, physical conditions in the bay, and choices of spat were determined and then standardized. Harvest methods also were improved. By 1979, fishermen were reaping a more stable crop and enjoying increasing success.

The scallop fishermen — both those dependent on trawls and those engaged in cultivation — now are aided by an elaborate monitoring program using buoys placed around Mutsu Bay to measure physical conditions, to forecast seed-collecting opportunities, and to monitor for pollution outbreaks. Incidentally, the "months without R" in Japan are May, June and July.

A notice is being inserted with the first issue under the new system, asking for assistance in catching any errors that may have crept in.

The label includes information on your current mail category and the latest year for which your dues are paid. This information is primarily to guide the volunteer mailing crew, but you should check it to see if it corresponds with your records.

For much of the foregoing, including the photo, I am indebted to the **Fishery Journal**, published in English, French and Spanish by the Yamaha people of Japan, and the U.S. National Marine Fisheries Service, Honolulu Laboratory.

B.L.B.