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## **CONCHOLOGISTS**



## OF AMERICA, INC.

In 1972, a group of shell collectors saw the need for a national organization devoted to the interests of shell collectors; to the beauty of shells, to their scientific aspects, and to the collecting and preservation of mollusks. This was the start of COA. Our membership includes novices, advanced collectors, scientists, and shell dealers from around the world. In 1995, COA adopted a conservation resolution: Whereas there are an estimated 100,000 species of living mollusks, many of great economic, ecological, and cultural importance to humans and whereas habitat destruction and commercial fisheries have had serious effects on mollusk populations worldwide, and whereas modern conchology continues the tradition of amateur naturalists exploring and documenting the natural world, be it resolved that the Conchologists of America endorses responsible scientific collecting as a means of monitoring the status of mollusk species and populations and promoting informed decision making in regulatory processes intended to safeguard mollusks and their habitats.

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Editor's comments: First, I have to correct a couple of errors.

In the last issue of *American Conchologist*, vol. 38, no. 3, Sep 2010, I both misspelled and misspoke in the review of "The Sound of a Wild Snail Eating." The author, Elizabeth Tova Bailey spells her first name with a "z" rather than the "s" I used. She is also not actually recovered from her mystery illness, but rather still coping with chronic illness and its many complications to life. *Mea culpa*.

This next error is thankfully someone else's. Winston Barney wrote to inform me that the assignment of the stromb genera *Dolomena* and *Doxander* to Iredale was in error (*American Conchologist*, vol. 38, no. 3, Sep 2010). Winston states that according to Kronenberg & Dharma (2005, see ref. for article), "Iredale only gave names and no descriptions for *Dolomena* and *Doxander*, leaving both *nomen nudum*. The authors could find no earlier reference to these genera prior to Wenz (1940), thus making him the author of record: *Dolomena* Wenz, 1840 and *Doxander* Wenz, 1840."



I was pleased to note the First International Cone Meeting in Stuttgart, Germany, in October. According to my sources there were several interesting papers presented and lots of discussion centered on the family Conidae.

This first meeting falls on the heels of the online publication of *The Cone Collector*, now in its fourth year. This conecentered Internet publication has been sponsored by the Poppes and can be downloaded for free from their web site at: http://www.conchology.be

This issue is rather eclectic as usual, with hopefully at least one article for everybody.

Tom Eichhorst

Front cover: A superb and richly patterned specimen of *Entemnotrochus adansoniana* (Crosse & Fischer, 1861). Photograph by Charles Rawlings, off Roatan, Honduras, in 55 feet of water, after bringing the specimen up from 428 feet. The change in depth did not seem to affect the slit shell as its behavior continued as it had been at the deeper depth.

Back cover: A 14 inch *Triplofusus gigantea* (Kiener, 1840) (horse conch), attacking a much smaller *Busycon sinistrum* Hollister, 1958 (lightning whelk). This tableau took place in 10 inches of water and was spotted and photographed by David and Sandra Herman off Sanibel Island, FL, 5 November 2010.

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## Ifremeria nautilei Bouchet & Warén, 1991

by Tom Eichhorst

I recently received an image of a deep water shell from Simon Aiken of Simon's Specimen Shells Ltd., in the United Kingdom (http://www.simons-specimen-shells.com). Simon has long supported American Conchologist with images and articles. and this time he had a shell he thought was special enough to be of interest to our readers. Well, he was certainly correct. The shell is Ifremeria nautilei Bouchet & Warén, 1991. The specimen was brought up from 6,600 feet in the Mariana Trough by the DSV Nautile. A couple of interesting side notes are that the Nautile is owned and operated by Ifremer (Institut français de recherche pour l'exploitation de la mer [the French Research Institute for Exploration of the Sea]), thus the genus name. This submersible was commissioned in 1984 and is capable of diving to depths (and more importantly, returning from depths) as deep as 6km or 3.7 miles. The *Nautile* has a rich history of scientific dives. but there are two missions for which it is perhaps best known: the examination and photography of the wreck of the RMS Titanic and the search in the Atlantic for the flight data recorder and cockpit voice recorder after the crash of Air France Flight 447 on 1 June 2009. Of concern here is the exploration the Nautile made of the Mariana Trough that provided this interesting specimen.

The Mariana Trough lies south of Japan in the western Pacific Ocean, just west of the larger and deeper Marianas Trench, a gash in the sea floor over 1,500 miles long but with an average width of only 43 miles and depths of over 10,800 meters or 6.75 miles. To the west of this is the Marina Trough, an active volcanic area resulting from the collision of two tectonic plates that form the deeper Marianas Trench. The older and heavier Pacific Plate is subducted or forced under the Mariana Plate creating the deep Marianas Trench with two resultant ridges to the west: the Mariana Arc containing the Marianas Islands (including the island of Guam) and the ridge further west called the West Mariana Arc. In between these two ridges is an area about the size of California called the Mariana Trough. The trough varies between 2800 and 5400 meters depth (9,186 to 17,700 feet). The volcanic activity in this area provides the suitable habitat for *Ifremeria nautilei*.

Ifremeria nautilei (first identified from the Lau and North Fiji Basins) is a hydrothermal vent dweller with endosymbiotic bacteria that allow it to exist and even thrive in the cold, dark, oxygen-starved depths. These gastropods inhabit the sea floor in areas of hydrothermal emissions that raise temperatures to a range of from 3°C to 20°C (37°F to 68°F). With temperature taken care of, two types of endosymbiotic bacteria provide their host with oxygen from the surrounding water and food from the sulfur emissions.

Ifremeria nautilei is the only species in the genus Ifremeria and has been placed in the family Provannidae with four other genera, all inhabitants of hydrothermal vents, cold seeps, whale falls, or sunken driftwood. Ifremeria nautilei has a unique larval form only recently discovered. For the first 15 days or so after hatching (they are brooded in a special camber in the female's pallial cavity, a part of the mantle) the larva are not the typical veligers we associate with most gastropods. Instead they are covered with cilia, longer on the posterior end, and develop



Above: *DSV Nautile*, owned and operated by Ifremer, the French Research Institute for Exploration of the Sea. Photo by Bjørn Som Tegner on Wikipedia, used IAW site instructions. Below: Living specimens of Ifremeria nautilei clustered on the sea floor with associated limpets (Olgasolaris sp.). Photo by P. Briand, from Wikipedia, used IAW site instructions.



two anterior globular structures. This larval form is called Warén's larva. After about 15 days the larva undergoes a metamorphosis into a typical gastropod veliger.

Thanks to Simon we can present this image of a shell that few collectors would otherwise see, much less possess. *Olgaconcha tufari* L.A. Beck, 1991 is a junior synonym.

#### Resources:

**Allen, Chris. 2010.** *Encyclopedia of Life* at: http://www.eol.org/pages/4932582, accessed on 29 Nov 2010.

**Beck, L.A. 1991.** *Olgaconcha tufari* n. gen. et n. sp. - a new mesogastropod (Gastropoda: Prosobranchia) from hydrothermal vents in the Manus Back-Arc Basin (Bismarck Sea, Papua New Guinea). Ann. Naturhist. Mus. Wien. 92(B): p. 277-287.

**Bouchet, P. & Warén, A. 1991.** *Ifremeria nautilei*, a new gastropod from hydrothermal vents, probably associated with symbiotic bacteria. C.R. Acad. Sci., Paris, sep. III, Vol. 312, no. 10, pp. 495-501.

**Desbruyères**, **D.**, **Segonzac**, **M.**, **and Bright**, **M.** (eds.) 2006 Handbook of Deep-sea Hydrothermal Vent Fauna. Second completely revised edition. *Denisia* 18: 544 pp.

Thomas E. Eichhorst thomas@nerite.com



*Ifremeria nautilei* Bouchet & Warén, 1991 (54.5mm), taken at 6600 feet, Mariana Back-Arc Basin, by *DSV Nautile* (Schaake collection). Image by Simon's Specimen Shells Ltd., http://www.simons-specimen-shells.com

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### Gettleman key to probe of major reversals by Harry G. Lee

### 1. The strange case of *Cerion fraternum* Pilsbry, 1902 (Eupulmonata: Urocoptoidea) on Cat Island, Bahamas

By his own admission, former COA President Alan Gettleman of Merritt Island, FL, is relatively new to saturation landsnailing. A self-admitted "musselhead" for years, he was greatly influenced by the late Hessie Kemper during his St. Louis days. On the other hand, Hessie's sister, the late Frieda Schilling, was a landsnailer, and Alan was thus exposed to that side of conchology early on (Gettleman, 2010). Yet only in the last few years, particularly since his retirement from NASA two years ago, has he reprised his interest in terrestrial snails. Despite the relative novelty of the enterprise, he has embraced this aspect of shelling with a passion reminiscent of Frieda's. Several field trips, each lasting a week or more, have taken him to Jamaica, Alabama, the Smokies and Blue Ridge, back to St. Louis, and recently to Mayaguana, Chub Cay, and Cat Island in the Bahamas. On those latter three trips he was exposed to the great panoply of peanut snails, genus Cerion, which find their metropolis in this island group, where they are both speciose and exhibit high rates of endemnicity. He pled guilty to a new addiction as he began to look closely at taxonomy and other aspects of Cerion biology.

While on Cat Island with the Bailey Matthews Shell Museum field contingent this April, Alan spent the better part of a week gathering *Cerion* from a variety of accessible (some barely) habitats. One lesson learned by most *Cerion* collectors is that large series of specimens are essential to the appreciation of shell variation within and among the generally small and isolated colonies of these snails. With that in mind, Alan retrieved a couple of hundred empty specimens of what appeared to be a populous but recently-extirpated colony of *Cerion fraternum* Pilsbry, 1902 near the SE end of the island. This is one of the smallest species in the hundreds named in the genus, being about 1/2 inch at maturity. The other Cat Island species, numbering a half-dozen or more, average about twice that in height.

Several days after his return home, Alan was curating his many Cat Island shells and *mirabile dictu*, came across a reverse-coiled (sinistral) specimen in this large lot of empty shells. The specimen was subadult - the lip not thickened and reflected, but it sure was left-handed (**Fig. 1**, Bill Frank digital image). One of his early responses was to report this bit of news to me. Alan no doubt recalled that at this very station I had made it clear that I was selectively searching for sinistral specimens in this colony for about a half hour, estimating well over a thousand dextral-only specimens caught my eye. Meanwhile, neither Alan nor Anne Joffe (who took the photo of Alan in full field regalia (**Fig. 2**), the remainder of our collecting triad, were so disposed. Bitter irony aside, I am compelled to offer an insight into the singularity of this Gettleman *coup-de-grace*. First, a little history is in order:

Perhaps by sheer coincidence, the first sinistral *Cerion* specimen ever brought to light was also found on Cat Island, Bahamas (Plate, 1907) and reported as *C. fordi* [= *C. agassizii* (Dall, 1894) *fide* Gould, Young, and Kasson, 1985]. The collector, German biologist Ludwig Hermann Plate (1862-1937),

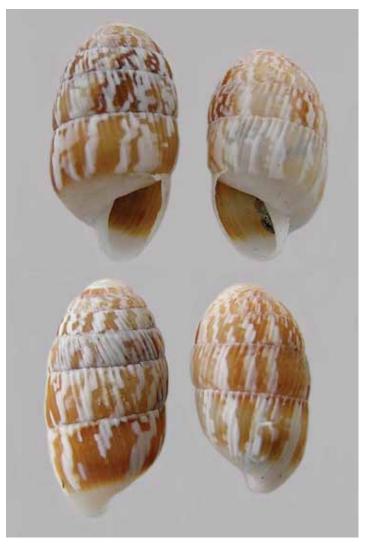


Fig. 1 Rare sinistral (R) and normal dextral (L) specimens of *Cerion fraternum* Pilsbry, 1902, collected by Alan Gettleman on Cat Island. The adult shell is less than 1/2 inch in length.

is memorialized by *Cerion platei* Clench, 1933 (**Fig. 3**, from Harasewych, 2006, with the author's permission), recognized as a Cat Island endemic. Alan and others collected both these species earlier on this trip.

Charles Johnson Maynard (1845-1929) (**Fig 4**), the most prodigious student of *Cerion* in the history of conchology (Harasewych *et al.*, 2007), found three sinistral specimens (Maynard, 1920: 81). Two were from a single sample including about 1,962 dextral deme-mates and later named *C. santesoni* (Maynard and Clapp, 1929) [= *C. glans* (Küster, 1844) *fide* Gould, Young, and Kasson, 1985] from the northern shore of New Providence Island, Bahamas. Perhaps surprisingly, one of the sinistral shells was designated the lectotype (MCZ358073: Harasewych *et al.*, 2007). The fourth left-handed Peanut Snail was collected along with 583 dextral deme-mates on Bird Cay, Exuma Islands, Bahamas. It became the lectotype (MCZ356677:



Fig. 2 Alan Gettleman decked out in the latest sheller's fashion.

Harasewych *et al.*, 2007) of *C. inconstans* (Maynard, 1920) [also = *C. glans* (Küster, 1844) *fide* Gould, Young, and Kasson, 1985]. Over a half-century elapsed before Bill Kasson located a fifth specimen, previously unrecognized, in a lot of *C. incanum* (A. Binney, 1851) collected on Big Pine Key, Monroe Co., Florida, at the OSUM (abbreviations of institutional repositories listed on page 10). Not much later Stephen Jay Gould found a second sinistral *C. incanum*, also from Big Pine Key and likewise unrecognized, in the MCZ. These latter five specimens and some of their dextral deme-mates formed the basis of an extensive morphometric analysis by Gould, Young, and Kasson (1985).

Operating far from the metropolis of the family, and quite unaware that he was dethroning Grand Master Maynard, Phil Poland of Tampa, FL, found five more sinistral *C. incanum* in the Lower Florida Keys, four of them from a single population on Boca Chica Key over a few visits spanning about a year (Poland, 2000). (**Fig. 5**) is an example from Phil's camera.

After over a century of field and museum work on *Cerion* by many scientists and other enthusiasts with probably a million or more shells examined, Alan can bask in the glory of knowing he's only the sixth collector to bag a sinistral *Cerion* - and apparently only the fourth to know that he had actually done so! His left-handed *C. fraternum*, while being the twelfth sinistral cerionid

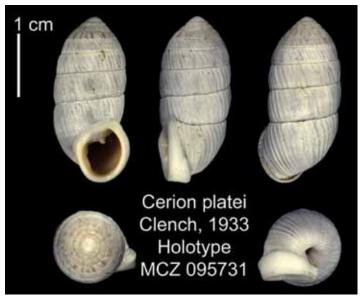


Fig. 3 Cerion platei Clench, 1933, endemic to Cat Island.

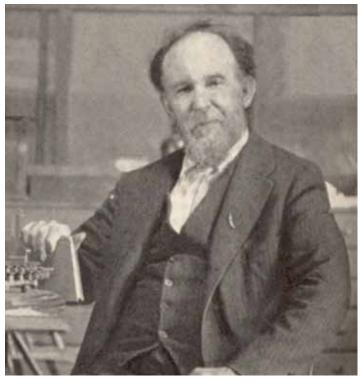


Fig. 4 Charles Johnson Maynard (1845-1929), an ornithologist and a dedicated student of *Cerion*.

shell ever reported, is the sole representative of only the fourth species of this family to be known in the sinistral condition. In summary:

Cerion agassizii (Dall, 1894) L. Plate! 1
Cerion fraternum Pilsbry, 1902 A. Gettleman! 1
Cerion glans (Küster, 1844) C.J. Maynard! 3
Cerion incanum (A. Binney, 1851) Anon! 2; P. Poland! 5 = 7

Total: 4 species, **12 specimens.** Four collectors accounting for 10 specimens.

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Fig. 5 *Cerion incanum* (A. Binney, 1851), 25mm. Collected by Phil Poland in the Florida Keys, dextral (L) and sinistral (R).

### 2. One thing leads to another. A new twist in the Polygyridae (Eupulmonata: Polygyroidea)

The Gettleman Collection isn't small, unidimensional, or limited to self-collected material. There are plenty of pre-owned (recycled) specimens. Among these are a number of land snails obtained from dealers and other collectors. It was from the latter resource, although an as yet untraced chain of ownership, that Alan acquired a number of specimens originating in the Aron L. Mehring collection. Mehring, a resident of Adelphi and of Hyattsville, MD, and a fertilizer scientist by profession, produced a typescript manuscript monograph on the land snails of Jamaica, based in part on his collections there (R. Goldberg, pers. comm.. 27 June, 2010). He also collected freshwater and marine shells, as well as echinoderms, in Cuba, Pacific Panama, Hawaii, the Philippines, Japan, and Florida, from (at least) 1947- 1964 (NMNH, 2010). For Fiscal Year 1963-1964, a portion, about 3,500 lots and 23,800 specimens, of his collection was the largest given to the NMNH Division of Mollusks (Rehder ms: 150 teste M.G. Harasewych, 29 June, 2010).

As is often the case with us collectors, Alan took only momentary notice of most of these Mehring specimens initially. He was, however, given momentary pause by a left-handed shell in the material, a single specimen lot from Houston collected by Mehring himself. Now, this was several years before Alan's terrestrial epiphany, and he relates that he was quite content to regard this as a "normal" sinistral specimen. No doubt energized by his *Cerion* discovery, Alan recently dug this specimen of "*Mesodon bucculentus* Gould" out, reported it to me, and ultimately lent it for close examination and photography. The shell actually belongs to the closely-related *M. clausus* (Say, 1821), and is the only known



Fig. 6 Mesodon clausus (Say, 1821), 16mm. The shell on the left is the only known sinistral adult specimen of this species.

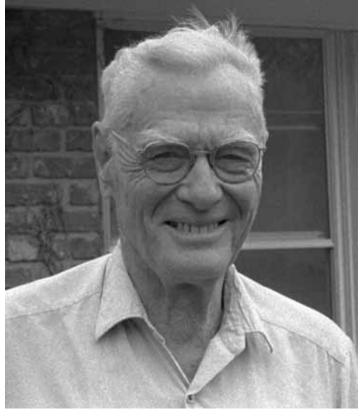


Fig. 7 Leslie Hubricht (1908-2005), a friend and probably the preeminent collector of eastern US landsnails.



Fig. 8 The August 1978 postcard from Leslie Hubricht listing sinistral Polygyridae.

sinistral adult specimen of this species in existence! (**Fig. 6**, Bill Frank digital image)

As with the Cerion, there is one undisputed champion collector of eastern US landsnails, Leslie Hubricht (1908-2005) (Fig. 7, with the permission of Jochen Gerber). I had the privilege of working with Leslie in the field on a few occasions and maintaining a correspondence for more than two decades. As it suited both of our styles, our messages were usually short, and in those pre-Internet days (1970's to 1990's) postcards were quite suitable for streamlined communication. As I have been interested in gastropod coiling reversal for a very long time, on one occasion I mailed him a self-addressed stamped postcard requesting him to summarize his experience with sinistral Polygyridae, the family including Alan's *Mesodon*. **Fig. 8** is the August 13, 1978 response. Although Leslie probably handled something on the order of a few hundred thousand polygyrids, he had found only eleven specimens of five species! Interestingly an immature Mesodon clausus was one of the eleven! Over the years I have gathered notes on other sinistral polygyrids, and on the occasion of Alan's second sinistral score, I thought it might provide context for this kind of rare discovery. Here follows an account, in roughly the same format as the above Cerion tabulation, of all the known instances of sinistral specimens of polygyrids in the USA and northern Mexico (brackets [] include reference and collection details, ! indicates collector:

*Allogona profunda* (Say, 1821) [Pilsbry, 1940: 879: "Shimek and Billups have recorded 4" (no reference)] (4)

**Daedalochila avara** (Say, 1818) [4132 Ortega Forest Dr., Jacksonville, FL, H.G. Lee! 27 July, 1977; Lee Collection] (Fig. 9) (1)

*Euchemotrema leai* (A. Binney, 1841) [Archer, 1934: 148: Ann Arbor, MI, Alan F. Archer! 1932-1933] (1)

Inflectarius inflectus (Say, 1821) [Bland, 1861: 448: John Gould Anthony Collection, ?MCZ; Pilsbry, 1940: 773: Hubricht! St. Louis, MO; FMNH; Feinberg, 1970: 12-13: Carter Co., TN, Harold S. Feinberg! 4 June, 1969, AMNH 157293] (3)

Linisca texasiana (Moricand, 1833) [Hubricht, 1978: three,

FMNH] (3)

Mesodon clausus (Say, 1821) [Hubricht, 1978: immature; FMNH; Houston, TX, A.L. Mehring! 13 December, 1960. Gettleman Collection] (2)

*Mesodon elevatus* (Say, 1821) [Tryon 1867: 104: Frank Daulte Collection, Cincinnatti] (1)

*Mesodon mitchellianus* (I. Lea, 1839) [Bland, 1861: 448: Thomas Bland Collection, ?AMNH but not in Gratacap (1901); Wetherby, 1895: 94: near Cincinnati, OH, F.W. Bryant!] (2?)

Mesodon thyroidus (Say, 1817) [Bland, 1861: 448: Bland Collection, ?AMNH but not in Gratacap (1901); Wetherby, 1895: 94: three shells: one Cincinnati, OH, Stannage! two Wetherby! one deposited at MCZ; Archer, 1934: 148-149: two specimens, Ann Arbor, MI, A.F. Archer! April, May, 1933; Petit, R.E., March 2007, personal communication, G. R. Webb letter to P. H. Reed late Sept. or early Oct., 1946, prob. FMNH] (8?)

*Mesodon zaletus* (A. Binney, 1837) [Pilsbry, 1940: 725: two specimens: one Herkimer Co, NY, one ANSP; Fluck, 1943: 105: two of several hundred individuals, Ilion, Herkimer Co., NY, W.H. Fluck!] N.B. Ilion colony introduced by J. Lewis (*fide* A. Bailey, Pilsbry, 1940: 724-725), therefore derived from dextral stock. (3-4?)

*Millerelix mooreana* (W. G. Binney, 1857) [Pilsbry, 1940: 624: J.A. Singley!] (1)

Neohelix albolabris (Say, 1817) [Lewis, 1872: 99: near Mohawk, NY, James Lewis! June, 1871; Pilsbry, 1940: 838: several known; Reigle, 1962: 37; Washtenaw Co., MI, Phil Marsh(?)!; UMMZ 210163] (prob. >6)

*Patera roemeri* (L. Pfeiffer, 1848) [Pratt, 1965: Possum Kingdom SP., Palo Pinto Co., TX, W(illiam) Lloyd Pratt! (?)1965, Pratt Collection no. 992] (1)

*Polygyra cereolus* (Mühlfeld, 1818) [Baily, 1942: 102: Hillsboro, FL, R.I. Baily! Spring 1940; Sullivan, 1986: Desoto Park, Manatee Co., FL, Wayne Sullivan! 1986] (Fig. 10) (2)

*Polygyra septemvolva* Say, 1818 [W.G. Binney, 1878: 282 MCZ; Waccasassa River, SR 24 bridge, Levy Co., Florida, John Slapcinsky! 19 March, 2005, Lee Collection] (Fig. 11) (2)

*Praticolella* species [23 km NNW El Limon, Tamaulipas, Mexico, Fred G. Thompson! 27 December, 1989, Lee Collection] (Fig. 12) (1)

Stenotrema hirsuta (Say, 1817) [Bland, 1961: 448: Isaac Lea Collection, ?USNM] (1)

*Triodopsis fallax* (Say, 1825) [Bland, 1861: 448: William Greene Binney Collection, ?AMNH but not in Gratacap (1901); Hubricht, 1978: two, FMNH] (3)

*Triodopsis hopetonensis* (Shuttleworth, 1852) [Pilsbry, 1940: 812: ANSP; Hubricht, 1978, FMNH] (2)

*Triodopsis obsoleta* (Pilsbry, 1894) [Hubricht, 1978: three, FMNH] (3)

*Triodopsis vulgata* Pilsbry, **1940** [Reigle, 1962: 36-37: Washtenaw Co., MI, Phil Marsh(?)!, UMMZ 210162] **(1)** 

*Webbhelix multilineatus* (Say, 1821) [Wetherby, 1895: 94: A.G. Wetherby! MCZ] (1)

*Xolotrema fosteri* (F. C. Baker, 1932) [Pilsbry, 1940: 831: W.G. Binney! 202 Union St., Burlington, NJ (his own garden), ?AMNH, but not in Gratacap (1901); St. Louis, MO, Frieda Schilling! 2 May, 1969, Lee Collection] N.B. NJ specimen definitely derived from (naturalized) dextral stock. (Fig. 13) (2)

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Total: 15 genera, 23 species, about **(53) specimens.** Twenty collectors; **36 specimens**:

Archer, A.F 3

Baily, R.I. 1

Binney, W.G. 1

Bryant, F.W. 1

Feinberg, H.S. 1

Fluck, W.H. 2

Hubricht, L. 11

Lee, H.G. 1

Lewis, J. 1

Marsh, P. (?) 2

Mehring, A.L. 1

Pratt, W.L. 1

Schilling, F. 1

Singley, J.A. 1

Slapcinsky, J. 1

Stannage 1

Sullivan, W. 1

Thompson, F.G. 1

Webb, G.R. 1

Wetherby, A.G. 3

Abbreviations for institutional repositories mentioned above:

AMNH: American Museum of Natural History, New York.

ANSP: Academy of Natural Sciences, Philadelphia.

FMNH: Field Museum of Natural History, Chicago.

MCZ: Museum of Comparative Zoology, Harvard University, Cambridge, MA.

OSUM: Ohio State University Museum, Columbus, OH.

UMMZ: University of Michigan Museum of Zoology, Ann Arbor. NMNH: National Museum of Natural History, Smithsonian Institution, Washington DC.

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Acknowledgements: Aside from various contributors given mention in the text above, I must offer my gratitude to Bill Frank of Jacksonville, FL, who is responsible for the majority of the images used in this report.

Hary G. Lee shells@hglee.com



Fig. 9 Dextral (L) and sinistral (R) *Daedalochila avara* (Say, 1818), 6mm. Collected in Jacksonville, Florida, by Harry G. Lee, 27 July 1977, Lee collection.



Fig. 11 Dextral (L) and sinistral (R) *Polygyra septemvolva* Say, 1818, 9mm. Collected along the Waccasassa River, Levy Co., Florida, by John Slapcinsky, 19 March 2005, Lee collection.

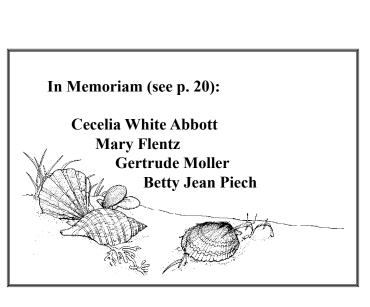




Fig. 10 Dextral (L) and sinistral (R) *Polygyra cereolus* (Mühlfeld, 1818), 8mm. Collected in Desoto Park, Manatee Co., Florida, by Wayne Sullivan in 1986, Sullivan collection.



Fig. 12 Dextral (L) and sinistral (R) *Praticolella* species, 10mm. Collected north of El Limon, Tamaulipas, Mexico, by Fred G. Thompson, 27 December 1989, Lee collection.



Fig. 13 Fig. 12 Dextral (L) and sinistral (R) *Xolotrema fosteri* (F.C. Baker, 1932), 17mm. Collected in St. Louis, Missouri, by Frieda Schilling, 2 May 1969. Lee collection.



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### Four Abnormal Land Shells from Israel

### by Moshe Erlendur Okon

to Lilach

Shell collections rarely exhibit abnormal specimens and only a handful of collectors focus on them. Although there is much to learn from these aberrant forms, they are usually considered to be less attractive or aesthetic and thus discarded in the initial stages of the long process which brings specimens to dealers and then to our cabinets and display cases. In reality, less than perfect land and marine molluses are much more common than is reflected in our collections.

The situation in the conchological literature is no different. In the past ten years, for example, only five articles relating to this subject appeared in *American Conchologist*. One dealt with a white color form, three with sinistral specimens, and only one with an actual freak (co-authored by me, incidentally).

Abnormal shells can be divided into two major groups: one of shells with repetitive patterns of abnormality, such as albino, melanistic, or rostrated appearances, and the other of shells with totally erratic growth patterns and deformities. The former group seems to attract more attention and interest and certain exemplars can also command high prices, such as the rare small pale *Harpa major* from Australia or the dark rostrated cowries of New Caledonia.

One can often find the general statement that most freaks are probably caused by early trauma to the shell or the animal, especially an injury to the mantle. Other reasons given are water pollution, parasites, renewed growth after maturity has been reached, and habitat changes. Nonetheless, I have not been successful in obtaining literature pertaining to the general phenomenon of abnormal growth (as opposed to descriptions of miscellaneous aberrant shells).

This short article depicts four landshell species from Israel, each displaying aberrant growth. Collecting for these is especially productive during the beginning of the rainy season, which is usually around October, and throughout the winter. The area of the State of Israel is not a simple geographical unit and its borders with Lebanon, Syria, Palestine, Jordan, and Egypt (some still to be decided) are somewhat arbitrary and not necessarily reflective of natural landscape boundaries. There are, however, land shells endemic to the wider area of Israel and some that live in much smaller habitats within Israel.

Those readers with an interest in land shells from the Holy Land are welcome to contact me for more information and exchanges.

#### Buliminus labrosus (Olivier, 1804)

This light brown shell, averaging 30mm, belongs to the family Buliminidae and is quite common throughout south Lebanon, north and central Israel and Palestine, and west Jordan. There are several subspecies or forms, varying mostly in size and shape. It lives in limestone crevices and can often be found in the middens of small rodents with the shell punctured in the last whorl. A means to a feast for the rodent.

The shell pictured here began its growth in a normal manner and at a certain point another juvenile *B. labrosus* attached



Buliminus labrosus (Olivier, 1804) (normal specimen (L) and abnormal specimen (R) 27mm), found on limestone rocks near Kesalon, Israel (col. MEO).

itself to, what was at that time, the body whorl. This probably occurred during a rest stage between growing cycles. The attached shell can be seen on the top, its apex pointing down and with the last whorl punctured. The host continued growing, but as it could not remove its guest (which died but remained attached), it coiled around the attached shell until it reached maturity and formed its thickened outer lip. The guest juvenile is still attached to the host, although partly enclosed by the adult shell.



Sphincterochila fimbriata (Bourguignat, 1852) (normal specimen (L) and abnormal specimen (R) 15mm), found on limestone rocks in the Judean Desert, Israel (col. MEO).

Sphincterochila fimbriata (Bourguignat, 1852)

This white shell, in the family Sphincterochilidae, is common in the central Israel-Palestine-Jordan area. The shell reaches 20mm and can be more or less flattened compared to the imaged (normal) shell. In an article by Bar, scalarid or open-coiled forms of this species are described. Sinistral specimens are also known.

The smaller abnormal shell pictured here (15mm) is a scalarid loosely coiled shell and even though the whorls are not disjunct, it is certainly far from the typical form for this species. It seems to have died before it reached maturity, lacking the last whorl. To me, this is aesthetically the most attractive of the shells illustrated here.

A land shell with a similar scalarid form in the genus *Josephinella* is found in Greece and is pictured in an article by Cédric Audibert. Another example many of us are familiar with is the scalarid form *Cornu aspersa* (Müller, 1774) (syn. *Helix aspersa*) illustrated on page 193 of Abbott's "Compendium of Landsnails."



Levantina spirplana werneri (Kobelt, 1889) 40mm, found dead on limestone rocks near Bareqet, Israel (col. MEO).

### Levantina spirplana werneri (Kobelt, 1889)

This globose cream coloured shell, in the family Helicidae, may be a subspecies or form (authors disagree). It can reach up to 40mm, lives in a very restricted habitat, and is carinate or keeled as a juvenile. The umbilicus of this species is totally covered. The color pattern of the adult shell consists of five poorly defined and interrupted brown spiral bands. The outer lip is thickened and the aperture faces downward towards the ventrum of the shell.

The specimen pictured here reached adulthood in a normal manner (outer lip thickened and last whorl rounded, not carinated), but then, for some reason, resumed growth for another eighth of a whorl. While the inner part of the shell shows continuity in smoothness and texture, the outer part of the additional whorl is rougher and not confluent with the original outer lip. The transitional angle is a bit sharper as well. The new outer lip is not completely thickened.



*Theba pisana* (Müller, 1774) 21mm, found on bushes in Sede Moshe, Israel (col. MEO).

#### Theba pisana (Müller, 1774)

This rather handsome shell is another specimen in the Helicidae exhibiting a "double aperture." This species, originally from the Mediterranean area, has become widespread throughout

many areas of the world. The shell is small to medium in size (15-22mm) and varies considerably in colour and in the pattern of the spiral lines. The tip of the apex, however, is dark brown or black, even on pure white specimens.

As I close this quick look at a few abnormal shells found in Israel, I should note that the "double aperture" phenomenon is a bit more regularly encountered and can occasionally also be seen in marine gastropods.

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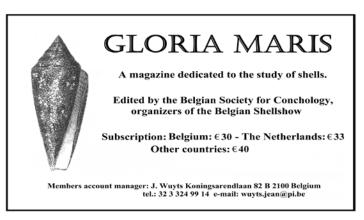
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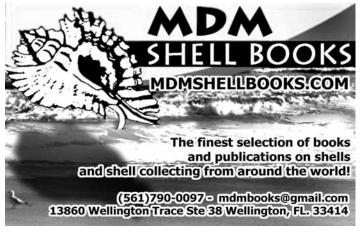
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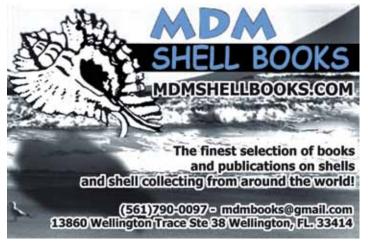
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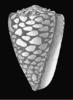
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# COA 2010 Convention



Tres Amigos - (left to right) Scott Robichaud, Warren Graff, & Don Robak. Like ducks, they were calm on top but paddled furiouly under water.



Part of the Texas Contingent - (left to right) Jean Dickman, Sybil Burger, Rozelle Wilson, & Cynthia Beck.



Half a table at the welcoming party - (left to right) José Leal, Harry Lee, Richard Ott, Marcus Huber & Anne Joffe.



The other half - (left to right) Anne Joffe (twice? COA Convention Coordinator, why not?), David Joffe, Jeanne Pisor, Don Pisor, & Chuck Owen.



Panel discussion on "What to do with your Collection" - (left to right) Rich Goldberg, Gary Rosenberg, Adam Baldinger, Jay Cordeiro, Elizabeth Shea, & José Leal.



Jim Brunner prepares to explain why at least two audience members need to bid against each other for these conchs.

# Shellebration Boston



The bourse was held in the very elegant ballroom of the hotel. Here things have slowed during the dinner hour.





Shelling at low tide on Revere Beach. Practitioners of the "Sanibel Stoop" were in their element.



The intrepid folks who braved the beautiful sunny weather to walk Revere Beach looking for small washed up treasures.



Enjoying the final banquet are (left to right) Jack Lightbourn, Jeanne & Don Pisor, & Cheryl & Rick Negus.

From the opening rendition of "Charlie on the MTA" sung by Roger Pierce, to the interesting and varied daily programs, to the closing banquet, Shellebration Boston was a successful convention enjoyed by everyone who attended. The COA 2010 convention had 164 registrants, 24 dealers, and 78 banquet attendees. The verbal auction made \$6,547, thanks to many generous donations and some really active bidding. The silent auctions were noted by many for the superb quality of material offered. The bourse venue was spectacular, with lots of room and an elegant setting. Apparently there were some Boston area attendees who had not attended previous COA conventions. The buying was "lively," ensuring a successful bourse for both dealers and attendees. With a lot of hard work by club members, the Boston Malacological Club was able to celebrate its 100th anniversary. The Boston Malacological Club wishes to thank their members and participants as well as Anne Joffe, Alice Monroe, Carolyn Petrikin, and Bob & Betty Lipe for making this event a success.

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## 2011 SHELL SHOWS & RELATED EVENTS

Jan. 15-16 2011	SPACE COAST SEASHELL FESTIVAL, Melbourne, FL The Melbourne Auditorium, 625 E. Hibiscus Blvd. Jim & Bobbi Cordy, 385 Needle Blvd. Merritt Is., FL 32953 (321) 452-5736 E-mail: corshell@earthlink.net	Apr. 30 2011	BRITISH SHELL COLLECTOR'S CLUB CONVENTION, Essex, England Theydon Bois Community Centre, Essex John Whicher, 44 196 336 3715 email: john@whicher.plus.com
Jan. 22-23 2011	BROWARD SHELL SHOW, Pompano Beach, FL Pompano Beach Recreation Center, NE 18 <sup>th</sup> Av. & NE 6 <sup>th</sup> St.  Nancy Galdo/Richard Sedlak, 4266 Chase Ave.  Miami Beach, FL 33140-3008 (305) 531-0036  E-mail: nancygaldo@gmail.com	May 14-15 2011	XXI BELGIUM INTERNATIONAL SHELL SHOW, Antwerp, Belgium "Extra Time" Sports Hall, Louisalei 24, Hoboken Charles Krijnen, Burgemeester Jansenstraat 10 NL-5037 NC Tilburg, Nederland 31 (13) 463 0607 E-mail: bvc.shellshow@planet.nl Web site: www.bvc-gloriamaris.be/beurs_e.htm
Feb. 11-13 2011	SARASOTA SHELL SHOW, Palmetto, FL Palmetto Convention & Civic Center, 1 Haben Blvd. Sandy Pillow, 11017 Jasmine Circle Bradenton, FL 34209 (941) 567-5982 E-mail: spillow6@comcast.net Cell: (810) 516-6120	Jul. 13-17 2011	CONCHOLOGISTS OF AMERICA ANNUAL CONVENTION, Cape Canaveral, FL Radisson Resort at the Port, 870 Astronaut Boulevard Bobbi Cordy - corshell@earthlink.net (321) 452-5736 Doris Underwood - dunderwood13@cfl.com
Feb. 26-27 2011	ST. PETERSBURG SEA SHELL SHOW, Seminole, FL Seminole Recreation Center, 9100 113th St. N., Seminole, FL Bob & Betty Lipe, 348 Corey Avenue St. Pete Beach, FL 33706 (727) 391-2197 E-mail: blipe@tampabay.rr.com FAX: 360-3668 Exhibit form at: http://www.stpeteshellclub.org	Jul. 2-3 2011	(321) 622-4372 Web site: www.conchologistsofamerica.org  TOWNSVILLE SHELL SHOW, Townsville, Queensland, Australia Orchid Society Hall, Charles Street, Kirwan Glenda Rowse, 19 Farrell Street Kirwan 4814, Queensland, Australia (7) 4773-2817
Mar. 3-5 2011	SANIBEL SHELL SHOW, Sanibel, FL Sanibel Community Center, Periwinkle Way Irene Longley, 2823 8th Ave. St. James City, FL 33956-2133 (239) 283-7417 E-mail: milsfrills@cs.com	Jul. 9-10 2011	KEPPEL BAY SHELL SHOW, Yeppoon, Queensland, Australia Gus Moore Pavilion at the Yeppoon Show Ground Jean M. Offord, 277 McDougall St., N. Rockhampton, Qld. 4701, Australia
Mar. 5-6 2011	XXIIéme RECONTRES INTERNATIONALES DU COQUILLAGE, Paris, France Bourse de Commerce, 2 rue des Viarmes, 75004 Paris, France M. & D. Wantiez, 88, Rue du General Leclerc 95210 Saint Gratien, France 33 (1) 34-17-00-39 E-mail: wantiez.mada@wanadoo.fr	Details pending	(7) 4928-3509  AMERICAN MALACOLOGICAL SOCIETY ANNUAL MEETING, Pittsburgh, PA www.malacological.org/meetings/next.html  DONALD DAN, COA Award Chairman 6704 Overlook Drive
Mar. 10-12 2011	MARCO ISLAND SHELL CLUB SHOW XXXI, Marco Is., FL Marco Presbyterian Church, Elkcam Circle Linda Shockley, 348 Colonial Avenue Marco Island, FL 34145 (239) 394-5416 E-mail: marco-sheller@earthlink.net		Ft. Myers, FL 33919 U.S.A. Tel. Voice & Fax (239) 481-6704 E-mail: donaldan@aol.com

# **Conchologists of America** Neptunea Award

The Neptunea Award (Brunner, 2000; Lipe, 2000) was established at the midyear (1999-2000) meeting of the COA Board in order to recognize outstanding and distinguished service to conchologists and malacologists in recognition of:

1. Service to the Conchologists of America.

AND/OR

2. Service to the scientific interests of Conchologists of America.

AND/OR

3. Service to the science of Malacology as it applies to conchologists anywhere.

Although exceptions have been made, the COA Board, which serves as the jury for the Neptunea Award, has traditionally weighed their consideration for award recipients toward (1) amateurs: those not currently pursuing a principal career involving collection, study, or commerce involving mollusks, and (2) active members of the COA. The nomination process will close on June 1, 2011 to give the Board time for discussion and balloting. Up to three awards have been made at annual conventions, beginning with the Houston event in 2000 (see below). Nomination(s) for the Neptunea Award may be made by any COA member and the format is simple:

Name of nominee:

This person deserves this award because (here a somewhat detailed paragraph will suffice) ......

And either snailmail or email that nomination to

Harry G. Lee COA Neptunea Award Coordinator 4132 Ortega Forest Drive Jacksonville, FL 32210 <shells@hglee.com>

A ballot form will be included in the March, 2011 American Conchologist, but one need not mull it over all winter: the balloting is now open!

#### Previous Neptunea Award winners:

2000 (Houston, TX): Ross Gunderson, Ben and Josy Wiener, Debbie Wills

2001 (Port Canaveral, FL): Emilio Garcia, Harry Lee, Lynn Scheu

2002 (Sarasota, FL): Richard Petit, Bernard and Phyllis Pipher

2003 (Tacoma, WA) Jim and Linda Brunner, Kevin Lamprell, Doris Underwood

2004 (Tampa, FL): Bobbi Houchin

2005 (Punta Rassa, FL): Richard Forbush, Anne Joffe, William Lyons

2006 (Mobile, AL): Jack Lightbourn, Betty Lipe

2007 (Portland, OR): none given

2008 (San Antonio, TX): Bill Frank, Archie Jones

2009 (Clearwater, FL) none given 2010 (Boston, MA): none given

Brunner, L., 2000. The Neptunea Award. American Conchologist 28(3): 3. Sept. Lipe, B[etty], 2000. Presidents Message. American Conchologist 28(4): 2. Dec.

Respectfully submitted, Harry G. Lee

COA Director-at-Large



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# A rough few months for COA members; we lost four

Cecelia Abbott (1936-2010) was born in San Diego, California. graduated from Woodbury College in California, and became a model and fashion coordinator for the Hecht Company in Washington, D.C. She had a love of nature and joined the New York Shell Club, where she met the already noted malacologist Dr. R. Tucker Abbott. following account of his marriage proposal was provided by longtime COA member and



American Conchologist editor, Lynn Scheu.

My favorite Cecelia memory is a Tucker memory too. We were staying with them for a while, that same spring of their trip to Australia, when Walter Sage acted as their caretaker in Melbourne and mailed out the newly printed copies of the long awaited Standard Catalog of Seashells while they were away. We went beach walking, the day before they left. Cecelia and I wandered off together hunting angel wings in the muck. She began telling me little stories about Tucker. She noted that the angel wings always reminded her of bridal finery, all the lace and tucks and pleatings. Then she asked if she'd ever told me about Tucker's proposal. (I bet there are others of you out there that have heard this! She did love a good story as much as he did.) She said he left a note on her desk one day, asking her to marry him, and then added another note pleading, "Please type!" Then she did that uproarious laugh of hers and said, "Don't you think that's a scream? Ever the author, he wanted a secretary-typist too." And she took the "iob."

Cecelia sent the "scrunched and worn-looking" "Please type" note to Lynn, who still has it. Cecelia supported Tucker's efforts in malacology and was an avid collector as well. She traveled around the world with Tucker and after his death she continued her collecting and added an interest in sea beans, becoming a member of the Sea Bean Society. All who knew her will remember her grace and ever present humor.

Mary Cecilia Flentz (1916 - 2010) lived in Carlsbad, California. She was married to John Flentz and had a long-time interest in shells and conchology. John and Mary lived in a number of California towns over the years and saw the state drastically change as it grew. Living in Carlsbad and walking the southern California beaches was a natural for somene interested in shells.

Gertrude Hildebrandt Moller (1920 - 2010) was born in Germany and immigrated to Chicago with family when her she was nine. She studied voice and was an accomplished coloratura soprano, singing with Chicago Fine Arts Company. moved to New York when she was 22 and sang with the USO throughout the



war years. She had a minor part on Broadway, but her budding Broadway career was cut short when she met and Married Knud Moller, a marine engineer from Denmark. They moved to Jacksonville, Florida, in 1948 where Knud had an engineering job with a ship building company. In 1955 Knud's job required them to move to the Bahamas, specifically Eleuthera. Readers of this magazine know this locale is somewhat of a sheller's paradise, as it certainly was in 1955. Gertrude often said she was hooked, "When I picked up that very first shell..." She became an serious collector. They moved back to Jacksonville in 1957 and when a local paper ran a story of her rather extensive shell collection in 1959, she got calls from other shell collectors in the Jacksonville area. This led to an initial gathering at her house and the establishment of the Jacksonville Shell Club. Harry Lee, also a long-time member of the Jacksonville Shell Club said, "...the shelling world lost an abiding spirit. Among many other contributions to popular conchology, Gertie was the founder of the Jacksonville Shell Club and part of the mortar that held it together for decades." Gertrude was active with Pine Castle, a center for children with development disabilities.

Betty Jean Piech (1919 - 2010) was born and grew up in New Jersey. She graduated from Douglass Women's College (Rutgers University) and married Frank Piech in 1947. They moved to Wilmington, Delaware, were she worked as a home-maker and then went back to school to obtain a Library Science Degree. Betty worked as a librarian for many years before she retired. In the early 1960s the family started a tradition of vacationing on

Sanibel Island, Florida, Another rather wellknown sheller's paradise. Of course, in those days it was a true island with access by ferry. Betty's interest in shells grew and in the 1970s she became quite involved with the newly established Delaware Museum of Natural History, especially its malacology department. Her interest in shells took her around the world with shelling stops at such places as:



Africa, Australia, Indonesia, Malaysia, Fiji, French Polynesia, the Philippines, Samoa, and South America. Members of COA benefitted from these trips as Betty gave quite a few talks on her experiences around the world. Alan Gettleman provided the following.

Betty Jean was always a bright spirit and fun to know. At one COA convention, I entered the lecture hall after the program had started and in the darkened room I saw pictures on the screen, heard a person speaking, but there was no one at the podium. Later I saw there was a person, Betty Jean, who was completely blocked by the height of the podium. Her programs for her farflung trips were always wonderful, emphasizing the politeness of the need to learn and use the word for "Thank You" in every native culture she visited. I served with her on a COA committee and told her that I could always recognize her in a group photograph as she would always be 'the tall one' in the picture. She delighted in that title and in a written note to Tim Pearce, introducing me, said I was the one who gave her that epithet and that she even had a shirt made with 'the tall one' on it.

Betty Jean was active in COA and one of the early members of Conch-L, the COA list serve. In the mid to late 1990s Conch-L membership was much lower than today and Betty Jean was a major contributor. Her presence on Conch-L was a delight. While interested and knowledgeable about many aspects of conchology, Betty Jean was especially interested in the Ranellidae. She is the author of "Ranellidae and Personidae: A Classification of Recent Species," published in 1998.

### THOUGHTS FROM A SHELL COLLECTOR TO HER FAMILY AND FRIENDS

I love a beach where seabirds cry, Where the shining water meets the sky. Where one can look for shells and things, And gather the gifts that each tide brings.

I like to walk upon the sand, Between the ocean and the land. To breathe the wonderful salty air, And feel the breeze blow through my hair.

I enjoy the pleasure these things bring,
They calm my mind and make my heart sing.
And even when I can't be there,
I always remember what the beach had to share.

And if you happen to see a shell,
I hope this thought you'll remember well.
As I have prized each beautiful treasure,
So I value my family and friends in even greater measure.

And when the times comes I'm no longer here,
Do not think I have left you, never fear.

Just picture me happy on some distant shore
Picking up lovely things just as before.

For I will not have died, nor will I sleep; I will see you again, so please do not weep, I'll just continue happy in His peace and care Until the time comes when you join me there.

I love each and every one of you.

Betty Jean Piech September 3, 1995



Distorsio jenniernestae Emerson & Piech, 1992

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# Back to the Gulf of Aqaba: The search for rare shells of the Red Sea

### By Moti Kovalis

The end of the winter is a good time to continue exploration dives in the Red Sea [Ed: see the previous article about the Gulf of Agaba in vol. 37, no. 4, p. 4-6]. The weather is good (not hot) and the water is crystal clear. There are usually a number of mollusk species that seem to emerge after winter and there is definitely more activity underwater. It is always hard to explain why certain species suddenly appear after many years of absence, or disappear after years of presence, or appear in new localities. Common cowries such as Cypraea staphylaea Linneaus, 1758 or Cypraea punctata Linneaus, 1771, have been absent from this area for many years. There are not even records of dead specimens. Despite the temptation to blame weather, pollution, climate change, etc., there is no current scientifically based explanation for this phenomenon. Many mollusk species seem to come and go in a wave effect, for reasons still unclear. Only Mother Nature knows, and she is not talking.

Our plan for this exploration is to dive at three different locations. The first location is the northern point in the Gulf, near the border with Jordan. This location is interesting because it was for many years a battlefield: a long struggle between a private fish farm that placed fish cages in the sea and various "green" organizations that opposed this operation. After many years the Israeli court decided to remove the fish farm. The "green" organizations claim that the operation had a devastating effect on the original habitat as well as harming marine life throughout the Gulf. The fish farm claims the opposite. Both parties have stacks of supporting research, but in the end the cages are gone. From previous dives in the area some years ago, I remember many metal barrels and other metal structures, ropes, and tiers. It will be interesting to see what is left. The cages were placed at a depth of 25 meters; it will be a long swim. The spot will be hard to find since orientation under the water will be by compass only. The area is a no swimming zone (surface swimming). We have decided to dive during the day because we need better visibility to search for the correct spot and because this area is close to the Jordanian border and we really would not want to alarm the navy - of either country.

The swim to the area is without event, at a straight southeast direction from our entry point. In this northern area of the Gulf the bottom slopes downward more gradually than it does off the southern beaches. After 15 minutes we got to the spot. To my surprise the surrounding sea was cleaner than I remembered from two years ago. All that was left of the fish farm operation was an artificial reef probably planted to investigate the influence of the cages on the local marine life. The artificial reef is built from five- or six-meter long plastic pipes connected together to form a pyramid-shaped structure. The entire structure is surrounded by all kinds of fish (Fig. 1). What I am looking for is, of course, at the bottom of the structure where my target creatures are more likely to be found. Immediately I see a dead *Laevichlamys superficialis* (Forsskal, 1775) with both valves still attached. There are other

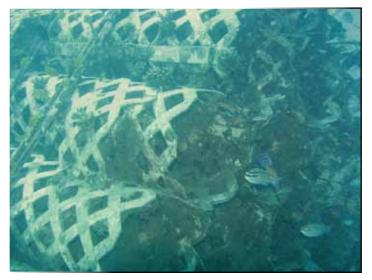


Fig. 1 (above) Remnants of the fish farm operation, now a home for many brightly colored fish that swim around and in the lattice-work pipes.

Fig. 2 (below) Interior view of one of the pipes with our lobster resident.



scattered dead bivalves, so it seems there is an octopus or other predator in this area. The various valves are not cracked or broken, so this may be a clue as to the identity of the predator. It is probably not an octopus. A look at the upper level pipes solves the mystery. Here we find a large lobster eating a pecten and guarding other bivalves (Fig. 2). In the picture it is difficult to see his unfriendly visage as he guards his a soon-to-be eaten *Glycymeris livida* (Reeve, 1843). I searched in vain for a living pecten hidden in the algae on this structure. I wanted to photograph a specimen *in situ*, but the lobster is certainly the better sheller, as I was unable to find a single live specimen. A further look in other pipes turned up lots



Fig. 3 (above) Looking deeper into the pipe we found more fish and a large *Cypraea* (*Mauritia*) arabica grayana. Fig. 4 (below) The *Homalocantha anatomica elatensis* I spotted, despite its rather effective camouflage.





Fig. 5 A small brightly colored and nicely patterned *Conus* (*Cylinder*) *textile*, usually a shallow-water dweller.



Fig. 6 This *Cypraea* (*Luria*) *pulchra sinaiensis* certainly is not well camouflaged. With its mantle retracted it really stands out in the dive light.

of colorful fish and a large *Cypraea* (*Mauritia*) *arabica grayana* Schilder, 1930, attached to a side panel (Fig. 3). It had completely withdrawn its mantle and was very easy to spot. Not far away I found another one, but in general it seems there are far more bivalves than gastropods in this area. The pipe structure is covered with large numbers of *Chama pacifica* Broderip, 1834. It is hard to identify them with the thick layer of algae covering everything. It was time to leave this area and rest up in preparation for our first night dive.

The night dive site is south of an oil terminal. The site is named the "the missile ship" because of a wrecked missile ship lying at 30 meters. The ship was one of five bought in Cherbourg, France, for the Israeli Navy. During the French military embargo after the 1967 Six-Day War, they were smuggled out at Christmas Eve. Today the ship is a diving attraction. Our dive is planned for a depth of 25 meters. In this particular location the descent begins immediately. At the bottom the corals are very dense and beautiful. Despite this, most of the dive is without any standout mollusk finds. Even digging in the sand fails to turn up the expected Mitridae and Terebridae. I do, however, spot a wellhidden Homalocantha anatomica elatensis Heiman & Mienis, 2009 (Fig. 4). It is amazing how well it is camouflaged. It is very hard to differentiate from the rock substrate. I only spot it because it sports a new white whorl, not yet algae covered. After a few minutes I see among the rocks a small Conus (Cylinder) textile Linnaeus, 1758 (Fig. 5). What is it doing at this depth? It is usually a shallow water dweller in the Gulf of Agaba.

As always the dive computer spoils all the fun and reminds us it is time to leave. On the way back to shore we find the surprise of the dive. At around 18 meters is a beautiful and rare *Cypraea* (*Luria*) *pulchra sinaiensis* Heiman & Mienis, 2000 (Fig. 6). Strangely, like the *C. arabica grayana*, it also has the mantle retracted. Unfortunately I don't have time to get a really good photo.

On our last morning we rush to exchange our diving tanks. Our dive will be in a restricted area near a shopping mall. This means we need to get in the water early, before the tourists

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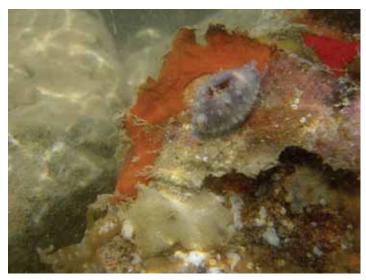


Fig. 7 (above) *Cypraea* (*Bistolida*) *erythraeensis*, a rare species in this part of the Gulf of Aqaba and the first cowrie we have seen on this dive with an extended mantle.

Fig. 8 (below) A well camouflaged *Spondylus smytheae*, still an exciting find this far north in the Gulf of Aqaba.



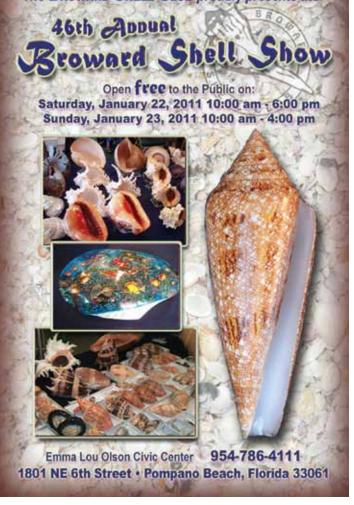
line the beach and hit the water with their jet skis. The depth will be 30-35 meters, so it will be a short dive. Two minutes into the dive, before the real descent phase, I spot Cypraea (Bistolida) erythraeensis Sowerby, 1837, a rare species in this part of the Gulf of Aqaba (Fig. 7). Finally we have found a cowrie with full mantle extension. A light touch of my finger exposes the distinguishing red blotches on its dorsum. In the south, along the beaches of Sinai, it is not a rare sight, but it is seldom seen this far north. Nice start. The swim to 35 meters is fast. At the end of the dense reef on one of the rocks I can see Spondylus smytheae Lamprell, 1998 (Fig. 8). This was a rare species in the Gulf, but has become more common recently. There was not much to find at this depth, so we head back to shallower waters. At night in the shallow water there are many specimens of both Cerithium adansoni (Bruguière, 1792) and Fusinus polygonoides (Lamarck, 1822). During the day, however, all that is evident are tracks in the sand. As we finish off our third and final dive I attempt to guess which species made which track in the sand.

Our winter dive is now over and we pack up to depart this interesting area. We will return in May to some new dive sites to see what treasures await us in the Gulf of Aqaba. In the meantime we have specimens to clean and photographs to go through looking for the few that best represent our explorations of this relatively unknown part of the world.

By Moti Kovalis koko61@gmail.com







### First Modern Shell Show in China

as reported by Robert Janowsky

On the 16th and 17th of October 2010, a group of shell collectors gathered in Beijing, China, for the first, of what is hoped to be an annual, shell show in China. These pictures were taken by Fan Zhang and forwarded by Wu Jingyu, a friend of Bob Janowsky. From the images you can see they made a good start with a nice selection of both marine and land shells. Attendance figures are unknown, but it appears that those who did attend were quite interested. Due primarily to the Internet and online auctions, there are several shell dealers in China who now regularly supply worldwide collectors. Hopefully this interest will continue.



Above: The participants in the first shell show in China, from left to right, bottom to top: Wei Hu, Yang Wang, unknown, Xiaoguang Li, Jin Chen, Liqian Zhou, Fan Zhang, Fan Zhang [yes, two], Xin Deng, Youning Wang, Qicong Li, unknown, Qing Feng, Yifeng Lu, Peng Wei, Xin Qian, Huabing Liang, unknown, Yang Wu, Hanchen Wang unknown, Junyi Du. Photos are offered by Fan Zhang.

Below: The room begins to get a bit crowded as the day goes on. Hopefully there are some young future shellers there.



Below: One of the tables with a nice selection of shells.





Robert Janowsky mdmbooks@gmail.com



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### Conus recurvus Broderip, 1833: One Mo' Time

By J. M. Inchaustegui

In a recent article that appeared in the *Triton*, the *Epitonium*, and the *American Conchologist*, I discussed some shells I obtained from the Houston Conchology Society that had been donated to the Club by the Houston Museum of Natural Science. In the article that appeared in the *American Conchologist* Vol. 38, No.3, September, 2010, Mr. Tom Eichhorst added a footnote that read, "*Conus recurvus* Broderip, 1833, is apparently no longer valid as the type does not match shells of that name, the correct name is probably *Conus (Kohniconus) emarginatus* Reeve, 1844."

This made me ponder so I checked my literature to see what I could find. In Abbott's "American Seashells" he shows *Conus recurvus* Broderip, 1833, as valid with synonyms *Conus scriptus* Dall, 1910, and *Conus magdanelensis* Bartsch and Rehder, 1939. These synonyms only showed that this cone was probably very variable.

So next I checked Keen's "Sea Shells of Tropical West America" Second Edition, which showed *C. recurvus* Broderip, 1833, to be valid with synonyms: *Conus incurvus* Sowerby, 1833; *Conus emarginatus* Reeve, 1844; *Conus scariphus* Dall, 1910; and then it showed that *Conus regularis* Sowerby, 1833, was valid with several synonyms: *Conus syriacus* Sowerby, 1833; *Conus angulatus* A. Adams, 1854; *Conus magdalenensis* Bartsch & Rehder, 1939; *Conus monilifer* Broderip, 1833; *Conus gradatus gradatus* Wood, 1828; *Conus gradatus thaanumi* Schwengel, 1955; and *Conus recurvus helenae* Schwengel, 1955.

This did not leave me with any positive thoughts about any of the above so I then contacted one of my shell collecting friends that has an extensive collection and a vast library of literature to ask his opinion of this footnote and he was kind enough to e-mail me two scanned paragraphs of "A Chronological Taxonomy of

Conus, 1758-1840," which was published in 1992 by Dr. Alan J. Kohn and reads as follows (pg. 246): "Although Nybakken (1970) reported the radulas of C. recurvus and C. regularis to differ strikingly, it is not clear from his illustrations of shells (Nybakken, 1970: figs. 35-39 that his concept of C. recurvus is consistent with the specimen (Fig. 36). Hanna (1963:30) suggested that "C. regularis is not very distinct and intergrades with gradatus, scalaris, and recurvus. Pending further study of this difficult complex, I tentatively conclude that C. recurvus Broderip 24 May, 1833, is a junior synonym of C. regularis Sowerby, 17 May, 1833." Later on Kohn continues (Pg. 274): "The result of this is that C. arcuatus Gray, 1839, is a junior primary homonym but not a synonym of C. arcuatus Broderip and Sowerby, 1829. Because the former species is valid, it takes the next available name applied to the taxon. Reeve (1844: pl.43, sp. 232) renamed C. arcuatus Gray as C. emarginatus. I thus conclude that C. arcuatus Gray, 1839, a junior primary homonym but not a synonym of C. arcuatus Broderip and Sowerby, 1829, is C. emarginatus Reeve, 1844."



- 1. *Conus recurvus* Broderip, 1833, (left) Manzanillo, Mexico, 48mm, August 1975, col. Theresa Stelzig; (right) Guaymas, Mexico, 49mm, November 1968, col. Lucia Leing.
- 2. *Conus regularis* Sowerby, 1833, (left) San Carlos, Mexico, 46mm, January 1971, col. Leola Glass; (right) Agua Verde, Mexico, 47mm, November 1975, col. unk.
- 3. Conus scalaris Valenciennes, 1932, Baja California, Mexico, 60mm, March 2009, col. unk.

In view of all of the above, I will change my *C. recurvus* labels to "*Conus regularis* Sowerby, 1833" but don't take my word for this since all of this is in flux and may change any day. Do your own research and proceed accordingly. The accompanying photograph may or may not shed light on this. Photo by the author.

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**Abbott, R. Tucker. 1974.** American Seashells. Van Nostrand Reinhold, Ltd., New York, 663 pgs.

**Keen, A. Myra. 1971.** Sea Shells of Tropical West America, Standord University Press, California, 1064 pgs.

**Kohn, A.J. 1992.** A Chronological Taxonomy of *Conus*, 1758-1840. Smithsonian Institution Press, Washington & London, 315 pgs. 26 pls.

J.M. Inchaustegui joaquininc@aol.com



# The rise and fall of "Conus recurvus Broderip 1833" By Bruce Neville

In an article in the September 2010 issue of *American Conchologist*, J.M. Inchaustegui identified two figured cone specimens from western Mexico as "*Conus recurvus* Broderip 1833." Taking a second look at the shells in Mr. Inchaustegui's illustrations, I tentatively identify them as *Conus regularis* (Sowerby I 1833). The two species, "*C. recurvus*" and *C. regularis*, are not as easily separated as one might think, at least on conchological characters.

Our long-suffering Editor's "innocent" note attached to Mr. Inchaustegui's article regarding the taxonomic status of "C. recurvus" has led to some interesting discussions. When I (Neville 2010) reviewed Tucker and Tenorio's "Systematic classification of Recent and fossil conoidean gastropods" (2009), I was puzzled that the shell that has long been called "Conus recurvus Broderip 1833" was not included, and finally found it under the name Kohniconus emarginatus (Reeve 1844), type species of the genus Kohniconus Tucker and Tenorio 2009. I was surprised that such a longstanding name for such a well-known shell as Conus recurvus could have been replaced, but they did not discuss the reason(s) for the change (that not being the function of their work), so I did some research into the matter. I did not have space in that review to go into the nomenclatural legalities, but, since it has come up again, I've decided to go into more detail on the story. Here goes.

G.B. Sowerby I described and figured *Conus regularis* in the *Conchological Illustrations*; that portion of the *Illustrations* was issued 17 May 1833. W.J. Broderip described *Conus recurvus* in *Proceedings of the Zoological Society of London* without illustration; that part of the *Proceedings* was issued 24 May 1833, or one week after Sowerby's name. [The article is attributed to "Broderip and Sowerby," but individual names are credited to one or the other with initials.] The primary types of *Conus regularis* Sowerby "II" [sic] 17 May 1833 and *Conus recurvus* "Broderip and Sowerby" [sic] 24 May 1833 are illustrated in the Type Gallery of the *Conus* Biodiversity Website (Kohn & Anderson, n.d.) and obviously belong to the same, highly variable species (Figs. 1 & 2, respectively).

In his review of the Eastern Pacific *Conus*, Hanna (1963) figured a "hypotype" (a term without definition or standing in the International Code of Zoological Nomenclature) of *Conus recurvus* Broderip 1833. Unfortunately, this specimen was not conspecific with Broderip's type. Apparently Keen (1971), Abbott (1974), and many others took the specimen illustrated to represent "*Conus recurvus* Broderip 1833," and the name was widely applied to the species illustrated by Hanna. Walls ([1979]) was perhaps the first to recognize that the holotype of *Conus recurvus* Broderip 1833 did not represent the species to which the name was then applied, but chose not to open that particular can of worms.

In 1839, J.E. Gray illustrated a shell as "Conus arcuatus Broderip and Sowerby 1829." Reeve recognized that Gray's illustration was not the *C. arcuatus* of Broderip and Sowerby (Fig. 3) and so gave it the replacement name Conus emarginatus in his Conchologia Iconica in 1844. Coomans, Moolenbeek, and Wils (1981), in reviewing the status of the name Conus arcuatus Gray 1839, realized that the types of *C. recurvus* and *C. regularis* 



Fig. 1 (above) *Conus regularis* G.B. Sowerby II [sic], 1833, representation of lectotype, Sowerby (1833: pt. 29, fig. 29), no type locality or size provided, photo by Alan J. Kohn, Conus Biodiversity Website, with permission, http://biology.burke.washington.edu/conus

Fig. 2 (below) *Conus recurvus* Broderip & Sowerby [sic], 1833, lectotype, British Museum of Natural History, 52mm, type locality: Monte Christi, Colombia, photo by Alan J. Kohn, Conus Biodiversity Website, with permission, http://biology.burke.washington.edu/conus



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Fig. 3 Conus arcuatus Broderip & Sowerby, 1829, neotype, British Museum of Natural History, 42.5mm, type locality: near Mazátlan, Mexico, photo by Alan J. Kohn, Conus Biodiversity Website, with permission, http://biology.burke.washington.edu/conus

represented the same species and that the next available name for the "shell formerly known as *recurvus*" was thus *C. emarginatus* Reeve 1844, but this change was not picked up in the broader literature. Tucker and Tenorio, with their encyclopedic knowledge of cone taxonomy, were aware of the change and used it correctly in their recent systematic work. This is the "shell formerly known as *recurvus*" and is the first available name for that species.

There are two "take home" lessons from this story:

- 1. Always refer to (trusted) types wherever possible, when making identifications, and
- 2. None of this should detract from the interesting observation reported by Mr. Inchaustegui!

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Fig. 4 (added) These are shells from the editor's collection that have labels stating they are Conus recurvus (no. 3), Conus regularis (no. 1 & 5), and Conus gradatus (no. 2 & 4). Applying what we now know(?), they are: 1. Conus regularis 45mm, Gulf of California; 2. Conus regularis 52mm, Algodones, Mexico. 3. Conus emarginatus (the former C. recurvus of authors) 58mm, Pacific Panama; 4. Conus regularis 40mm, San Carlos, Mexico; and 5. Conus regularis 51mm, Gulf of California. The "actual" Conus recurvus (based on the type specimen as opposed to authors accounts) is a synonym of Conus regularis, while the name Conus recurvus was incorrectly applied to Conus emarginatus. All clear?



### An Eleutheran Adventure:

### **My First Live Shell Collecting Trip**

Amelia Ann Dick (Amy)

#### Sunday, May 23, 2010

A small and diligent group of shell enthusiasts, George and Amy Dick, Jim and Bobbi Cordy, Ellen Bulger, Judy Herman, and Beverly Snyder were eager for our journey to begin. We all converged at Twin Air Calypso, a small charter and cargo airlines in Fort Lauderdale, Florida, for a short afternoon flight to Rock Sound, Eleuthera, Bahamas. While in the air I observed the beautiful clear, calm, turquoise blue water of the Caribbean Sea and my heart filled with a sense of adventure and the excitement of discovery. Upon arrival, we quickly loaded the rental cars and were off to our cottages in the small picturesque town of Tarpum Bay (Fig. 1). We were greeted by a kaleidoscope of cheerful brightly painted houses and shutters in every color imaginable. We were finally there and on "Island Time." After filling the fridge/freezer with a week's worth of meals, we hastily donned

our skins to take advantage of late afternoon, bright sun, and snorkeling at a place located four miles north referred to as Xeno Beach.

Xeno Beach is a dream come true for beach collectors. A variety of species were available for the picking. All that was required was a sharp eye, a good back, and a container to place all that "loot." A very small list of beach finds included limpets, bubbles, nerites, mussels, clams, cones, tellins, ceriths, tegulas, and those beautiful, although fragile, green and white sea urchin tests.

Immediately upon entering the water for my first Eleutheran snorkeling adventure, I found a dead Atlantic partridge tun (*Tonna maculosa* (Dillwyn, 1817)) in less than a foot of water on rocks. Ellen found a dead typhis triangularis (*Tripterotyphis triangularis* (A. Adams, 1855)). Jim fared even better with a live *T. triangularis* and Tom McGinty's murex (*Murexiella mcgintyi* (M. Smith, 1938)). This was an exciting beginning.

#### Monday, May 24, 2010

The start of our first full day began with Bobbi serving her delicious almond coffee cake for breakfast, an Eleuthran tradition with the Cordys. After packing lunches we were off on our morning excursion to Half Sound on the east side of the island. We observed a multitude of empty queen conch shells that had been strewn about like litter. This beach was definitely popular with Bahamians as a collecting and cleaning spot for what is a major staple of their diet. The place was so very quiet and still and a small sparkling crystal-clear stream emptied into the Sound. The water temperature was approximately 77-78°F. The snorkelers encountered grassy bottoms with intermittent sand patches. We spotted many juvenile queen conchs, called pink rollers. They were photographed, but none were taken. Jim and Ellen snorkeled



Fig. 1 Street scene from our cottage on Tarpum Bay. It is just as tranquil gorgeous as it looks here.



Fig. 2 "Traveling incognito," *Turbinella angulata*. Photo by Ellen Bulger

further out and down the shore. Jim took an adult West Indian chank (*Turbinella angulata* (Lightfoot, 1786)) (Fig. 2) and a king helmet (*Cassis tuberosa* (Linnaeus, 1758)). Ellen turned over a sponge on turtle grass in 2½ feet of water and found a beautiful live Atlantic yellow cowrie (*Erosaria acicularis* Gmelin, 1791) (Fig. 3). I found two amber pen shells in sand (*Pinna carnea* Gmelin,

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Fig. 3 Erosaria acicularis in situ. Photo by Ellen Bulger.

1791). After several hours of snorkeling, beach combing, and lunch, we were off again for another totally different destination.

We filled our afternoon with the delights of Islandica Beach, a.k.a. Larry's Beach, on the Atlantic Ocean. It was quite windy and the water was very choppy. Large coral heads make up the reef with a myriad of brightly colored fish and marine life. Jim found two adult queen conchs (*Strombus gigas* Linnaeus, 1758). No pearls. Ellen found a rams horn shell (*Spirula spirula* (Linnaeus, 1758)) on the beach at the high tide mark. It is the interior structural support of a deep water squid-like cephalopod and functions as a buoyancy device. The group found many lovely sunrise tellins (*Tellina radiata* Linnaeus, 1758), turkey wing arks (*Arca zebra* (Swainson, 1833)), red brown arks (*Barbatia cancellaris* (Lamarck, 1819)), speckled tellins (*Tellina listeri* Roding, 1798), and common Atlantic marginellas (*Prunum apicinum* (Menke, 1828)). Four-toothed nerites (*Nerita versicolor* Gmelin, 1791) were observed moving about intertidal rocks.

As soon as we got back to the cottage, Ellen crossed the street, went down some steps leading to a small beach, and stepped into Tarpum Bay. She hit "pay dirt" and came back with a beautiful live deep-colored orange lace murex (*Chicoreus florifer* (Reeve, 1846)). She also brought back apple murex (*Chicoreus pomum* (Gmelin, 1791)). Time well spent!

### **Tuesday, May 25, 2010**

Today our group split up and went to two locations. Jim, George, and Ellen headed for Winding Bay. The rest of us visited Palmetto Point Salt Pond. Both of these sites offered specific shell takes. Winding Bay did not disappoint. Jim found what he went looking for taking four *Conus abbotti* Clench, 1942. The largest was approximately 33mm. He also found a live measle cowrie (*Macrocypraea zebra* (Linnaeus, 1758)) and the Atlantic Triton's trumpet (*Charonia variegata* (Lamarck, 1816)). Ellen found a helmet that may possibly be a hybrid between a flame helmet (*Cassis flammea* (Linnaeus, 1758)) and a king helmet (*Cassis tuberosa*). George found one *S. spirula* at the high tide mark on the beach.

My group started off with a little sightseeing and shopping at Governor's Harbor. We then headed for a special place called



Fig. 4 *Volvarina jimcordyi* in situ, along with an unidentified chiton and a couple of mystery gastropods. Photo by Ellen Bulger.

Palmetto Point Salt Pond. On the "hit list" for this excursion was the little black murex *Chicoreus dunni* Petuch, 1979. This murex is endemic to this location only and I took most of mine in less than three feet of water on rocks and silty bottom. There was certainly no trouble finding them. Another lovely day in paradise!

#### Wednesday, May 26, 2010

Today we visit a saltwater lake named Sweetings Pond. The main objective is to collect *Volvarina jimcordyi* Cossignani, 2007 (Fig. 4). This tiny margin is endemic to this pond only and Jim and George took many from under rocks. True tulips (*Fasciolaria tulipa* (Linnaeus, 1758)) were everywhere! The ones found here are mostly dark shades of brown and light tan. They were taken in less than three to four feet of water on sand and in grassy spots. George and Ellen observed an octopus hiding amongst rocks (Fig. 5). Ellen's description is as follows "chromatophore color change from cupcake pink frosting, shifting to deep salmon, to pale lime green, almost fluorescent with differing patterns." George and I were thrilled to see two seahorses. Ellen found two pregnant males. Mahogany-and-yellow colored egg cockles (*Laevicardium laevigatum* (Linnaeus, 1758)) were found by everyone.

After our picnic lunch, we drove north on Queen's Highway to see the Glass Window Bridge. This is a unique place where one can observe the Caribbean Sea on one side of the bridge and the Atlantic Ocean on the other with one glance. My first observation was the extreme differences between the two bodies of water. The Caribbean quite peaceful and pale blue, the Atlantic dark blue and extremely rough, with powerful waves crashing high onto rocks. We found time for a little shopping on our way back home and I was already thinking about tomorrow.

### Thursday, May 27, 2010

Millar's Beach! Goodies in and out of the water. A shell collector's paradise. As soon as I walked on the beach, I spied a beautiful dead and clean flame helmet in excellent condition. It had washed up in weed drift at the wrack line. Also, there were many juvenile queen conchs, mostly dead and crabbed amongst



Fig. 5 Octopus species. Photo by Ellen Bulger.

the weed. After walking much of the beach, I discovered a perfect dead and clean lamellose wentletrap (Epitonium lamellosum (Lamarck, 1822)) and a gorgeous dead and clean costate horn shell (Cerithidea costata (da Costa, 1778)), along with a Barbados miter (Mitra barbadensis (Gmelin, 1791)). All of us observed large chitons on intertidal rocks. I had the good fortune to find a live mouse cone (Conus mus Hwass, 1792) moving around a rocky intertidal pool at mid-day. On the beach, Ellen found a dead hawk-wing conch (Strombus raninus Gmelin, 1791) and a long-spined star-shell (Astraea phoebia Roding, 1798). In the water she took the little white-spotted miter (Mitra puella Reeve, 1845), a crown cone (Conus regius Gmelin, 1791) and a dead and clean juvenile Atlantic yellow cowrie. Jim collected two flame helmets and a large West Indian top shell (Cittarium pica (Linnaeus, 1758)). He also found two fresh dead and clean true tulips in excellent condition, one an exceptional orange color and the other light brown/tan.

Everyone prospered on the beach, picking up a variety of shells that included tusks, coffee bean trivias, the gaudy asaphis, Atlantic morums,

Jasper cones, common dove shells, ivory ceriths, common West Indian bubbles, black-ribbed limpets, Barbados keyhole limpets, the tinted catharus and chestnut latirus, gold-mouthed Tritons, and colorful Atlantic moons. There were many washed up sea biscuits and sand dollars. This beach is truly a natural wonder and fit the bill for all of us.

### Friday, May 28, 2010

Upon waking this morning, the realization that my time in Eleuthera was swiftly drawing to a close is first and foremost on my mind. Little did I know that snorkeling north of Governor's Harbor Airport was destined to become a very exciting day. Jim

and Ellen chose to snorkel and swim some of the shoreline and were dropped off nearly two miles away from our destination. After almost three hours we spotted them making their way down the beach towards us. Jim took some lace murex. Ellen found seven carrier shells (Xenophora conchyliophora (Born, 1780)), with five being live takes and two dead. Xenos are her favorite shells. George and I took West Indian chanks, which were collected on sand in approximately eight to ten feet of water (Fig. 6). It was so much fun bringing them up as they are a big and heavy shell with the most interesting black animal inside. We kept the three largest adults and put the others back in to live and reproduce. The very strange chank egg cases somewhat resembled long chains of those no-spill plastic lids used to cover drinking cups. They were attached to what I believe was soft coral known as the black sea rod. We also collected milk conchs (Strombus costatus Gmelin, 1791). I got a kick out of seeing the attractive animal responsible for making such an exquisite work of art. Wow, great shell booty!



Fig. 6 West Indian chank shells, Turbinella angulata.

### Saturday, May 29, 2010

This morning we are heading south past the town of Rock Sound. We cross a small bridge and park our cars. This habitat is very rocky. We carefully make our way out. Once again, Ellen discovers another small octopus. We carefully play with it for a few minutes then went on our way. I saw many beautiful yellow and black colored mussels in extensive beds and delicate file clams on rocks with valves open and tentacles gracefully swaying with the current. I was fortunate to find deltoid rock shells (*Thais deltoidea* (Lamarck, 1822)) and West Indian stars (*Lithopoma tectum* (Lightfoot, 1786)), both species attached to rocks. I also

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find lace murex and apple murex. Jim finds McGinty's murex and glossy dove shells (*Nitidella nitida* (Lamarck, 1822)). Ellen finds a dead and clean immature purple milk conch along with lace murex. A great haul!

This afternoon we explore a beach that no one in our group has ever seen. In my opinion, this was THE most beautiful beach and reef we had been to all week. The deserted beach is named Whiteside and is on the Atlantic Ocean. White and pink sand, softly swirled together like a parfait that has only been lightly stirred. A palette of dreamy water colors with hues in turquoise and teal. The reef alive and teaming with lacy purple fans, large sponges, coral reefs separated by white sand bottom corridors, which became a snorkeler's highway. Heaven truly does exist on Earth! With all this natural beauty to absorb, one can truly forgive the fact that this beach offers nothing for shell collectors. In fact, it was difficult to find any shell of any kind whatsoever, but there were a couple of surprises to be relinquished by the ocean. Ellen found two king helmets, one live and the other being the most outstanding, clean and fresh dead, with markings so rich and dark in color, it would have "knocked my socks off" had I been wearing any. I plucked a pretty flamingo tongue (Cyphoma gibbosum (Linnaeus, 1758)) from a purple sea fan and I found an Atlantic Triton's trumpet attached to the wall of the reef. The shell was of poor quality so I returned it. Even though we hit rock bottom as far as shelling goes at this location, for me, the sheer beauty of the place puts it at the top of the list to visit again on my next trip. In my opinion, it is a feast for the eyes.

#### Sunday, May 30, 2010

The day of reckoning has arrived, and the critical question is will all of those frozen shells make it home frozen, or at least semi-thawed? Another thought was how heavy are we now? We found out in Ft. Lauderdale upon checking in for our flight. We definitely were over the weight limit and paid the additional fee. I must confess it must have been those four liters of Ricardo Rum that tipped the scales upward, but it was worth it!

#### A Few Things Learned

- 1. How helpful it is to have daily high and low tide schedules to plan for a successful shell hunt.
- 2. How amazing it is to see color differences in the same species such as true tulips that differ from one location to another, being separated by only a few miles.
- 3. How crucial habitat is to the viability of shell speciation, such as *Chicoreus dunni* and *Volvarina jimcordyi*, which are endemic to only two different salt ponds on Eleuthera.
- 4. How crucial it is to keep a daily log or journal to record what shells were found where, along with pertinent habitat information to create accurate identification slips.
- 5. Always "hang" king helmets immediately to help hasten the cleaning process.
- 6. Bug spray is as important as bottled water.
- 7. Enjoy Kalik Beer and Ricardo Gold Rum which is made

only in the Bahamas.

- 8. Empty Pringles Crisps canisters make great shell collecting containers.
- Take time to visit with the locals and be a good American ambassador.
- 10. If one must drive with parking lights on during daylight hours, be absolutely sure you turn them off before leaving your rental car, as getting a jump may be just as difficult as calling Triple A.
- How wonderful it is to share a cottage with a woman who
  has taken the time to cook, freeze, and fly six complete
  and nutritionally balanced meals from the U.S. to a Bahamian island.
- 12. I had so much fun I can hardly wait to return.

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### **COA Award Winners**

Doug Wolfe won the COA Award at the North Carolina Shell Show, 25-26 September 2010. Doug's display was a showing of 49 of the 50 shells listed by Peter Dance in "Rare Shells," (1969). Amassing 49 of the 50 shells listed by Peter Dance is no mean feat. Of the shells listed, Dance says, "A book like this is necessarily a very personal, subjective affair..." So too is attempting to collect these same species. Yes, many are now fairly commonly available, but just as many are still uncommon enough to command hefty price tags and a few are famously difficult to obtain. There are rarer shells, but these were both rare and showy. Doug's display encompassed 6 cases spread over 13 feet. Like Dance's book, he presented much more than just the shell. He also summarized the history of each shell as provided by Dance and then updated the collecting history from when Dance wrote "Rare Shells." It was an eye-catching display, well worth winning the COA Award. There were a total of 190 feet of shell display at this year's event. Judges were Dr. Harry Lee and Brain Hayes; Shell Show Chairman was John Timmerman. Other winners at the show were:

DuPont Trophy - Ed Shuller & Jeannette Tysor for "Mystery of the Migrating Mollusks."

Hugh Porter Award - Vicky Wall for "Self Collected Shells from North Carolina."

Dean & Dottie Weber Award - Vicky Wall for "The Queen Conch - Icon of the Caribbean."

Shell of Show any source - Ron Hill for *Austroharpa exquisita* Shell of Show self-collected - Vicky Wall for *Decatopecten noduliferum* 

Karen VanderVen won the COA Award at the Philadelphia Shell Show, 9-10 October 2010. Karen's display was "Volutes of the Tropical Western Hemisphere." She had 8 cases displayed in over 22 feet with volutes from all areas of the tropical Western Hemisphere. Karen's display was well thought out and exhibited the many forms, colors, and sizes of this varied group of volutes. The Philadelphia Shell Show is a large well attended event with stiff competition in any category imaginable. This year there were over 350 feet of exhibit cases and an attendance well over 1,000. Judges were Dr. Ellen Strong and Dr. M.G. Harasewych, Shell Show Chairman was Paul Callomon, and Exhibits Chairman was J.B. Sessoms. Other winners at the show were:

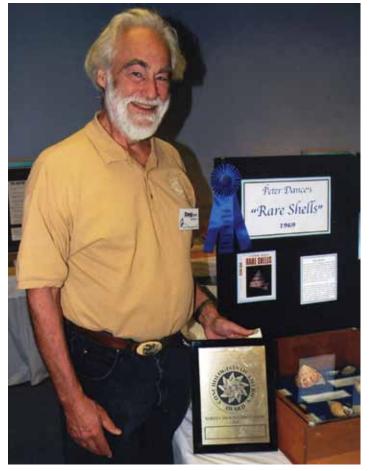
DuPont Trophy - John & Darlene Schrecke for "True Conchs of the World."

Masters Award - Gene Everson for "Seashells of the New Millennium, Self-collected."

Leonard Hill Award - Tom Grace for "Maurea of New Zealand." John Dyas Parker Award - Rich Kirk for "Mother of Pearl." Robert Fish Award - Michael Gage for "Shells of Hawaii."

Best Shell - Patricia Whitacre for Angaria sphaerula.

Best Shell, Self-collected - Gene Everson for Conus theodorus.



Doug Wolfe with his COA Award won for his display of Peter Dance's "Rare Shells." The caption for each shell included its present status and collecting history.



Karen VanderVen with her COA Award for "Volutes of the Tropical Western Hemisphere." Also shown, left to right: Ellen Strong, M.G. Harasewych, Paul Callomon, & J.B. Sessoms.



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# Mystery Bivalve in the Caribbean

by D. Y. Zhang

On 10 April of this year I was walking the shore of St. John's, Antigua, the largest and capital city of this marvelous Caribbean island. The tide was quite low and I took advantage of that fact to explore some infrequently exposed rocks and beds of seaweed. I came across an area that no one seemed to have walked on and found a large exposed bed of seagrass (*Halodule wrightii*) (Fig. 1). When I sifted through the seagrass to see if there were any hidden mollusks, I found thousands of small



Fig. 1 One of the untouched beds of seagrass (*Halodule wrightii*) exposed by the low tide.



Fig. 2 The seagrass from a closer perspective showing the bivalves exposed on top. Many more were hidden within the grass cluster.

Fig. 3 A close up view of the mystery bivalves, each measuring approximately 10mm+.

bivalves literally covering the individual blades of grass (Figs. 2 & 3). There were also dozens of small blue crabs amongst the grass, possibly feeding on the bivalves. I pulled apart three small bundles of seagrass to take back and study, hoping to be able to identify these small bivalves. These were small patches of grass (held comfortably in one hand) and yet I counted a total of 1,380 bivalves attached to the grass. The smallest shells were 4-6mm (about 6 individuals). There were about 200 shells that were over 6mm but less than 10mm, and the rest were 10-13.3mm.

I returned to the site one week later and almost all of the shells were gone. While some were certainly served up as prey to crabs or other mollusks, I believe the majority released their hold on the grass to let the tide and currents take them elsewhere. I base this upon an observation of the few remaining shells that, as I watched, released their hold on the grass and became free floating (Figs. 4, 5, & 6).

The shell are translucent green to pale greenish-brown and mottled with rayed zigzag stripes of dark green, greenish-brown, or brownish-purple. In some there was a wider band of color (green, brown, dark brown, or white) from the umbo to the posterior ventral margin. The interior of the valves is a pearly nacre. Figs. 7-8 show a typical shell, this one is 12.3mm in its longest dimension.

So what is this small mystery bivalve. My best guess is that this is a species of *Electroma*. This is a small genus in the family Pteriidae, the pearly oysters that include the genera: *Electroma*, *Pinctada* (pearl oysters), and *Pteria* (winged oysters). When I asked Harry Lee what he thought, he concurred with this initial identification. So why should we care about this find that may be interesting but seems rather mundane? Because, until now, they have not been found in Atlantic or Caribbean waters. This "infestation" is probably the product of a visiting ship dumping its ballast. As these things typically go, the newly introduced



organism fails to gain a viable foothold and is soon gone from its new potential home, but we all know that sometimes the introduction succeeds. Just ask Tampa, Florida, residents about the success of the green mussel (*Perna viridis* (Linnaeus, 1758)) or anyone interested or involved with waterways in most of the United States about the zebra mussel (*Dreissena polymorpha* (Pallas, 1771)). The introduction of an alien species can have disasterous effects. This is the first recorded introduction of this species and we shall see what the future holds. I did find a few broken shells, obviously predator mutilated, on the shore (Fig. 9).

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(Above & right) Figs. 4, 5, & 6 The bivalve pushes away from the seagrass and becomes free floating.

(Below) Figs. 7 (right valve) & 8 (left valve) Magnified view of the *Electroma* species.



(Below) Fig. 9 A broken shell (predation?) collected on the beach.



