

Vol. 41, No. 2 June 2013

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American CONCHOLOGIST



Quarterly Journal of the Conchologists of America, Inc.

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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AMERICAN CONCHOLOGIST, the official publication of the Conchologists of America, Inc., and issued as part of membership dues, is published quarterly in March, June, September, and December, printed by JOHNSON PRESS OF AMERICA, INC. (JPA), 800 N. Court St., P.O. Box 592, Pontiac, IL 61764. All correspondence should go to the Editor. ISSN 1072-2440.

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Front Cover: A pair of flamingo tongues (*Cyphoma gibbosum* (Linnaeus, 1758)) on a gorgonian in about five feet of water off Eleuthera Island in the Bahamas. This image will be featured in a presentation at the 2013 COA convention, "Shell Eleuthera with Jim Cordy." Photo and presentation by Ellen Bulger.

Back Cover: *Phalium granulatum* (Born, 1778), dredged by a scallop boat off Cape Canaveral, FL. and photographed in an aquarium. This common bland-colored shell takes on an aspect of grace and beauty when seen gliding over the substrate. Photo courtesy of Frank Frumar.

Editor's notes:

First a correction to a listing in last issue's "In Memoriam." I incorrectly listed Heather Johnson (now Pearson) instead of Paul Johnson. My fault as I misread an email. Heather is fine, but we will miss Paul.

The front cover for this issue is an *in situ* photograph of *Cyphoma gibbosum* by Ellen Bulger. In an email with the photo, Ellen stated: "No small trick, getting that shot with a D10 at a depth of about five feet and me wearing no lead. I was doing headstands and the gorgonian was swaying to and fro and I was swaying to and fro and the snails were in and out of the sun. It took, ah, um, let's say multiple tries." Thanks to Ellen, the final result is a great cover image. I also found (when discussing this image with a fellow COA member) that some of our members are unaware of how the flamingo tongue shell appears with an intact mantle. The cleaned shell sold to collectors is quite different from the strongly patterned living animal and shell. So below is an image of a 27mm flamingo tongue, cleaned and shiny, from Wikipedia, image by H. Zell.



This issue includes the results for three shell shows, Sanibel Island, Marco Island, and Antwerp. This is followed by the upcoming shell show schedule by Donald Dan. Then (and don't get confused) we have the announcement for the Philadelphia Shell Show in October and a bit on the Sarasota COA convention in July. Please don't confuse this upcoming event with something that has already taken place.

Also in this issue we have Don Cram discussing *Notocypraea* and Harry Lee talking about *Lanistes*. Both articles are a bit different from the usual fare and worth reading. We also have a couple of interesting COA grant recipient reports; interesting feedback that show our grant monies at work.

As always, thanks to our contributors and please keep those articles coming in.

Tom Eichhorst

Early taxonomic history of *Notocypraea* Schilder, 1927

Don Cram

When I first became interested in shell collecting and particularly *Notocypraea* in 1968, other than shell dealer lists, the main reference was Joyce Allan's 1956 *Cowries of World Seas*, where the taxonomy of *Notocypraea* was based solely on the papers and interpretations of Cotton and Iredale. Subsequent forays by Trenberth (1961) and Schilder (1962) further complicated an already confusing situation, where dealers and collectors named their shells based largely on opinion rather than on a sound taxonomic basis. By 1870 all of the five now generally accepted valid species of *Notocypraea* (*N. angustata*, *N. piperita*, *N. comptonii*, *N. pulicaria* and *N. declivis*) had been named. A sixth, *N. bicolor*, is now accepted as a variety or synonym of *N. piperita*. Apart from a few exceptions, taxonomic treatment is today relatively stable, but the history of the confusion that existed for over half a century makes an interesting story.

In 1961, Dr. F. A. Schilder, in *Archiv für Molluskenkunde*, published a controversial reclassification of the two well-known species, *Notocypraea piperita* (Gray, 1825) and *Notocypraea comptonii* (Gray, 1847). After examining shells in the collection of J. E. Gray in the British Museum, he discovered five specimens labeled in Gray's handwriting "*Cyp. piperita* Solander", that were not specifically different from the lectotype of *Cypraea comptonii* Gray, 1847. In his "Provisional Classification of the genus *Notocypraea*," *Veliger* (1964), the species *N. comptonii* (modern usage) became *N. piperita* and the species *N. piperita* (modern usage) became *N. bicolor* (Gaskoin, 1849), with *N. comptonii* becoming a synonym of *N. piperita*. This classification was listed as an alternative in Taylor and Walls *Cowries* (1975) and accepted in the second edition by Walls (1979), causing great confusion, as access to the original reasons for the change were not readily available.

After examining photos of these five specimens, taken for me by Dr Brian Smith in 1974, I agreed with both Schilder and Griffiths that they were specimens of *N. comptonii* (modern usage). In *Australian Shell News* (1975, 11: 2) I wrote an article giving reasons for retaining existing taxonomy on the presumption of a mixed label. In 1980 during a visit to the British Museum, I personally examined and photographed these specimens, then held in the type collection along with other *Notocypraea* types. Recent examination of photos and the accompanying label of these specimens, considered by Schilder to be types, has revealed some interesting findings, prompting a detailed examination of the circumstances surrounding the description of the above mentioned species and an understanding of the conchologists who described and illustrated them over 160

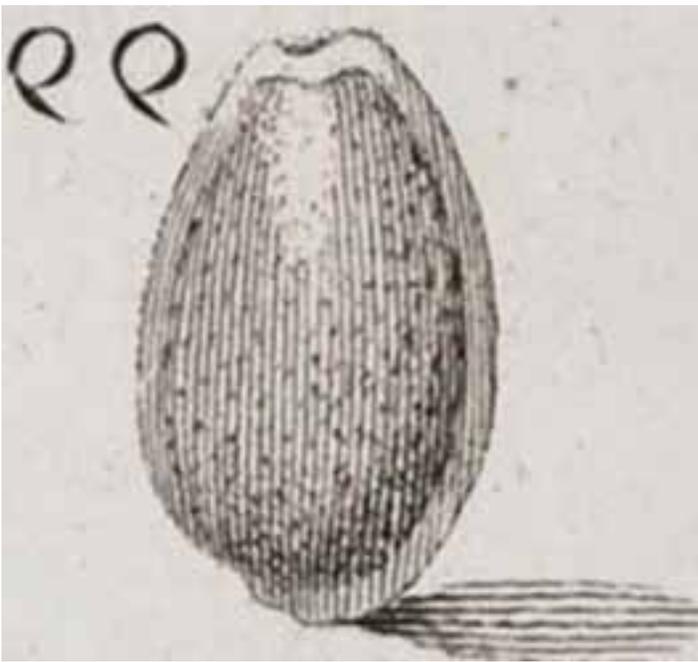
years ago.

In June 1832, Gray completed part 1 of the text (*Cypraeidae*) for what was proposed to be a joint publication with G.B. Sowerby Jr. (today most often listed as G.B. Sowerby II), titled *The Conchological Illustrations or Coloured Figures of all the recent shells by G. B. Sowerby Junr. with the corresponding text of a Descriptive Catalogue of Shells by John Edward Gray, Esq., F.R.S & c.*, to be published on the first of July 1832. In a letter to Gray dated 15 September 1832, Sowerby writes: "I am glad you have sent me some copies of your three half sheets (i.e. 24 pp) but I must see you again on the subject, for it is so incorrectly printed that I cannot resolve to publish it." The dispute between Sowerby and Gray is well documented in Richard Petit's excellent publications on the Sowerbys, Gray, Perry, and Reeve and I agree with him that it was Gray's insistence about the use of names created by George Perry (whom Sowerby despised) that was the primary reason for Gray's catalogue to be abandoned and not several typographical errors (which could have been easily corrected). Sowerby published only colored figures of cowries with minimal text.

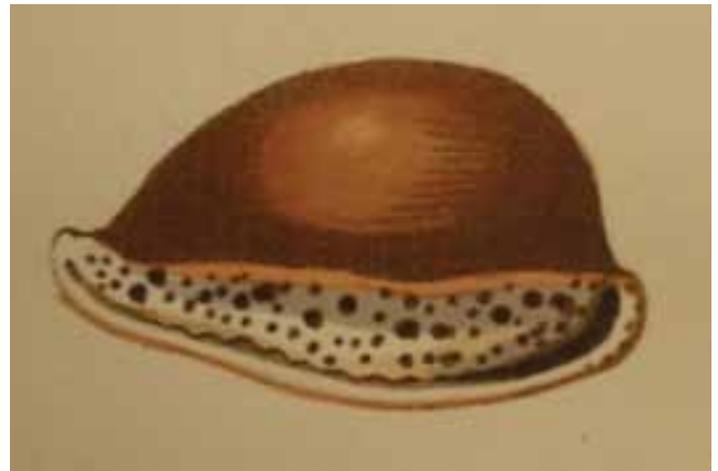
By courtesy of the Natural History Museum, London, I obtained a copy of the first part on cowries of Gray's never published *Descriptive Catalogue of Shells* dated June 1832, which contains the title page of the proposed joint publication and 22 pages of text. It revealed a fascinating insight into the Gray - Sowerby saga and reasons for the subsequent confusion created by Iredale, Cotton and Godfrey, Joyce Allan, Trenberth, and Schilder on the taxonomic placement of *Notocypraea piperita*, *N. comptonii* and *N. angustata*.

The *Catalogue* consists of species No's 1-176, and includes the author, a description, a locality where known and, in many cases, the cabinet from which the shell was described. If previously illustrated, the publication, as well as the plate and figure number are quoted. It is clear that Gray had seen the first 46 figures painted by Sowerby and published in 8 parts between 28 September 1832 and November 1832. The illustration numbers quoted in the *Catalogue* (e.g. Ills. f.24) match all those in the first eight parts of *Conchological Illustrations*. The species number that precedes the text is matched for *C. angustata* and *C. piperita*, but only on odd occasions for other cowries.

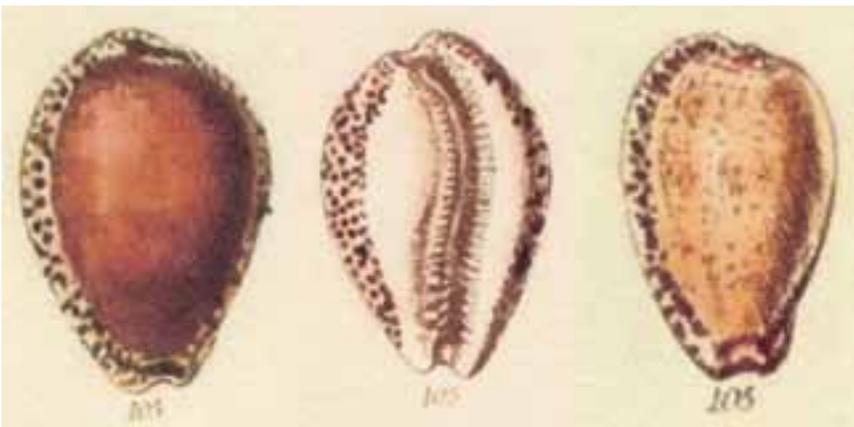
In 1825 Gray published a description of '*Cyp. piperita* - the peppered cowry,' but no figure was given and no type specimen designated. The description begins: "*Cypraea piperita*. 'Solander's Mss'. Humphrey, Mus. Nost. Icon. *Zool Journal*, t. 6. *Inhabits* New Holland. Mawe. Mus. Nost. Shell ovate, oblong, pale chestnut-brown, polished, with four narrow, sometimes slightly interrupted



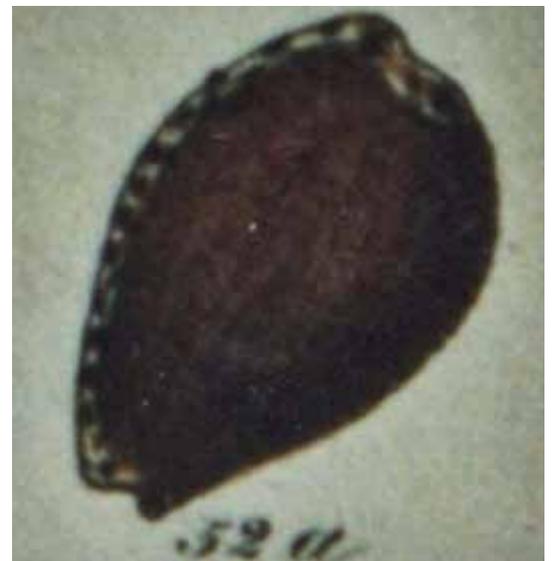
Notocypraea angustata (Gmelin, 1791) as depicted by Gaultieri (1742) in *Index Testarum Conchyliorum*, pl.13, fig. QQ.



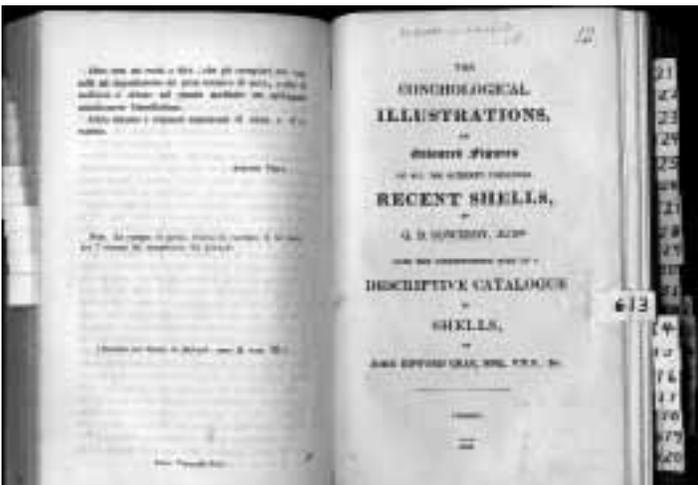
Cypraea maculata Perry, 1811, as depicted by Perry (1811) in *Conchology*, pl. 20, fig. 5.



Cypraea angustata as depicted by G.B. Sowerby II (Jr.) (1832-1841) in *Conchological Illustrations*, fig.105.



Cypraea angustata as depicted by Wood (1828) in *Index Testaceologicus, or A Catalogue of shells*. Second edition, p.83, pl. 17, fig. 52.



*100. *Peppered Cowry*.—*Cyp. Piperita*, Gray, Illus. f.24.—Shell brown, with narrow dark bands; base white; upper edge of outer margin brown dotted; front of columella flat. Varies, bands interrupted.—Cab. Gray. New Holland.

Above: Gray's redescription of *Cypraea piperita*, based upon specimens from his own cabinet that were not available to him in 1825 and mistakenly assumed to be the same species as he described in 1825. His description in the unpublished *Catalogue* more closely matches *N. comptonii*.

Left: Gray's never published *Descriptive Catalogue of Shells* dated June 1832. In it he redescribes *Cypraea piperita* Gray, 1825, "*100. Peppered Cowry.— Cyp. Piperita..."

bands, one of which is near the spire, and another in the front of the shell, and the other two about the middle of the back.” After much detail, the description concludes: “I have had it from several old collections under the above name, and have therefore adopted it out of courtesy and to prevent confusion. When worn, it is pale flesh-coloured, with the bands interrupted.” The shell was to be illustrated as “t.6,” but another shell was used in its place. The name *piperita* was adopted from Solander’s manuscripts.

In the never published *Descriptive Catalogue of Shells* dated June 1832, Gray re-described this species as “*100. *Peppered Cowry*.— *Cyp. Piperita*, Gray, Illus. f.24.— Shell brown, with narrow dark bands; base white; upper edge of outer margin brown dotted; front of columella flat. Varies, bands interrupted.— Cab. Gray. New Holland.” This was the text intended for Sowerby’s *Conchological Illustrations*. The five specimens from Gray’s collection are labeled *Cyp. piperita Sol, Coll. Gray no.100*.

The first illustration of *Cypraea piperita* listed as species 100, fig. 24 was published on 19 October 1832 in part 4 of *Conchological Illustrations*. Curiously the specimen illustrated matched neither Gray’s original description nor his subsequent description in the unpublished *Catalogue* (which was presumably of the specimens he had in his own collection), but was more like the yet to be described *Cypraea bicolor* with a ventral view resembling *C. pulicaria*. Gaskoin (1849) described and distinguished *C. bicolor* from *C. piperita* of Gray by having only three broad, irregularly interrupted bands, instead of four narrow interrupted bands indicated in Gray’s original description. It is clear that Gray would have seen all of Sowerby’s published illustrations up to figure 48, as all of these figure numbers (e.g. Ills. f.24) were listed in the *Catalogue*.

In his *Conchologia Iconica*, Reeve (1846) described and illustrated a specimen of *C. piperita* (misspelled *piperata*) as, “yellowish, back ornamented with four interrupted pale chestnut bands,” later noting, “The two central bands of this species are sometimes amalgamated into one of double width.”

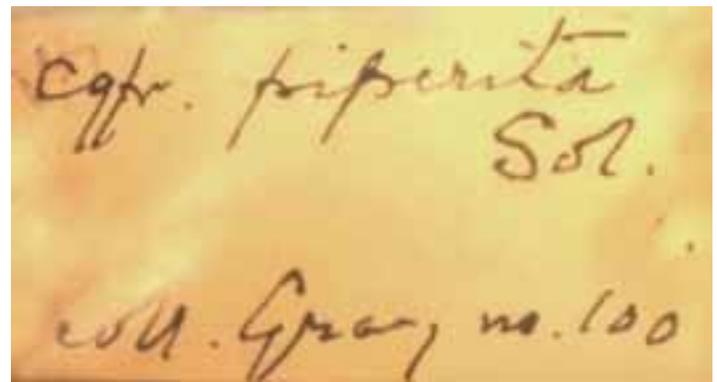
In 1847 Gray described and figured *C. comptonii* from Port Essington (a locality given to him incorrectly by either Jukes or Cumming). The description begins: “Shell ovate, grey brown (when young, paler zoned) with three darker bands.” After further details the description concludes: “Inhabits Port Essington. My cabinet. Mr. Gaskoin, who has described several new species of this genus since the publication of my Monograph, agrees with me in considering this species as distinct, and hitherto undescribed. The two specimens I have seen differ a little in the degrees of their ventricoseness.” Sowerby figured *C. piperita* (with *C. bicolor* as a variety) and *C. comptonii* in his *Thesaurus Conchyliorum* (1870).

Why then are the five specimens, labelled in Gray’s

handwriting as *Cyp piperita Sol. Coll. Gray no.100* (illustrated here for the first time) and considered by Schilder to be type specimens of *N. piperita*, actually specimens of *N. comptonii* (modern usage)? In Gray’s original description of *C. piperita*, he referred to specimens in the collections of Humphrey and Mawe. From his description of *C. piperita* in the *Catalogue*, it appears that Gray had obtained specimens for his own cabinet that were not available to him in 1825, and had mistakenly assumed they were the same species, as his description in the *Catalogue* more matches that of *N. comptonii*. The conchologists of the day would have had only beach worn specimens of uncertain origin. Beach worn specimens of *N. piperita* and *N. comptonii* are very difficult to differentiate, even today, as they are similar in size, shape, and tooth structure, and the identity can only be determined by the dorsal pattern, which can be faded or indistinct. It is then obvious that it was not known there were two species until more specimens of better quality came to light when *C. comptonii* was described by Gray in 1847. This also explains the first illustration of *C. piperita* (which Gray would have seen) by Sowerby in 1832. Amidst all the confusion at the time, the original descriptions of *C. piperita* and *C. comptonii* match the species as we know them today and the five specimens in question are merely a case of mistaken identity by the author.

The lectotype of *Cypraea comptonii* Gray, 1847 is here illustrated for the first time. The erroneous locality of Port Essington (probably given to Gray by either Jukes or Cumming), prompted Allan (1956) to follow Iredale (1935) and Steadman and Cotton (1946) to list *C. comptonii* as a form of *C. walkeri*, and was the sole reason for the species to be unnecessarily renamed *Notocypraea trenberthae* Trenberth, 1961. The true type locality is more likely to be Western Port Bay, Victoria (Cram, 2006).

Notocypraea angustata (as *Cypraea angustata*) was described by Gmelin in 1791 in *Systema Naturae* ed. 13, n. 107, p. 3421. The description is brief, one line of Latin and no type locality was given. Gmelin referred to figure t.13. f. QQ. by Niccoló Gaultieri in his *Index Testarum Conchyliorum* (1742). In 1811 George Perry, in his *Conchology*, illustrated and briefly described *Cypraea maculata* as “Shell of dark brown, sides and ends white, and thickly spotted with dark spots. A native of Eastern Seas...” - illustrated as t.20 f.5. Later writers, including Gray and more recently Schilder, interpreted this illustration as a specimen of *C. angustata*. In 1825, J. E. Gray re-described the species in detail in both English and Latin in his 1925 *Monograph on the Cypraeidae*. He did not illustrate the species, but referred to specimens in the British Museum and in the collection of British collector and conchologist John George Children: “inhabits New Holland. Mus. Brit. Dom. Children. Nost,” also citing Gaultieri, Gmelin, Schreibers, and Schroeter. Gray’s description reads “*Cypraea angustata* — The Narrow Cowry. Shell ovate, reddish brown, or rarely



The label for the five specimens thought to be *C. piperita* but are specimens of *N. comptonii*. Photo by author.

The five specimens from the J.E. Gray collection in the Natural History Museum, London, were considered by Schilder to be the type specimens of *Cypraea piperita*. They were photographed by Dr Brian Smith in 1974, and I photographed them again in 1980. My photograph is poor and not included, but the label for these specimens is shown above right. These five shells are specimens of *N. comptonii* (modern usage).



Cypraea comptonii Gray, 1847, NHMUK Reg. No. 1951.3.29.1, lectotype. Photo courtesy of Phil Hurst, NHMUK Photographic Unit.



First published image of *Cypraea piperita* by G.B. Sowerby II in *Conchological Illustrations* (1832), fig.24.



Left: *Cypraea piperita* as depicted by Reeve (1846) in *Conchologica Iconica*, pl. 17, fig. 87.



Cypraea bicolor Gaskoin, 1849 (lectotype), locality Adelaide, from the J.S. Gaskoin collection. Photo by author.

pale brown; the spire prominent, covered; the base convex, white; the margins slightly thickened, with small, round, black spots; that of the inner lip rounded, only slightly extended; and that of the outer rather sharply edged, with the extremities generally dark; the aperture rather large; teeth equal, small, close; columella rather concave, and rather deep, plaited nearly the whole length; in-side pale brown. Axis 10/10, diameter 7/10 of an inch. This shell has not been taken notice of by any of the French writers, although it is not uncommon in old collections. It varies sometimes, in being of a very pale yellowish brown." W. Wood (1828) in his *Index Testaceologicus, or A Catalogue of Shells*, clearly illustrates this species with Pl. 17 fig. 52, which matches Gray's interpretation of Gmelin's original description.

In his unpublished *Descriptive Catalogue of Shells*, which was to be the text for *Conchological Illustrations*, Gray's description reads "*99. Quaker cowry,— *Cyp. Angustata*, Gray (Gmel in pencil above) W.C. t.17, f.32 [sic - f.52]; Perry, t.20, f.8. [sic - f.5] — Shell whitish brown, minutely brown dotted; base white; margin closely black dotted; ends blackish. Worn plain brown varying in darkness.— New Holland." In his *Conchological Illustrations* (1832) G. B. Sowerby II did not initially illustrate the species but referred to Wood's figure and Gmelin's description, ignored reference to Perry, quoted Gray's *Catalogue* species number 99, but for some unknown reason ignored Gray's locality of New Holland and added the locality "South Africa." After the first eight parts issued in 1832 (illustrating all cowries that had not been previously figured), *Conchological Illustrations* concentrated on other families and resumed illustrating all other known species of cowries in parts 101-131 (published between 30 July 1836 and 15 Nov 1837). In December 1836, two specimens of *Cypraea angustata* were illustrated as fig. 105, one being a dorsal view, similar to the original illustration of *C. declivis* Sowerby, 1870, fig. 287, and the other a clearly identifiable dorsal and ventral view of a typical *C. angustata* (all illustrated). There is no doubt that confusion also existed between worn specimens of *C. declivis* and *C. angustata*, as they are of similar form and Gray appeared to relate to both in his description in the *Catalogue*.

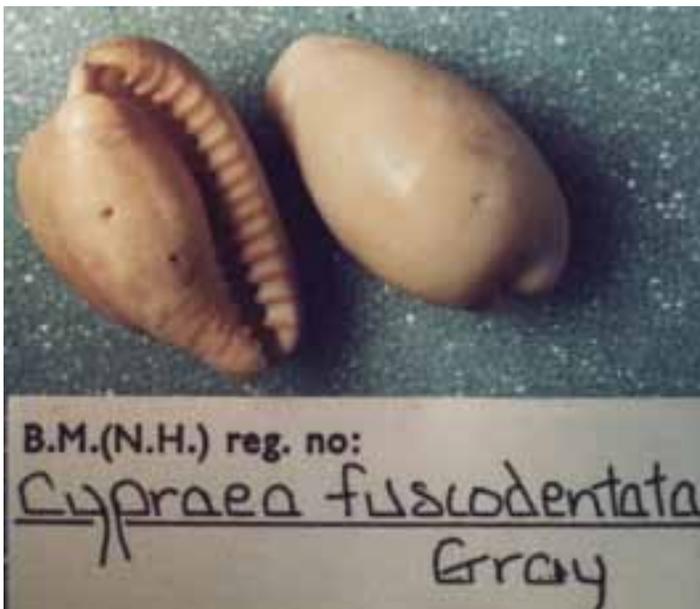
Reeve (1846) in his "Monograph of the Genus *Cypraea*" described and figured a clearly recognizable painting by G. B. Sowerby II of a specimen from the collection of J. S. Gaskoin. In his concluding remarks Reeve stated that: "Although a species comparatively not uncommon, the specimen here figured from the collection of Mr. Gaskoin is the only one I know that is not more or less worn, or uncoated. It has a bright enameled porcelaneous surface consisting of a layer of dark brown colouring matter, overlaid with a thin filmy coating of semi-opaque cream colour. *Hab* New Holland." From that point it appears that most authors agreed on *C. angustata* in the form we know

today, although S. R. Roberts (1885), probably noting Gray's descriptions, suggested *C. angustata* and *C. declivis* may be identical species. There was no further dispute regarding *C. angustata* until 1924, when Iredale rejected the name on the grounds that he believed that no South Australian shell could have reached Europe by 1742, the date of the publication of the description and figure by Gaultieri. Iredale also referred to Sowerby's doubtful locality of South Africa. Cotton & Godfrey in *South Australian Naturalist* (1932) accepted this argument and renamed the species *Notocypraea verconis*. The holotype Reg. No. D.10173, a worn and damaged adult specimen dead collected from St Vincent Gulf, South Australia, is in the South Australian Museum. Joyce Allen in her 1956 *Cowry Shells of World Seas* used the name *C. verconis* and, following Steadman and Cotton (1946), gave the name *C. angustata* to the South African species generally known as *Cypraea fuscudentata* Gray, 1825. In his 1962 *Sea Shells of the World*, R. Tucker Abbott also applied *C. angustata* to his illustration of the South African *C. fuscudentata*.

R. J. Griffiths, in a submission to the International Commission of Zoological Nomenclature in 1962 pleading the retention of the name *C. angustata* for the Southern Australian species, suggested that shells could have found their way to Europe via Dutch ships that visited the area inhabited by *C. angustata* a number of times during the seventeenth and eighteenth centuries. He also pointed out that Gmelin in his brief description used the words "maculis ad latus rufescentibus," indicating that the sides of the shell are spotted as they are in *C. angustata*. In the species *C. fuscudentata*, the sides are not spotted, therefore the assumption that this species is the basis for the name *C. angustata* cannot be correct. He then suggested that the holotype of *C. verconis* be designated as the neotype for *C. angustata*. The first illustration of *C. fuscudentata* in *Conchological Illustrations* Sp. 104, Fig. 28 is an indisputable ventral view of the species. Two specimens from the Cape of Good Hope in the type collection in the British Museum (from Gray's collection) are here illustrated.

Although I find it difficult to match the figure by Gaultieri to Gmelin or to the detailed description of *C. angustata* by Gray in 1825, it is clear from subsequent illustrations that conchologists at the time were in agreement as to the status of this species, once sufficient specimens were available for verification. In the same submission Griffiths requested the commission to use its plenary powers to suppress the specific name *C. piperita* to avoid a confusing transfer of this name to another species. A shell from Adelaide presented to the British Museum by J. S. Gaskoin was selected as lectotype of *C. bicolor* Gaskoin, 1849 (B.M.N.H. 54.1.28.11) and a shell from the J. E. Gray collection (BMNH 1951.3.29.1), labeled Port Essington, was selected as a lectotype of *C. comptonii* Gray, 1847.

In November 1981, Vol. 38, pt. 4, Opinion 1197, the commission rejected the argument for suppressing the



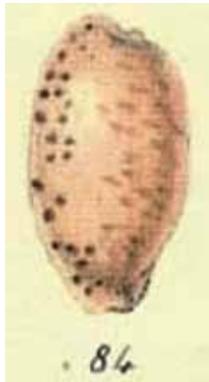
Type specimens of *Cypraea fuscudentata* Gray, 1825, from Gray's cabinet. Photo by author.



Cypraea pulicaria Reeve, 1846, (type) in NHMUK. Photo taken Oct. 1980 by author. Atypical specimen lacking bands. Label reads, "Collection of Mrs. L. Taylor (x Gaskoin)." Description corrected by Gaskoin in 1849. See Cram (2003).



Above left: Additional illustration of *Cypraea piperita* var *bicolor* from the collection of Hugh Owen, pl. 37, *Thesaurus Conchyliorum*.



Above right: Original illustration of *Cypraea pulicaria*, Reeve, 1846 in *Conchological Iconica*, pl.17, fig. 84.



The original illustrations of *Cypraea declivis* by G.B. Sowerby II in *Thesaurus Conchyliorum* (1870), pl. 28, fig. 287 & pl. 30, fig. 328. Note the similarity of fig. 287 to the dorsal view, fig. 105, of *Cypraea angustata* in Sowerby's 1832 *Conchological Illustrations* (page 5).

name *C. piperita* and placed *C. piperita* Gray, 1825, *C. comptonii* Gray, 1847, *C. bicolor* Gaskoin, 1849, and *C. angustata* Gmelin, 1791, on the official list. The specific name *verconis* Cotton & Godfrey was placed on the Official Index of Rejected and Invalid Specific Names in Zoology with the name number 1093, but they listed Cotton & Godfrey's holotype of *C. verconis*, selected by Griffiths, to be interpreted as the neotype for *C. angustata*.

The type specimen of *C. pulicaria* Reeve, 1846, originating from the collection of J. S. Gaskoin, is illustrated here showing atypical spotting and lack of transverse bands. The original description by Reeve was corrected by Gaskoin in 1849 (Cram, 2003).

Acknowledgements

My thanks to Kathy Way and Andreia Salvador of the Natural History Museum, UK, for providing copies of rare text and also images by Gray and Gualtieri used in this article. Thanks also to Phil Hurst of the NHMUK photographic unit for reproducing stored images of the lectotype of *C. comptonii*, Chris Rowley of the Marine Invertebrates Department of Museum Victoria for access to images from the rare book library, Robert Burn Honorary Associate, Museum Victoria, who has been most helpful with his knowledge of taxonomy and his extensive library, and Platon Vafiadis for reading the manuscript and making many useful suggestions.



Thesaurus Conchyliorum Sowerby 1870, part of plate 28 showing all known *Notocypraea* species: fig. 285 & 286 - *N. piperita*, fig. 287 - *N. declivis*, fig. 288 & 289 - *N. piperita* var *bicolor*, fig. 290 & 291 - *N. pulicaria*, fig. 292, 293, 294, & 295 - *N. comptonii*, fig. 296 & 297 - *N. angustata*.

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RTA, riding to the rescue, rights a wrong; Röding redivivus

Harry G. Lee

The aquatic prosobranch snail genus *Lanistes*, with about 20 species living in Africa and Madagascar, is grouped with the applesnails in the family Ampullariidae. It differs from the other ampullariid genera in appearing to have a sinistral shell. With its apex toward the observer, expansion of the coil proceeds counterclockwise, the same geometry as that of the shell of a sinistral snail (Robertson, 2003); however, the animal of snails of this genus has the same dextral asymmetry as its confamilial relatives. It is not a mirror image thereof as one might expect! *Lanistes* has a peculiar type of spiral growth (chirality) termed ultradextral, or hyperstrophic pseudosinistral often depicted as shown in **fig. 1**; aperture rightward (following the convention used by Robertson (2003:6)). The conchologist is compelled to view the axis of growth as diametrically opposite that of the applesnails, and for that matter essentially all other dextral snails. Although there is no absolute “up” or “down” in shell growth, specialists have found the concept “upside-down” convenient for the understanding of this pattern of shell growth (**fig. 1**). More precise is the term “hyperstrophy,” vs. “orthostrophy,” the latter being applied to the prevailing right-side-up topology seen in all applesnail, volute, cone, and cowrie species as well as all members of the predominantly sinistral family Triphoridae. There are a few other examples of hyperstrophy, including two large groups of Paleozoic marine snails, certain sea butterflies, and as a transitory condition of the larvae of many marine gastropod taxa.

Recently Allen Aigen, a Staten Island shell-collector, paleontologist, and frequent contributor to the University of Georgia-hosted Conchologists of America list-serve known as Conch-L, let me know he had collected some living left-handed snails in the Nile River during a visit to Cairo in December, 1989. I had been to that ancient city seventeen summers earlier and, despite gathering plenty of gastropods in my parasitological studies, hadn't come across anything quite like the described shells. So I took Allen on his offer to send me a couple,



Fig. 1 (above) - *Lanistes boltenianus* (Röding, 1798) appears to be a sinistral or left-handed shell with the spire pointed downward. In fact, it has dextral or right-handed coiling, but the coils are “upside down.” It is as if a dextral shell with the spire pointed upwards had the spire pulled down through the spiral plane of the shell.

Fig. 2 (below) - One of the specimens from Allen Aigen showing the keels and the false appearance of sinistrality.



which had somehow acquired the identification “*Lanistes bolteniana* (Chemnitz)” and exhibited two distinctive spiral keels, one bordering the funnel-shaped umbilicus and the other on the periphery save the latter majority of the adult body whorl. The larger of Allen’s two specimens is depicted to the right (**fig. 2**).

The name Johann Hieronymus Chemnitz (1730-1800) applied, “Die Boltenische Linksgewundene Landschnecken [the Boltenian Left-coiled Landsnail], *Helix terrestris bolteniana contraria* ...” Chemnitz, 1786: 111) is unavailable for the purposes of formal taxonomic nomenclature as all but one of the author’s works^a were inconsistent in their use of the binominal system (ICZN, 1944; 1954; 1987: 319), this name being a classic exemplar. Not long after, countryman Peter Friedrich Röding (1767-1847), while anonymously penning the catalogue of the shell collection belonging to Dr. Joachim Friedrich Bolten (1718-1796), provided it with an available name, *Planorbis*^b *boltenianus* (Röding, 1798: 73; sp. no. 933, see <http://www.biodiversitylibrary.org/item/41571#page/93/mode/1up>).^b The sole indication, “Martini” [error for Chemnitz], 1786: pl. 109, figs. 921, 922 (**fig. 3**). This is also the type figure of *Helix terrestris bolteniana contraria*... as cited above. It appears to have a keel at the periphery and around the umbilicus just like Allen’s shells. Chemnitz also cited a very similar illustration (Martini, 1776: pl. 2, fig. 24, who mentioned that his specimen also came from Dr. Bolten’s collection) and two other indications (d’Argenville, 1780: pl. 63, fig I.3; (**fig. 4**)), which has a nearly concealed umbilicus, and Favart d’Herbigny (1775, vol. 3: 466-467), who vaguely described a “unique” shell consistent with the Martini specimen. According to Martini (1776: 424), Spengler, on Chemnitz’s authority, reported it originated in the marine waters of Guinea (west Africa), so it appears the latter conchologist changed his mind over the ensuing decade, after which he indicated a land snail of unknown geographic provenance. In Martini’s footnotes reference was also made to a figure in Gualtieri (1742: Tab. 2, lit. T, (**fig. 5**)) also cited by Davila [1767: 438-439]), which appears to be a good likeness of figs. 921, 922. Both the earlier authors treated it as a land snail. Although none of these citations has any direct bearing on the Röding taxon, they provide a glimpse at the uneven scientific rigor with



Fig. 3 The Chemnitz illustration quoted by Röding in *Museum Boltenianum* (1798).

Fig. 4 The image from d’Argenville (1780) with a nearly concealed umbilicus.

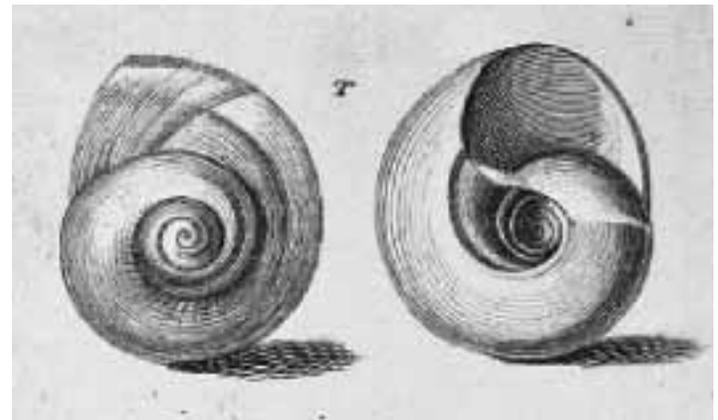
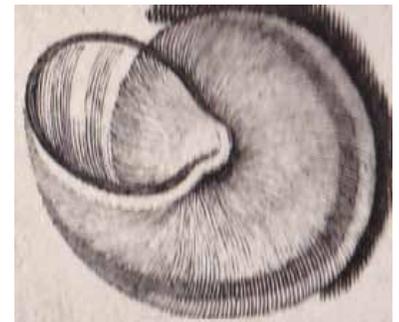


Fig. 5 The figure by Gualtieri in his *Index testarum conchyliorum...* (1742).

^a The unique exception relating to Chemnitz’s species-level taxa is a 1777 paper describing *Conus gloriamaris*; see <http://www.listserv.uga.edu/cgi-bin/wa?A2=ind0812E&L=conch-l&P=R2320> and bibliography. Certain genus-level taxa may be protected from the ICZN actions cited above (Polaszak, 2004).

^b Two interesting points here: (1) As can be seen from the URL provided, there is no entry in the catalogue for the number of specimens of *Planorbis boltenianus*! Apparently Dr. Bolten divested himself of the specimen(s) before the catalogue was published. Perhaps the Chemnitz shell was the same as that of Martini, and, as d’Herbigny wrote, “unique” in a sense. (2) *Planorbis* Röding, besides being a heterogeneous (more aptly, polyphyletic) assortment of aquatic prosobranchs and pulmonates, both terrestrial and aquatic, is unavailable due to junior synonymy with *Planorbis* Müller, 1774.

which contemporary workers were obliged to deal.

Forty years later, and apparently unaware of Röding's action, Deshayes and Milne Edwards (1838: 536, 537; sp. 8) treated *Ampullaria carinata* "Lamarck"^c [referring to Lamarck (1819: 176) but actually dating from *Cyclostoma carinatum* Olivier (1804: 39, pl. 31, figs. 2A, 2B)]. In a long footnote and in the chresonymy, the Lamarck taxon was deemed synonymous with the Chemnitz appellation, and the authors coined "*Ampullaria bolteniana*"^c for the species. Lamarck had placed his species "en Egypte dans l'eaux du Nil," the type locality actually being a canal in Alexandria (Olivier, 1804). A number of ampulariids in the Lamarck collection ("Mon cabinet;" *Idem*: 537) have survived to at least the mid-Twentieth Century in the Geneva Museum, but this shell(s) was apparently not one of them (Mermod, 1952). This Chemnitz/Olivier/Lamarck/Deshayes (and Milne Edwards) synonymy was supported by Roth (1839: 26), and Jay (1852: 281) as well as Anton (1839: 50) and Pfeiffer (1840: 82), both of the latter treating "*Ampullaria bolteniana* Deshayes"^c as valid. These four workers were but the earliest of many who likewise acknowledged the identity of the two taxa while overlooking Röding and the "Museum Boltenianum."

Fortunately the identity of *Cyclostoma carinatum* Olivier, in contrast to the Chemnitz figure and Lamarck specimen(s), has been clarified by exposition of the type material. Tillier and Mordan (1983: 157; pl. 5, (fig. 6)) reported on five syntypes (the figured one was not designated as the lectotype in anticipation of a more extensive revision) with a label probably written by Olivier making reference to the original figure. "Four probable syntypes relabeled '*Ampullaria bolteniana* Fér.'"^d completed the suite of nine [? five] specimens at le Muséum National d'Histoire Naturelle, Paris.

Röding and his *Museum Boltenianum* might still be languishing in anonymity/obscurity if the American Association for the Advancement of Science had not enabled Sherborn and Sykes (1906) to reproduce the opus. In providing the first index for the work, Dall (1915) made

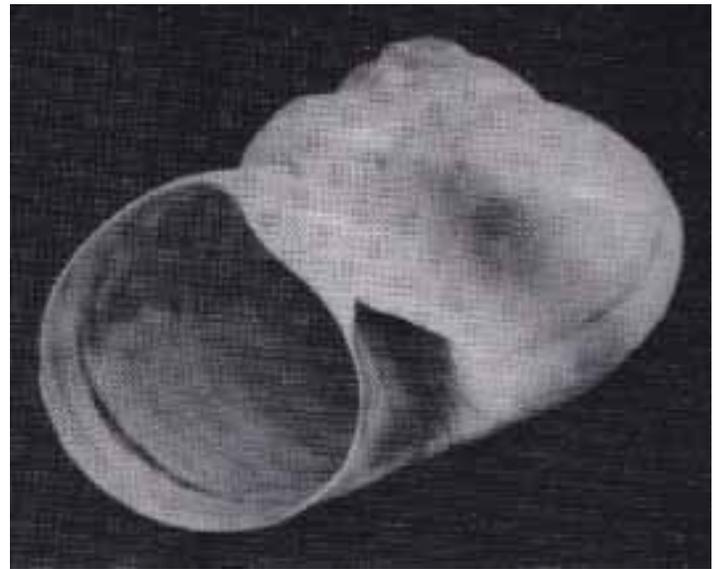


Fig. 6 One of five syntypes in le Muséum National d'Histoire Naturelle, Paris, reported by Tillier and Mordan (1983).

it clear that therein was a treasure trove of available names, many of which were poised to be employed as senior synonyms. The malacological community treated Dall's admonition as a bitter pill, and, even with the later formal attribution of authorship and declaration of availability of its nomina (ICZN, 1956, 1958), was slow to incorporate Röding's destabilizing "innovations." As best as I can determine, the indication of the priority of *Planorbis boltenianus* Röding over *Cyclostoma carinatum* Olivier had to wait nearly two centuries to receive notice (Abbott, 1989: 194; (fig. 7, with caption)). Perhaps RTA's collaboration in the Richardson *et al.* (1979) investigation, which work tied the actual Chemnitz figure to the Röding name, was instrumental in Tucker making this long overdue and fitting connection (mistaken familial assignment notwithstanding).

One particular reason the synonymy of the species discussed above is important is that it relates to the very foundation of their genus. Monfort (1810, vol. 2: 122-124)

^cAnother pair of points: (1) The co-opting of authorship of a species-level taxon by a reviser incidental to his assigning it to another genus, with or without the replacement of the species epithet, was customary, especially in the French School, at the time. Also at that time the *Conchylien-Cabinet* was considered an available work. Today such nomina, if available, are simply regarded as junior objective synonyms, as in the final paragraph of this essay. (2) Eponymous species epithets were often capitalized in those days; today lower case is mandated (ICZN, 1999: Article 5.1)

^dI could find no evidence that this binomen is an available Férussac name, but it is likely le Baron was referring to the same Chemnitz figures as Herr Röding, albeit several years later, as he wrote this label(s).

^eIn a twist vaguely reiterative of the central theme of this essay, *Cyclostoma* Lamarck (1799: 74), type species: *Turbo scalaris* Linnaeus, 1758 by original monotypy, is an objective junior synonym of *Epitonium* Röding, 1798 based on the same type species, subsequently designated by Suter (1913: 319), an action surely facilitated by Sherborn and Sykes' (1906) *Museum Boltenianum* reproduction. Various authorities applied *Cyclostoma* of Lamarck, 1799, or other authors' homonyms thereof, to an assortment of terrestrial prosobranchs over the years.



Carinate Lanistes (2") 5 cm
Lanistes boltenianus (Röding, 1798). Nile River, Egypt. Several operculate, left-handed species in African rivers. Viviparidae.

Fig. 7 The image from Abbott's *Compendium of Landsnails* (1989), "reviving" the Röding name and settling a couple centuries of confusion.

named *Lanistes* and treated *Laniste* (his French translation thereof) as masculine. Since he didn't indicate any inconsistency in gender, the taxon remains masculine under the provision of Article 30.1.4.4 of the *Code* (ICZN, 1999). The monotype is, natch, *Cyclostoma carinatum* Olivier, 1804, which Montfort unnecessarily renamed *Lanistes Olivieri*^c [sic; sic]. The figure Montfort provided is either quite poorly drawn or does not depict the Olivier species, but that's another matter and irrelevant to the typology of his new genus, *Lanistes* (ICZN, 1999: Article 67.2).

Failing memory and all, when it strikes my fancy, I create an extra data slip to serve as a terse commemorative of the assorted quirks involved in the identity of the corresponding lot. Consequently I have now penned a second label for Allen's two shells: "*Lanistes boltenianus* (Röding, 1798) [as *Planorbis*; after Gualtieri, 1742, Davila, 1767, Martini, 1776, Chemnitz, 1786, etc.] + *Cyclostoma carinatum* Olivier, 1804 (type species *Lanistes Montfort*, 1810 by original monotypy) + *Lanistes olivieri* [sic] Montfort, 1810 + *L. olivieri* auctores [unjustified emendation] + *Ampullaria carinata* Lamarck, 1819 + *Ampullaria bolteniana* Deshayes and Milne Edwards, 1838, etc. Ecology: marine → terrestrial → aquatic; taxonomy: *Helix* → *Wentletrap* → *Applesnail* kin." This little note-to-self vindicates the author who gave these shells nomenclatorial legitimacy and tracks the refinement of their position in the natural order of things from pre- (and otherwise non-) Linnaean opera to present while commemorating the dilatory upheaval of two centuries of unjust nomenclatorial hegemony.

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ACKNOWLEDGMENTS: I am grateful to Allen Aigen for the provision of the two specimens that generated this report, Bill Frank for photography and image-editing, Fabio Moretzsohn for sending me the Abbott excerpt in electronic format, and John Wolff for providing translations of critical passages in the German language.

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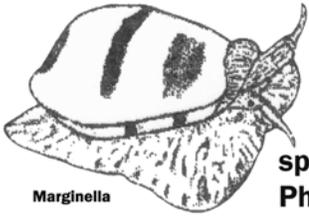
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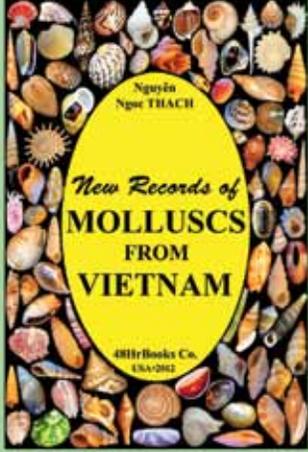
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COA Grant Summary (2012 award) for: Discovering visual capabilities of the unique eye in the scallop, *Argopecten irradians*

Anita
Krause

Scallops are marine bivalves that contain multiple, mirror-type eyes. Scallops are unlike many other animals because each eye contains two different retinas, the distal and the proximal retina. The visual pigments, or opsins, are a group of light sensitive G-protein coupled receptors and are required for vision in all animals. Thus far, only one opsin has been identified in either scallop retina (Gq-opsin and Go-opsin are located in the proximal or distal retina, respectively), suggesting the images formed by the scallop eye are monochromatic. While isolating the Gq-opsin gene from the eye, I discovered a second Gq-opsin copy, which is present in multiple scallop species. *If* the two opsins are housed in the same retina *and* they differ in wavelength absorbance (function), then this study will provide preliminary evidence for dichromatic (color) vision in scallops.

In my PhD dissertation, I will determine if scallops have dichromatic vision by completing two aims. **Aim 1. Confirm both Gq-opsin copies are used for light absorption (functional proteins) in the same retina of *Argopecten irradians*** by demarcating the spatial expression patterns of Gq-opsins. To do this, I will perform *in situ* hybridization to identify the location of expression for both Gq-opsin genes. **Aim 2. Determine if the function differs between the two opsin copies in *A. irradians*** by either a direct test of function using assays that quantify maximum wavelength absorption or indirectly by taking a bioinformatics approach to model and compare protein structures of the two Gq-opsin copies. This latter approach, and a portion of the spatial expression study, were completed within the year and is what I report here.

The Conchologists of America Award was applied to the direct purchase of *in situ* hybridization reagents and kits to address Aim 1. To identify where each Gq-opsin was expressed, I performed *in situ* hybridization on the eye and surrounding ocular tissue using gene-specific probes. Positive expression was observed in the eye for both Gq-opsin genes, while expression of Gq-opsin1B was only in the nerves of the mantle tissue.

This first round of *in situ* hybridization confirmed differential expression across tissue types. When multiple *in situ* runs are completed, this project will help me identify and compare spatial expression of ocular and extra-ocular tissues.



Argopecten irradians (Atlantic bay scallop) showing its numerous blue eyes. Photo by Rachael Norris and Marina Fruedzon at the Marine Biological Laboratory, Woods Hole, Massachusetts (Wikipedia Commons).

I completed Aim 2 using protein folding and threading to qualitatively estimate if there were differences in Gq-opsin gene wavelength absorption in *A. irradians*. **The preliminary evidence provided by tertiary structure modeling suggests both Gq-opsin1A and Gq-opsin1B are able to absorb and respond to wavelengths of light and are different in what wavelengths of light they are responsive to.** Because of changes in amino acids at key positions in the protein, this suggests the two genes are functionally different. For the next step, I will confirm functional differences by quantifying the wavelength absorption.

Most animals employ unique opsin types for each function, one type for ocular photosensitivity, and another type for extra-ocular perception. This will be one of the first studies to identify an opsin type that has been co-opted for two different photosensitive functions, used in both ocular and extra-ocular tissues. Functional data will complement the spatial expression patterns and molecular data to provide evidence for photosensitive tissues and the wavelengths of light absorbed by specific retinas, in turn providing evidence to address my ultimate objective of distinguishing whether the scallop is able to visually detect contrast (dichromatic vision).

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Siphonaria limpets from southern South America

Marina Güller

The false limpets of the genus *Siphonaria* comprise a group of pulmonate, algae grazing gastropods, which typically live on rocky intertidal substrates (Fig. 1). A literature search turns up a great diversity of the group in the southern tip of South America, from where a total of 13 nominal species were listed. Out of these, eight nominal species were originally described from this area: *Siphonaria lessonii* Blainville, 1827, from Malvinas (Falkland) Islands; *S. lateralis* Gould, 1848, from Cape Horn; *S. laeviuscula* Sowerby, 1835, and *S. anornata* Paetel, 1889, from Valparaíso; *S. lineolata* Sowerby, 1835, from Chiloé Island; *S. magellanica* Philippi, 1856, from the Magellan Strait; *S. laevis* Philippi, 1846; and *S. tenuis* Philippi, 1860, from the Chilean coast. *Siphonaria tristensis* Sowerby I, 1823; *S. antarctica* Gould, 1852; and *S. redimiculum* Reeve, 1856, with unknown type localities, were regarded as proper to the southern tip of South America. Two additional species: *Siphonaria concinna* Sowerby I, 1823, and *S. macgillivrayi* Reeve, 1856, from Africa and the Indian Ocean respectively, were also reported from this area.

Hubendick (1945), on the basis of the anatomy of the genital system, provided evidence on the existence of at least three *Siphonaria* species in the area: *Siphonaria lessonii*, *S. lateralis* and *S. macgillivrayi*. *Siphonaria lessonii* is the most studied South American species. Previous studies pointed out the great morphological variability and wide distribution of this species (Olivier and Penchaszadeh, 1968; Tablado *et al.*, 1994; Tablado and López Gappa, 2001). To date, however, it has not been investigated whether all these morphological variants, from such a wide range of distribution, actually correspond to a single species or a species complex. In addition, the relationships of *Siphonaria lessonii* with the other nominal species described or reported for the area have never been studied in detail.

The present scenario suggests that either: 1) there is actually a high number of siphonariid species in the area, but the lack of details in original descriptions does not allow them to be distinguished; or 2) the high species diversity reported for the area is associated with the existence of some rare or locally distributed species; or alternatively, 3) the high number of species is just an artifact, originating from the fact that some species were described more than once under different names.

This taxonomic puzzle was addressed as part of a research project partially funded by a COA grant. The particular objectives of this study were:

1) To re-evaluate the diversity of siphonariids occurring in southern South America from Brazil to Tierra del Fuego in



Fig. 1 *Siphonaria lateralis* living on intertidal rocky substrate.



Fig 2 Sampling sites.

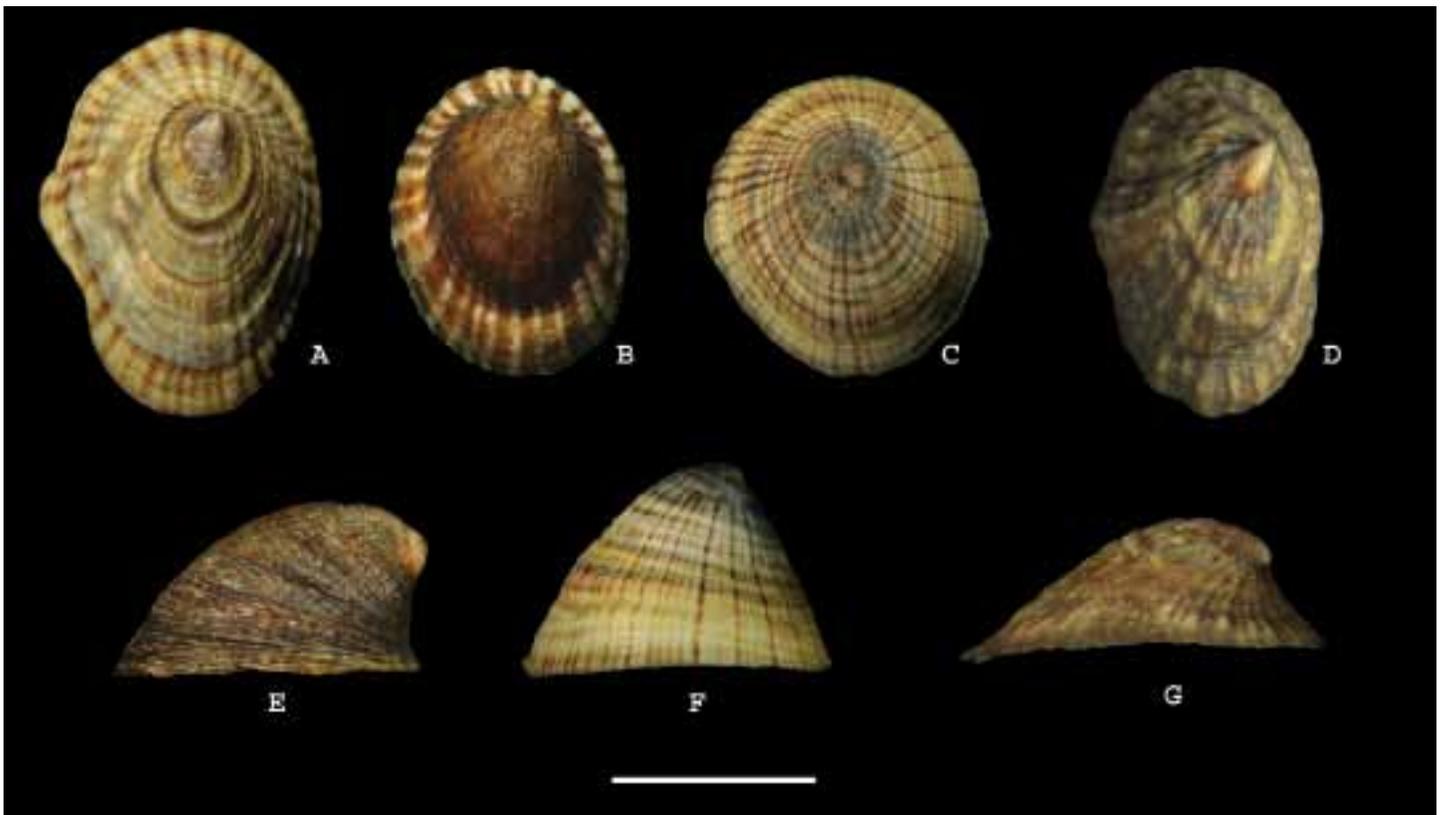


Fig. 3 Shell morphology. A-C, E, F: *Siphonaria lessonii*; D, G: *Siphonaria lateralis*. A-D: dorsal view; E-G: lateral view. Scale bar = 1 cm.

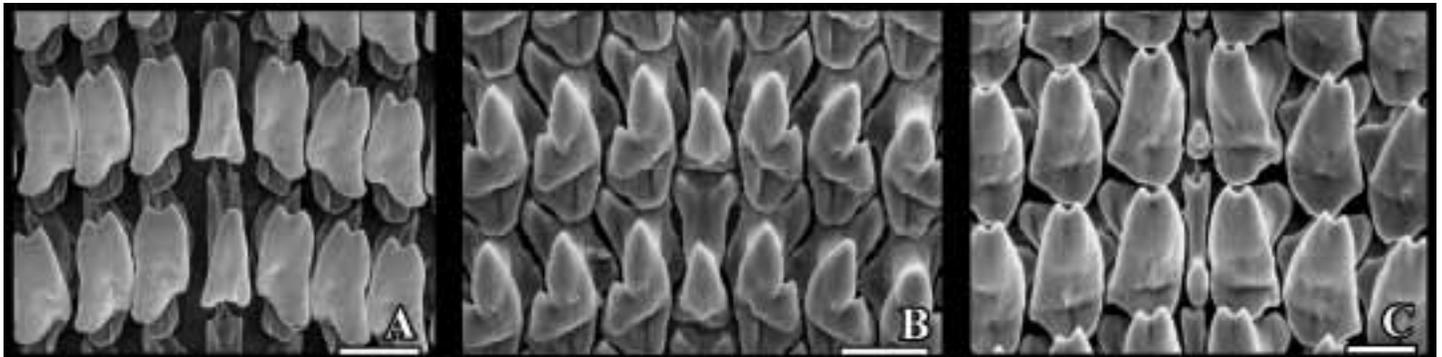


Figure 4. Radulae. A, B: *Siphonaria lessonii*, C: *Siphonaria lateralis*. Scale bar = 20 μ m.

the Western Atlantic, and northwards to Peru, on the Pacific coast.

2) To corroborate the distribution range of each species.

MATERIAL AND METHODS

The main sources of information for this study were the specimens collected during several field trips to 13 localities along the Uruguayan, Argentinean, and Chilean coasts (Fig. 2). This information was supplemented with the malacological collections at Museo Argentino de Ciencias Naturales (MACN), Buenos Aires, Argentina; Museo Nacional de Historia Natural (MNHN), Santiago,

Chile; Museo de Zoología de la Universidad de Concepción (MZUC), Concepción, Chile; and Natural History Museum of Los Angeles County (LACM), Los Angeles, USA. Furthermore, all available types of the species described or reported for the area were studied.

The information basis for the present study included: morphological characters (i.e. general shell characteristics, radial sculpture, apex position), radula morphology (studied by scanning electron microscopy), the anatomy of the distal portion of the reproductive system (by dissections and seriated cuts), and molecular information (considering sections of the markers COI, 12S and 16S).

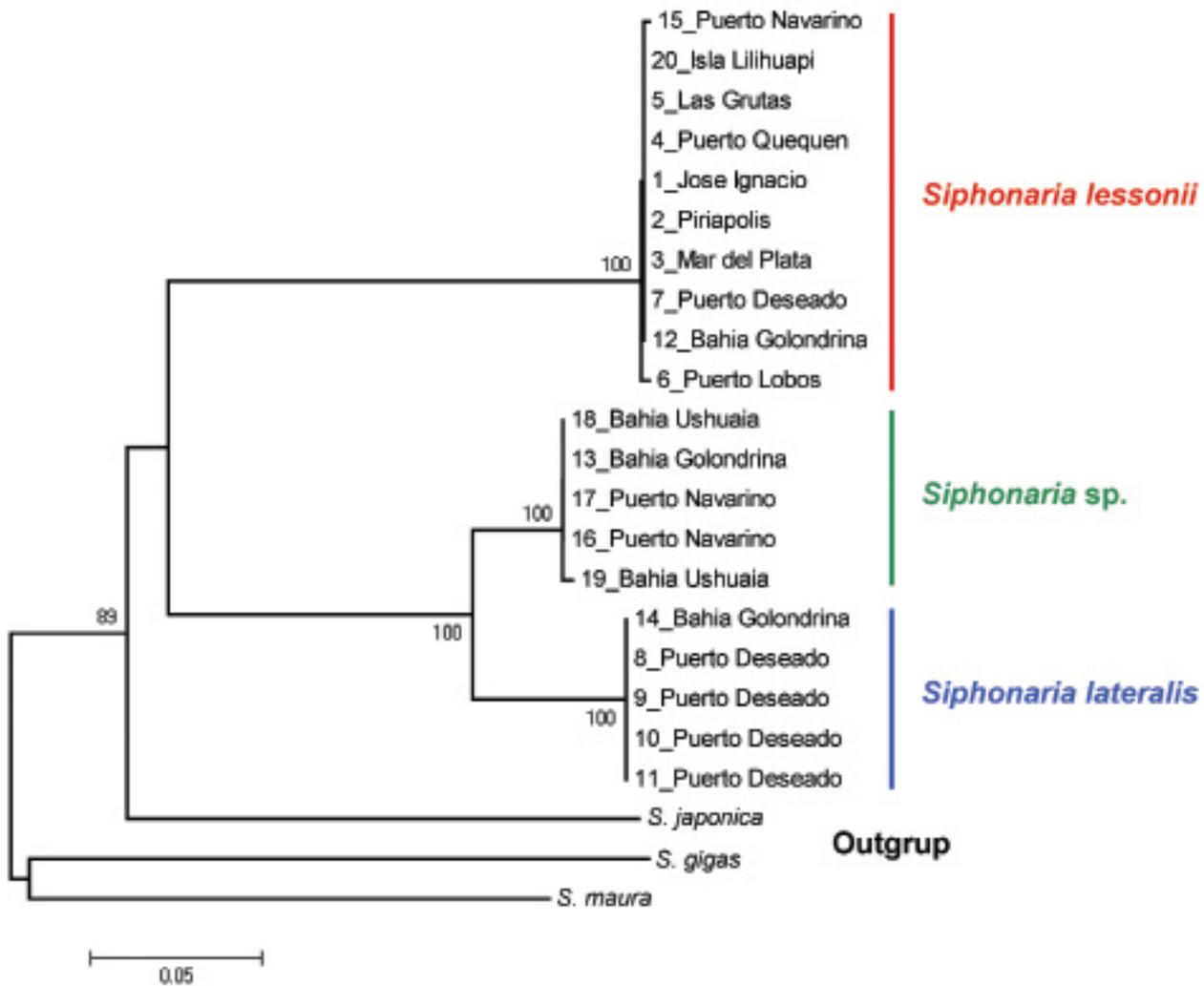


Fig. 5 Neighbor-joining tree for COI gene fraction (659 bp) of 20 *Siphonaria* specimens. Terminal names indicate the site of collection showed in figure 2. Only bootstrap values above 80 are shown (1,000 replicates used).

MAIN FINDINGS

Siphonaria lessonii actually proved to be a widely distributed species, occurring along the southern coast of South America, from Brazil to Tierra del Fuego and north to Perú, including the Beagle Channel and Malvinas (Falkland) Islands; no other gastropod species from the area shows such a wide distribution. Along with its distribution, *S. lessonii* shows a remarkable morphological variability (Fig. 3 A-C, E, F), which also encompasses differences in the number of teeth per row and between individuals and their morphology. While some specimens have ectocones in all laterals, in others the ectocone is reduced or even absent in the first 8 laterals (Fig. 4). Despite that, molecular evidence reveals that all of this variability is within a single species (Fig. 5). Not considering this intraspecific variability, led to the description of seven other nominal species, which are actually variants of *S. lessonii*. Those species are now known as synonyms of *S. lessonii*.

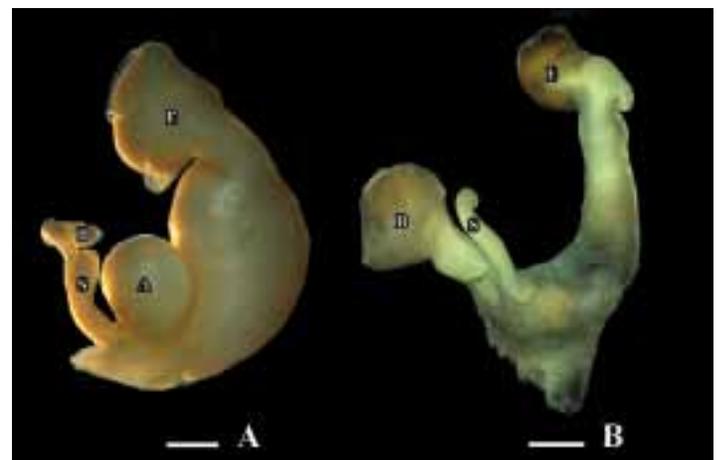


Fig. 6 Distal portion of reproductive system. **A:** *Siphonaria lessonii*; **B:** *Siphonaria lateralis*. Abbreviations: A = accessory pouch, B = bursa, E = epiphallus, S = spermoviduct. Scale bars = 1 mm.

Two other species of *Siphonaria* have been recognized as valid. One of them corresponds to *Siphonaria lateralis*, and the other is probably a new species; both of them are restricted to southern Patagonia and Malvinas (Falkland) Islands in the SW Atlantic. These species clearly differ from *S. lessonii* by shell and radula morphology, anatomy, and in the molecular markers considered in this study (Figs. 3-5). Whereas *S. lessonii* has a shell with smooth radial sculpture and a strong rachidian tooth, both *S. lateralis* and *Siphonaria* sp. have shells with irregular radial sculpture and weak rachidian teeth. Moreover, *S. lessonii* has a massive epiphallus and variably developed accessory pouch in the distal portion of the reproductive system. Both *S. lateralis* and *Siphonaria* sp. have elongated epiphalli and lack the accessory pouch (Fig. 6). Although *S. lateralis* and *Siphonaria* sp. are similar in form, they can be easily distinguished by the extremely asymmetrical shell and granulated ribs of *S. lateralis*, and the characteristic full beaks of *Siphonaria* sp., which end beyond the shell posterior outline.

CONCLUSION

The present study reveals that the great number of *Siphonaria* species listed for the southern tip of South America are actually an artifact, several synonymous names proposed for a single, highly variable species (*Siphonaria lessonii*). Out of the 13 nominal species reported for the area, only three species actually occur there.

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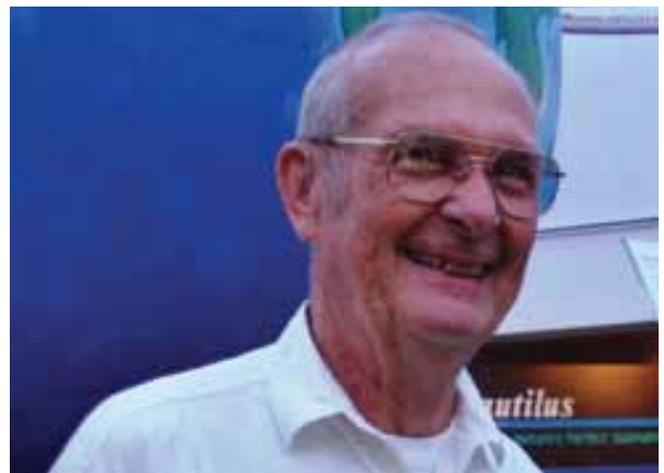
Buenos Aires, Argentina

Tel: (+5411)4982-6595 interno 206

mguller@macn.gov.ar



Dr. Holly Hale - college educator, author, world traveler, entrepreneur, shell collector.



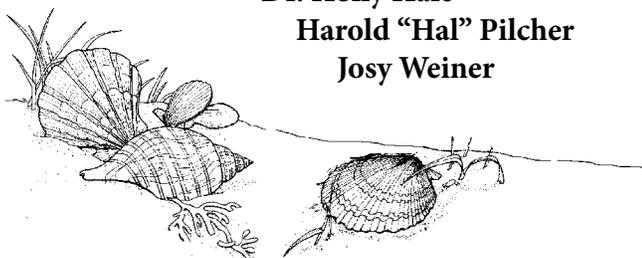
Harold "Hal" Pilcher - retired USAF, 18-year volunteer at the Bailey Matthews Shell Museum.

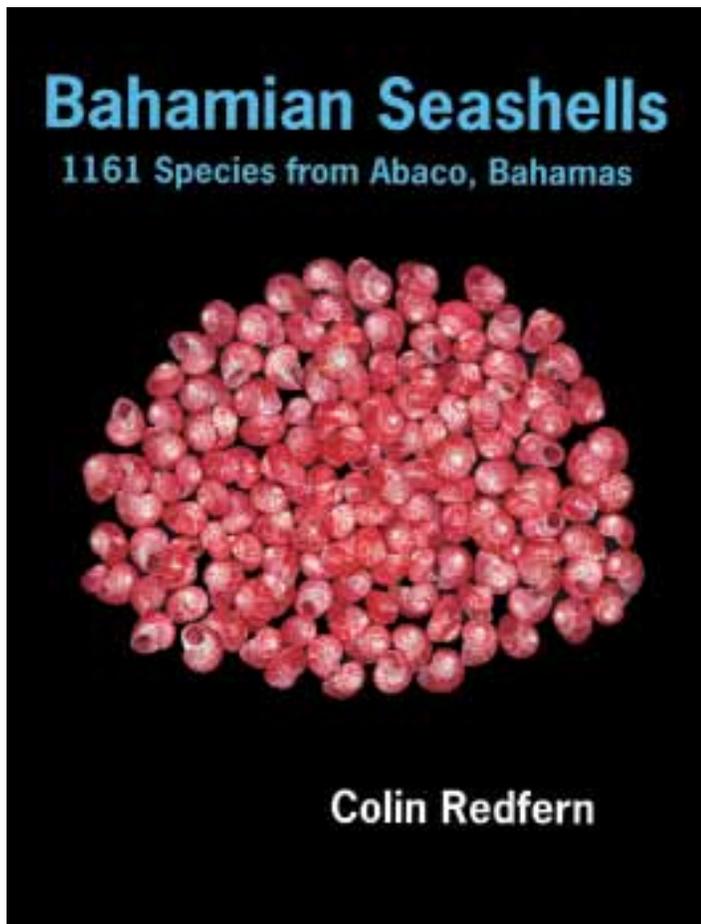


Josy Weiner - escaped Nazi Germany, to Chile, to US, tireless COA volunteer, "shake 'em up!"

In Memoriam:

**Dr. Holly Hale
Harold "Hal" Pilcher
Josy Weiner**





Bahamian Seashells: 1161 Species from Abaco, Bahamas

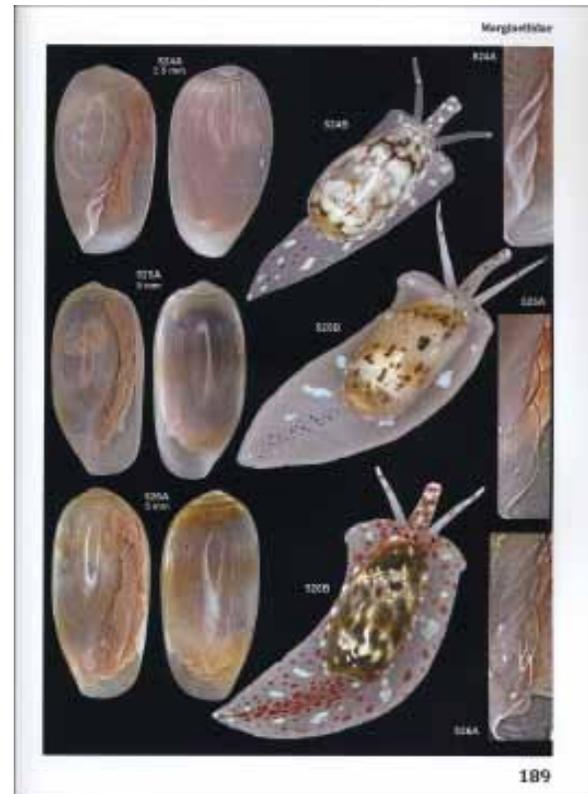
by Colin Redfern, 2013

Bahamianseashells.com, Inc., Florida

ISBN 978-0-9711066-1-1 (hard bound),

501 pages, 4,000+ color photos, \$136 from the publisher

Review by Tom Eichhorst



Colin Redfern's update of his original *Bahamian Seashells: A Thousand Species from Abaco, Bahamas* (2001) is an expanded second edition (so much so that it is a different book) with 161 new species covered, 170 scanning electron micrographs (SEM's), **over 3,600 new color photographs**, and an updated taxonomy. These easily observed facts are reason enough to buy this incredible follow-on volume, but there is more. I purchased the first *Bahamian Seashells* (BS1) at the Bailey-Matthews Shell Museum, Sanibel, Florida, during the 2005 COA convention in Punta Rasa, Florida. Despite a preponderance of black & white photographs, I found this volume extremely useful and applicable to a far wider range than just the Bahamas. My copy of BS1 is tattered from a lot of use looking up shells from Florida or the Caribbean area, not just the Bahamas. Now Colin gives us BS2 with color photographs, more species, and a new and easy to use format. The description of a species is on the same page or opposite page as its color photograph(s). No more flipping from front to back to match a description with a photograph. As a final benefit, there are tons of color images of the living animals. The image shown here is typical with shell specimens (none over 10 mm), the living animals, and close ups of identifying features of the columella. Thus detail and "life" is given to shells that are smaller than a grain of rice and almost featureless without such magnification and color.

As for the faunal coverage of the book, BS2 covers: Gastropoda, Scaphopoda, Polyplacophora, Bivalvia, and Cephalopoda. The images are nicely sized and often show the living animal as well as the empty shell. There is an extensive index with listings of both common and scientific names (including separate entries for family, genus, and species). There is also an appendix with image data for each image used in the book - a data slip for each image of where that particular specimen was found (e.g. beach drift, dredged in sand at 2 meters, etc.). The bibliography is of "literature cited" and is extensive. A lot of preparation and hard work went into this book and it shows.

BS1 proved to be an invaluable tool, both for casual collecting and research. BS2 takes these qualities and adds: an increased species count, new color and SEM images, and an easy to use format. **I honestly cannot find a single aspect of this book I do not like. Amateur or professional, if you are interested in conchology or malacology, this book really belongs on your bookshelf.**

33rd annual Marco Island Shell



Linda Shockley won the Conchologists of America (COA) Award for her display of Marco Island Area Bivalves (self-collected). She also won the Natural History Photographic Award and the Scribner's Trophy.

The 33rd annual Marco Island Shell Show was an unqualified success with lots of superb shell displays in both the scientific and artistic categories. It seemed there were more visitors this year and everyone seemed to have fun and maybe even learned a bit. This year's judges were Jim Cordy and Wayne Harland; both are veteran shell show exhibitors and judges. This year's show chairman was Jae Kellogg and he, along with a plethora of able and willing volunteers ensured the success of the shell show. Linda Shockley (pictured here at the Sanibel Shell Show) took three awards (including the COA Award) with her display, "Marco Island Area Bivalves." All were self-collected shells, displayed in 9 cases covering 17 feet.

Conchologists of America (COA) Award - Linda Shockley - Marco Island Area Bivalves (self-collected)

Du Pont Trophy - Alice and Robert Pace for "Florida/Caribbean Marine Gastropods"

Natural History Photographic Award - Linda Shockley

Scribner's Trophy - Best Collection of Self-collected Marco Island Shells - Linda Shockley

Florida Gulf Coast University - Best Self-collected Marco Island Shell - Jae Kellogg



Part of Linda Shockley's award winning display, Marco Island Area Bivalves.



Marco Island Shell Show - 2013.

Board of Directors Trophy - Shell of the Show - Gregory A. Curry, Sr.

Best Collection of Miniatures Trophy - Amy and Bill Tripp

Best Florida/Caribbean Single Shell Trophy - Amy and Bill Tripp

The Dr. William O. Reid Plaque - Bob and Pat Linn

The Jerome Bijur Trophy (Novice Active Member) - Patricia Davison

Judge's Merit Ribbon - Gregory A. Curry, Sr.



76th Annual Sanibel Shell Show

Joyce Matthys

The line of visitors waiting for the doors to open for the 76th Annual Sanibel Shell Show on March 7th was the first indication that it was going to be a great show.

When the show ended on the 9th, more than 3,300 people had viewed the exhibits. The theme for the 2013 show was "Color Your World With Shells," with a special class of competition in both the Scientific and Artistic Divisions.

The Scientific Division exhibit hall was filled to capacity. There were more large scientific exhibits than ever before. Extra tables had to be ordered for the auditorium stage and when the set-up was complete approximately 500 linear feet of table space had been filled. Not only was this the largest-ever display of scientific exhibits, veteran show attendees agreed that the quality of the exhibits was outstanding. Scientific judges Jerry Harasewych and John Slapcinsky had their work cut out for them.

The Artistic Division exhibits were equally exceptional. The atmosphere of the exhibit hall this year was more like that of an art gallery. The artistic judges for the show were Daphne Hunte from Barbados and Lee Repetto from Cape Cod.

The sold-out Judges and Awards Reception was held at The Bailey-Matthews Shell Museum the evening before the show's opening. After the award winners were announced, those in attendance were invited to a sneak peek of the show.

This year The Bailey-Matthews Shell Museum enhanced its support of the shell show by offering free admission to the museum to everyone who gave the suggested \$5 donation to see the Shell Show. Over 500 people took advantage of the offer and visited the museum during the show.

Major Scientific Award Winners

du Pont Trophy: Linda Shockley, Marco Island, FL

Conchologists of America Award: Charlotte Thorpe, Jacksonville Beach, FL

Best Sanibel-Captiva Shells, self-collected: Robert & Alice Pace, Miami, FL

Best Florida-Caribbean Shells, any source: Robert & Alice Pace, Miami, FL

Howard Sexauer Award: Charlotte Thorpe, Jacksonville Beach, FL

Shell of the Show, self-collected: Charlotte Thorpe, Jacksonville Beach, FL

Shell of Show, any source: Robert & Alice Pace, Miami, FL

Shell of the Show, Fossil: Irene Longley, St. James City, FL

Best of the Blues: Ken & Joyce Matthys, Salem, OR

Anne Joffe Superstar Trophy: Thomas Grace, Alburtis, PA

Theme Award "Color Your World With Shells": Bill & Amy Tripp, Marco Island, FL

Both Special Judges' Ribbons were won by Robert & Alice Pace, Miami, FL

Judges Merit Ribbons: Clare Horner, Pittsburg, PA



Conchologists of America Award: Charlotte Thorpe, Jacksonville Beach, FL.



Anne Joffe Superstar Trophy: Thomas Grace, Alburtis, PA.

The 23rd Antwerp Shell Show

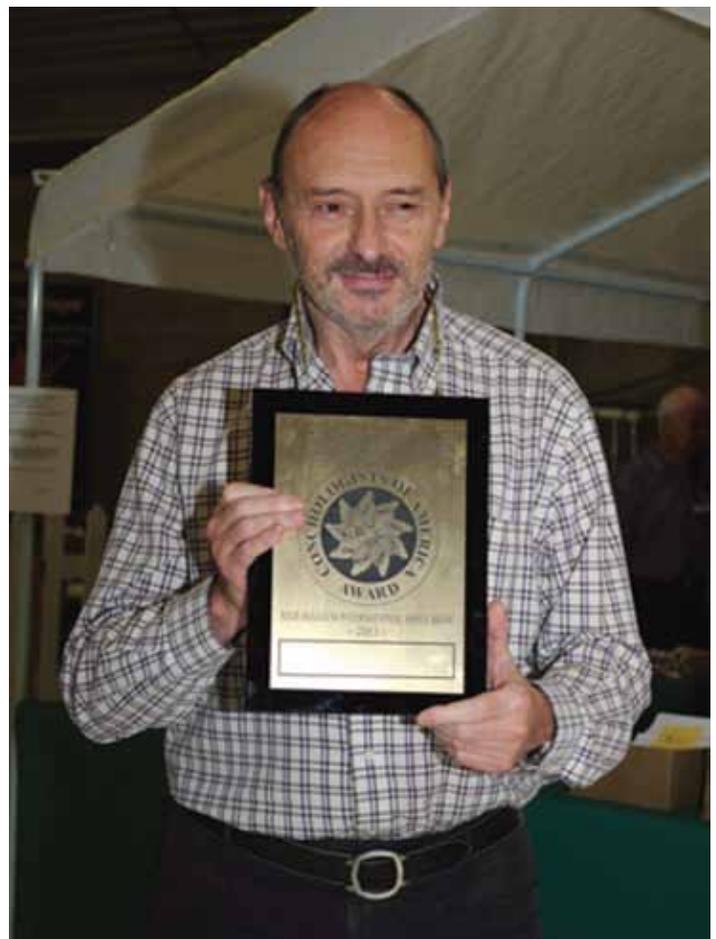
The 23rd Shell Show held in Antwerp, Belgium, 17 - 19 May 2013 was a rousing success. The organizers did an outstanding job with the overall venue and the display layout. Participants came from around the world and included shell dealers, scientists, collectors, and some locals who were just curious. Guido Poppe prepared an excellent overview of the event that is available as a PDF download from his web site: www.conchology.be (click on "Shell Topics," then "Visaya Net," then "Antwerp Shell Show 2013." If you register on his site you can get automatic updates on *Visaya* publications and other shell related activities, plus access to tens of thousands of quality shell images.



The winner of the COA Award at this year's show was Philippe Vandenberghe for his superb and well-documented display of Cypraeidae. "Shell of the Show" went to the second documented *Lyria aphrodite* Bondarev, 1999, displayed by Félix Lorenz. There were any number of other notable displays and spectacular shells (including an 80+ cm *Pinna nobilis* owned by Tiziano Cossignani).



"Shell of the Show" went to this very rare *Lyria aphrodite* Bondarev, 1999, displayed by Félix Lorenz. Image courtesy of Guido Poppe, www.conchology.be



Philippe Vandenberghe won the COA Award at the Antwerp Shell Show for his Cypraeidae display. Image courtesy of Guido Poppe, www.conchology.be

2013 SHELL SHOWS & RELATED EVENTS

(August – December)

Information is subject to change. Please verify with individual organization

Aug. 16-18, 2013

JERSEY CAPE SHELL SHOW, Stone Harbor, NJ
The Wetlands Institute, Stone Harbor, New Jersey
Louise Pepe e-mail: louise.m.pepe@gmail.com
(856)-723-6494

Sept. 7, 2013

CHATSWORTH SHELL FAYRE, Derbyshire, UK
Cavendish Hall, Chatsworth Estate, Derbyshire
Brian Hammond, Sulwath, Dornockbrow
Dornock, Annan DG12 6SX, UK
E-mail: brianandedna@btinternet.com
44 146 170 1096

Sept. 14-15, 2013

INTERNATIONAL SHELLS & FOSSIL BOURSE,
Ottmarsheim, France
Salle Polyvalente, Rue de la Priscine
Michel Rioual, 2 Rue des Vergers
68490 Ottmarsheim, France
(3) 89-26-16-43

Sept. 21-22, 2013

ANNUAL GERMAN SHELL FAIR, Oehringen, Germany
KULTURA Hall, Herrenwiesenstr. 12
Kurt Kreipl, Hoehenweg
D-74613 Oehringen-Cappel, Germany
61 (7941) 62-826
E-mail: meeresmuseum@t-online.de

Sept. 28-29, 2013

NORTH CAROLINA SHELL SHOW, Wilmington, NC
Cape Fear Museum of History & Science
814 Market Street, Wilmington, NC 28401
John Timmerman, Show Chairman
(910) 798-4368
E-mail: jtimmerman@nhcgov.com

Oct. 19-20, 2013

PHILADELPHIA SHELL SHOW, Philadelphia, PA
Academy of Natural Sciences, Parkway & 19th St.
Paul Callomon, Academy of Natural Sciences
Parkway & 19th St., Philadelphia, PA 19103
(215) 299-1159
E-mail: callomon@ansp.org

Oct. 26, 2013

SYDNEY SHELL SHOW, Sydney, Australia
Steve Dean, 166 Narabeen Pk Pde
Mona Vale, NSW 2103
61 (2) 9979-5736
E-mail: steve@easy.com.au
Cell: 61 (4) 1175 1185

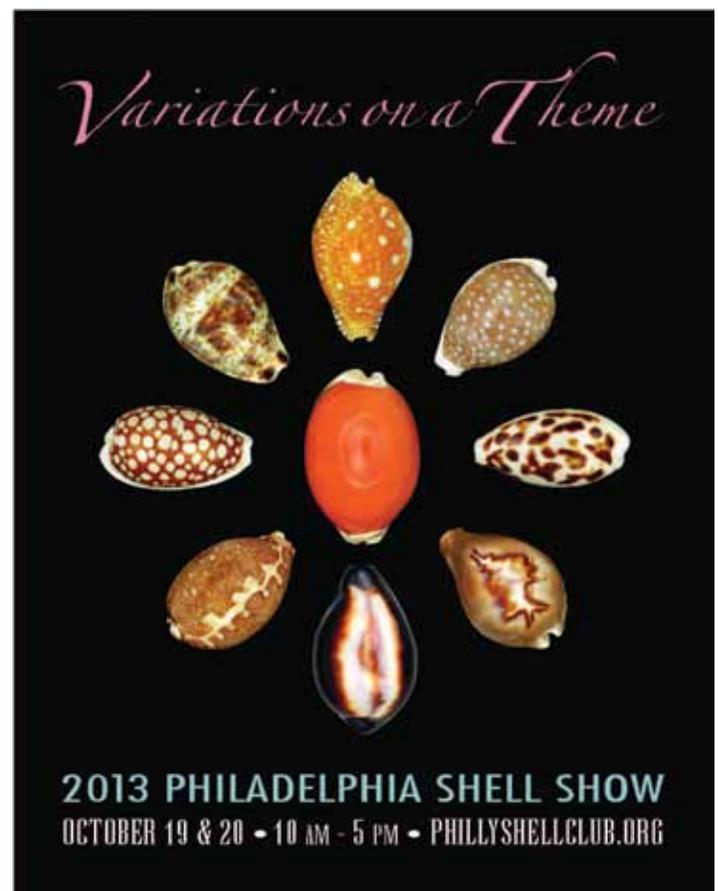
Oct. 26, 2013

BRITISH SHELL COLLECTOR'S CLUB CONVENTION, Essex, England
Theydon Boys Community Centre, Theydon Boys, Epping, Essex
John Whicher, Higher Marsh Farm, Henstridge, Somerset
BA8 0TQ, UK
Email: john@whicher.plus.com
44 (196) 336 3715

Nov. 9 -10, 2013

XVII PRAGUE INTERNATIONAL SHELL SHOW,
Prague, Czech Rep.
KULTURNIDUM LADVI Buresova 1661, Prague 8
Jaroslav Derka, Holeckova 51/370
15000 Praha 5, Czech Republic
42 (2) 5731 6246
Email: jderka@volny.cz
Web sites: <http://cksl.webpark.cz> <http://shells.webz.cz>

DONALD DAN, COA Awards Chairman
6704 Overlook Drive, Ft. Myers, FL 33919, U.S.A.
Tel. Voice & Fax (941) 481-6704
E-mail: donaldan@aol.com



The 2013 Philadelphia Shell Show

Paul Callomon

Once again, the largest shell show in the northeast swings onto the calendar! This year it's on October 19 and 20, with setup on the 18th. As in 2012, the show will be laid out in the magnificent reading room of the Ewell Sale Stewart Library at the Academy of Natural Sciences, and in the adjoining exhibit spaces. 2012's array of masterpieces will be a hard act to follow, but veterans and beginners alike seem to find new inspiration each year for this event! All the usual attractions will be on offer, including Free Shells for Kids, various raffles, and behind-the-scenes tours of the Academy's vast shell collection.



Shell show visitors will instantly recognize this as a shell display by Sue Hobbs. Her sales table is a highlight of any shell show.



The Ewell Sale Stewart Library at the Academy of Natural Sciences is a truly historically significant site for a shell show. You cannot help but feel the rich atmosphere.

Feedback from competitors and guests is always welcome, and it has inspired a few changes for 2013. The revamped Philadelphia Shell Club web site www.philly-shellclub.org has the entry forms and show rules, together with the Guide to Judging, and completed forms should now be mailed or e-mailed to show chair Paul Callomon at callomon@ansp.org, who will pass them on to exhibits chair J. B. Sessoms. Setup will both start and end an hour later than before, lasting from 10 am to 5 pm.

There is a special award this year for exhibits demonstrating "Variations on a Theme." This motif has been chosen to encourage the largest number of competitors! All collectors know that shells of the same species can vary in many obvious ways: size, pattern, color, and so on, but that's not the only sense in which variations can be found. Here are some other ideas:

- Many snails (and, believe it or not, a few bivalves) are carnivorous. They go after their prey in various ways however: some use poison, some drill through their victims' shells, and others are parasitic
- Some shapes occur in unrelated families. For example: the true limpets (Patellidae, Nacellidae etc.) share the same simple conical shape with the fresh-water Ancyliidae and the air-breathing Siphonariidae, among others.
- Stripes, spots, spines – these are all "themes" that can be illustrated using shells from very different families.
- Even names can follow themes; shells have been named for Greek gods, for animals and for precious metals, among many others.

The "Variations on a Theme" award is not limited to scientific exhibits! The Conrad Award for best paleontological exhibit is back this year too, alongside major prizes such as the COA, Pilsbry and Masters' Awards, and the DuPont Trophy.

For accommodation, the club has arranged a special block of rooms at the nearby Windsor Suites www.windsorhotel.com. Philadelphia is a popular convention venue in the fall, so get your bookings done in good time!

The show and bourse open at 10 am on both days, and a social event is planned around the awards ceremony on Saturday evening – details coming soon. See you in Philadelphia!

Contact: Paul Callomon
2013 Philadelphia Shell Show Chair
callomon@ansp.org
Tel. 215-405-5096

COA annual convention: July 15-21, 2013



The Sarasota Hyatt is a special place - join us.



The Conchologists Of America annual convention is July 15-21, 2013, in Sarasota, Florida, with a great lineup of field trips on July 13, 14, 15, 18, and 21! We still have room on the field trips for the COA convention, though the SMR fossil trip is filling up. There are 13 spaces still available for this trip. The wading trip still has plenty of room, as do the snorkel and scuba trips. The parking lot fossil trip hasn't proved to be popular, with only four signed up. If we don't get many more we may have to cancel it, since the costs will be too high. Remember, **YOU DON'T HAVE TO BE A MEMBER OF COA** to register for the convention and take advantage of the field trips; however, you do have to register to go on a field trip.

You'll find there are lots of great programs to see, people to schmooze with, and other exciting activities. The hotel is offering light lunch selections in the area in front of the meeting rooms so you don't have to go far or spend a lot of money. If you'd rather go elsewhere, however, downtown Sarasota is just a few blocks away with a great variety of restaurants. When you register at the hotel you can request a refrigerator, and there are two groceries within walking distance.

Our theme is "Circus of Shells," and we urge you to bring a circus-related costume for the Welcome Party on Tuesday evening, July 15. It will be a full meal with plenty of seating and entertainment, plus some surprises.

We already have nearly 100 items in the oral auction, with some excellent shells to be had. We can always use more silent auction items (send them to me at the below address), but we have a good selection already. There will be 7 silent auctions altogether.

During registration on July 15 and 16 you can get cheap shells - at 25¢ and up, many of them miniatures, and all identified for you.

The Bourse will be bursting at the seams - we have **NO MORE** space left for shell dealers. There are exciting dealers coming from every continent except Antarctica, with shells galore! Dates are July 20 beginning at 1:00 and ending the next afternoon at 4:00, and **YOU DON'T HAVE TO REGISTER TO COME IN, LOOK AROUND, AND BUY!**

To get a registration form, if you don't already have one, go to <http://www.conchologistsofamerica.org/conventions/>.

Y'all come to the Circus of Shells!

Peggy Williams, convention chairman
PO Box 575
Tallevast FL 34270
Peggy@Shelltrips.com (941) 355-2291

