



SHELL-O-GRAM

Official Publication of the
JACKSONVILLE SHELL CLUB, INC.

March-April, 2011

Volume 52 no. 2

The March 24, 2011 meeting will convene in the regular venue, the Southeast Branch Public Library, at the usual time, 7:00 PM. Brian Marshall will present the shell-of-the-month, *Macrocallista maculata* (Linnaeus, 1758), the Calico Clam. He's found living specimens near St. Augustine Inlet. The main program will be presented by Rick Edwards, who will reminisce about his collecting days on Okinawa.

Because of early voting at the Southeast Branch, we must convene a **week earlier in April** (the 21st vs. the 28th) - usual time. In consideration of the main event, Harry Lee will make *Luria tessellata* (Swainson, 1822), the Checkerboard Cowrie, an Hawaiian endemic, his shell-of-the-month. This will segue into Charlotte Thorpe's report on her collecting trip to Oahu, Hawaiian Islands, where she spent a week last August.

Is *Semicassis cicatricosa* (Gmelin, 1791) [Tonnoidea: Tonnidae: Cassinae] a valid biotaxon?

by Harry G. Lee

***Semicassis granulata granulata* (Born, 1778) form *cicatricosa* (Gmelin, 1791)**



Under coral in 85 feet of water, West Palm Beach, FL (28.5 mm.)

Elucidating the status of this western Atlantic bonnet shell is like peeling an onion. There are layers upon layers of complexities, and, as each one is removed, it provides a morsel of the process of taxonomy or nomenclature which the mind can savor.

Its placement at the family-level might be considered the onion's outer husk. As indicated in the above title, the current assignment is superfamily Tonnoidea, family Tonnidae, subfamily Cassinae. This hierarchy has appeared in a variety of iterations and spellings over the years and may well appear a bit strange to veteran collectors and curators. Yet it is the reasoned result of a succession of nomenclatorial events.

continued on page 3

Jacksonville Shell Club, Inc.
1010 N. 24th Street
Jacksonville Beach, FL 32250

Editor: Charlotte M. Thorpe
Assistant Editor: Harry G. Lee

This club meets each month at the Southeast Branch of the Jacksonville Public Library, 10599 Deerwood Park Blvd., Jacksonville, Florida. Please address any correspondence to the club's address above.

The *Shell-O-Gram* is issued bimonthly and mailed to all regular members. Annual membership dues are \$15.00 individual and \$20.00 family (domestic) and \$25.00 (foreign). Lifetime membership is available. Please send checks for dues to the above address and made out to the Jacksonville Shell Club.

We encourage members to submit articles for this publication. Closing date for article submission is two weeks prior to the first of each month of publication. Articles may be republished provided full credit is given the author and this newsletter and one copy of the complete publication in which the article appears.

E-mail: challoyd@bellsouth.net

OUR NEW LIFETIME MEMBERS:

Trudy Doerr
Charlotte M. Thorpe
In Memory of Jim Smith

UPCOMING SHELL SHOW/EVENTS

Mar. 10-12, 2011 Marco Island Shell Show XXXI,
Marco Is., FL, United Church of Marco Is.,
320 North Barfield, Jae Kellog, (239) 253-8483
Web Site www.marcoshellclub.com

April 26-May 1, 2011 Oregon
Shell Show
(503) 363-5017 joycematthys@aol.com

Jun. 25-26, 2011
Gulf Coast Shell Show, Panama City Beach, Fl.
contact Jim Brunner (850) 215-2086

July 13-17, 2011
Conchologists of America Convention
Radisson Resort at the Port,
870 Astronaut Blvd. Cape Canaveral, Fl
Doris Underwood dunderwood13@cfl.com

President's Corner

Greetings All,

We just had the pleasure of meeting at the MOSH to see Harry's program in the new planetarium and see the new exhibit "The Shell: 530 Million Years of Inspired Design", which was assembled by Harry Lee. It is a great exhibit and will be seen and enjoyed by many museum attendees. Attendance was pretty good for this meeting, but we need to see more of you at our regular venue. We need your input for future activities.

We are planning an outing to Hannah Park in May for a cookout and shelling. Harry will lead us to hunt for dune snails. Keep in touch for details. There is also research being done for fieldtrips in the future.

If you have any questions, contact me via e-mail or phone.

Barbara Cathey

MEMORIAM

Jacksonville Shell Club member Craig Thorn, an architect who designed many well known buildings in St. Augustine, has died - he was 80 years old.

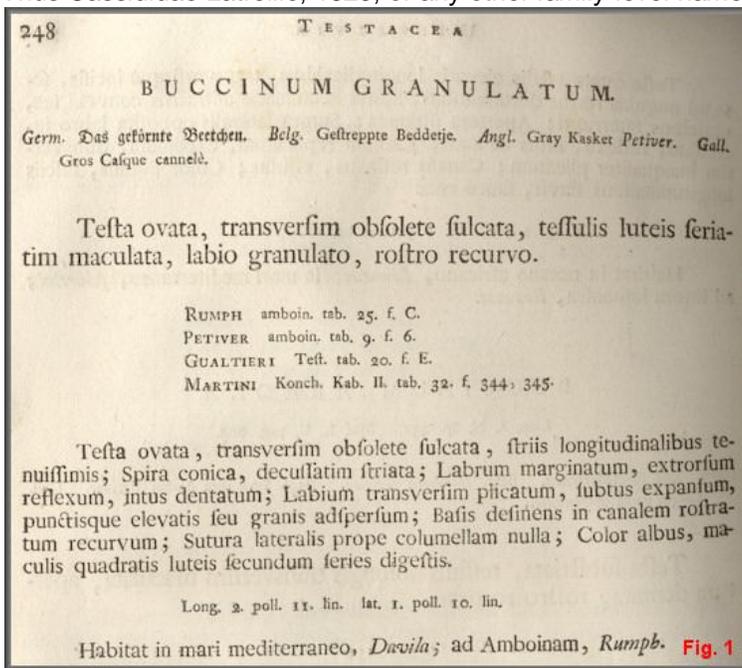
Craig was commissioner of St. Augustine from 1975 to 1982, and he served as mayor in 1975 and 1977. He also designed many downtown buildings; Flagler College's Auditorium and Gym, the Columbia Restaurant and several buildings for the Deaf and Blind Florida School.

As a member of our club Craig was always willing to help out at the Shell Shows. He had a great personality, was kind, generous and loved his wife with his whole soul. He is survived by his childhood sweetheart and wife of 59 years, Audrey.

Craig will be missed.

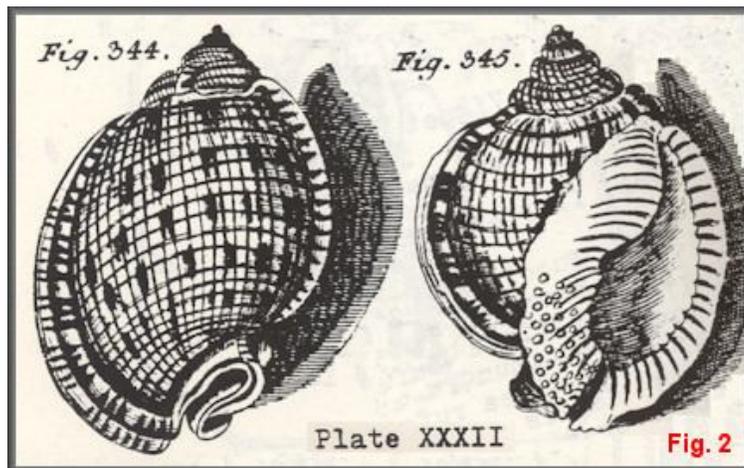
Since we have gone to emails for most of our members it will be your responsibility to see that your dues are current. The Jacksonville Shell Club needs your continued support. If you are not sure when your dues are due, you are welcome to call me at 904-246-0874. Thanks, Your Treasurer.

Tonnidae (as Doliidae) and Cassidae both date from Latreille (1825: 196, 194 respectively) so neither has immediate claim to priority. First, let's deal with Doliidae: Suter (1913) placed *Dolium* Lamarck, 1801 in synonymy with *Tonna* Brünnich, 1772, and, although he made no reference to any relevant family-level taxon, as a consequence of his action both *Tonna* and Tonnidae were in prevailing usage through the Twentieth Century and beyond. On that basis, Bouchet and Rocroi (2005: 172) invoked the provisions of Article 40.2 of the *International Code of Zoological Nomenclature* (ICZN, 1999) for the conservation of Tonnidae and suppression of the synonymous Doliidae. Earlier, Wenz (1941: 1045), acting as first reviser, had declared "Tonnoidea," later converted to "Tonnoidea," in compliance with Article 29.2 of the *Code* ICZN, 1999, and thus Tonnidae, superordinate to Cassidae. We now have the basis for "Tonnoidea: Tonnidae" in the title. Confusing? Yes, but by the rules. Just under the flaky husk is another tough layer: The author's clear intentions notwithstanding, Latreille's "Cassidae" was not the proper formation of a family name based on the genus *Cassis* Scopoli, 1777. Article 29.3.1 of the *Code* (ICZN, 1999) mandates that the stem of the type genus "is found by deleting the case ending of the appropriate genitive singular," in this instance leading to "Cassid-" via "Cassidis." So why not simply emend Cassidae to Cassididae? This remedy, while reasoned, runs afoul of that old troublemaker, homonymy. It happens that Linnaeus (1758: 362) named a genus of beetles *Cassida*, and Gyllenhal (1813: 434) based a family-level name, Cassidites, later emended to Cassidinae, on the Linnaean genus. Thus Cassididae Latreille, 1825, or any other family-level name based on the same stem by any author after 1813, is



unavailable for the purposes of taxonomic nomenclature under the provisions of the Principle of Homonymy (ICZN, 1999: 53.1, 55.5). Since Cassidae Latreille, 1825 was in widespread use and not a homonym, the ICZN was petitioned to forgive its fraudulent etymology and conserve it by exercise of its plenary powers. This exception was granted (Melville, 1974), and the family-level taxon, Cassoidea, Cassidae, Cassinae, is now available. But, as noted above, it is subordinate to Tonnoidea, Tonnidae, Tonninae when the former is considered synonymous at the same taxonomic rank. Thus we have arrived at "Cassinae" in the title. The bulb is now stripped of its outermost layers, and we may begin to delve into the more comestible parts: The genus *Semicassis* Mørch, 1852 is based on *Cassis japonica* Reeve, 1848 by the subsequent designation [SD] of Harris, 1897. Abbott (1968: 125, 128) considered *Phalium bisulcatum* Schubert and Wagner, 1829 to be a senior synonym of the Reeve name. Although it was treated as a subgenus of *Phalium* Link, 1807

[Type Species (TS): *Buccinum glaucum* Linnaeus, 1758 SD Dall, 1909] by Abbott (1968: 125), modern authors, e.g., Malacolog 4.1.1, Kreipl, 1997, have afforded this circumtropical group full generic rank. *Tylocassis* Woodring, 1928 [TS *Buccinum inflatum* Shaw, 1811 (= *B. granulatum* Born, 1778 *vide* Abbott, 1968) by original designation (OD)] is treated as a synonym, not a subgenus, of *Semicassis* by Kreipl (1997: 48). Thus we have reached the taxon *Semicassis granulata* (Born, 1778) and the innermost layers of this pungent, tantalizing herb. The Austrian



conchologist Ignatius von Born (1742-1791) laid a straightforward foundation for the nominal species *Buccinum granulatum*, widely-known as the Scotch Bonnet. It was described (Born, 1778: 239-240; repeated in Born, 1780: 248: Fig. 1) rather precisely and four illustrations were cited. Of these, the type was restricted to Martini (1773: plate 32, figs. 344, 345; Fig. 2) by Clench (1944: 6; citing Born, 1780 *vice* 1778). Since Born had placed the species in the Mediterranean and Amboina, Clench (*Idem*) designated Puerto Plata, Dominican Republic as the type locality While it is generally accepted that there are two allopatric subspecies beside the nominotypical Born taxon, the taxonomic status of a smooth western Atlantic morph, which we may call *Semicassis cicatricosa*

(Gmelin, 1791) for the purposes of argument, is controversial. Although the majority of authors seem to regard this as a mere morph of the Scotch Bonnet, others, e.g. Gibson-Smith and Gibson-Smith (1981) de Jong and Coomans (1988: 67), and Rosenberg (2009), treat it as a separate taxon at the species level. In support of the three preceding authorities, I shall proceed in satanic advocacy. attempt a proper analysis of *S. cicatricosa* (Gmelin, 1791), and strip the onion its core.

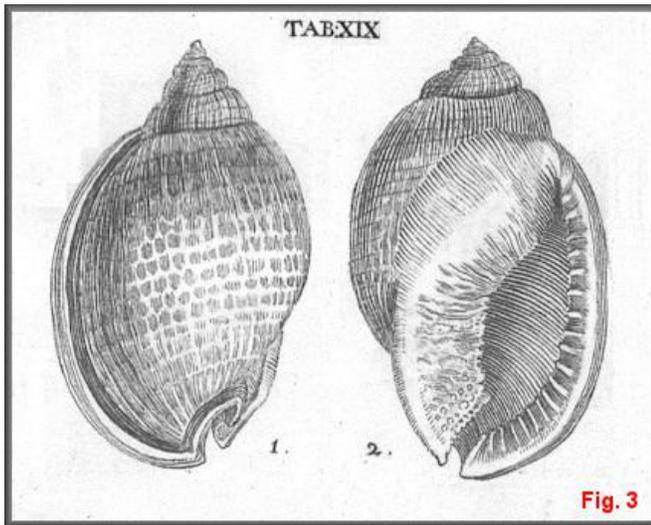


Fig. 3

The first notice of the topical shell was contemporary with Born's description of *S. granulatum*. Frederick Christian Meuschen (1719-1811) is a fairly obscure figure in the history of conchology, but to say his work, the *Museum Gronovianum* is simply rare and obscure does disservice to what may be the most recondite of all published conchological works. It is not mentioned in Dillwyn (1817) or Dance (1986) and is not among the 60,000 items listed in the British Museum's library (Woodward *et. al.*, 1903-1940). Nonetheless the book has been digitized, is now in the public domain, and provides the passage: "1158 [Buccinum] cicatricosum Pokdaalige Huid. Gr. Z. III n. 1350 & Tab. II. fig. 1. 2, L. sp. o. Een stuk." (Meuschen, 1778: 115). Since the only indication, the cited illustration, was not published until about two

years later (Gronovius, 1781a, b), this is a *nomen nudum* and thus, by this fact alone, unavailable for the purposes of taxonomic nomenclature (ICZN, 1999: Articles 12.1, 12.2). The Gronovius figures [our Fig. 3] can be found at the top of "TAB XIX," which plate is also labeled "Fasc. III Tab. II" at its bottom test R.I. Johnson (pers. comm. 27 November, 2010). Authors, e.g., Meuschen (1778: 115), Gmelin (1791: 1475), Dillwyn (1817: 597), and Clench (1944: 8), agree on the figure citation while variously locating the companion text, *i.e.*, "no. 1350," "p. 303," or "v." When considered along with the binomen again provided by Meuschen (1781a, b), *Buccinum cicatricosum* Meuschen in Gronovius, 1781a, b appears to be an available name for our straw man. However, after initial acceptance (ICZN, 1910: Opinion 20, 48-50) of the most important work of this second obscure Dutch naturalist, Laurens Theodore Gronow (1730-1777 or 1778), his *Zoophylacii* (Gronovius, 1763, 1764, and 1781a, b),* were subsequently declared unavailable for the purposes of taxonomic nomenclature (ICZN, 1925: Opinion 89, 27-33; 1950; 1954b; 1958). Quite familiar with the 1781 Gronovius work (since he was its editor and wrote its index), Meuschen (1787: 392; species no. 1290) later reported: "[C]asque Cicatricosa, ventricosa, anfractibus nodosis, testa maculis quadritis impressus, Linn. [1767] 453. [alpha]. s. o. Gronov. Zooph. III. 19. 1. 2. Petiv. Mus, 7. 4. (4. specim. 772*" in his catalogue of the shell collection of yet another Dutchman, Abraham Pauluszoon Gevers (1712-1780). Déjà vu, this appears to be a validly proposed binomen with a description and unambiguous figure citation, and it

was treated as an available name by some authors, e.g., Dall (1923) and Clench (1944: 8). Nonetheless, all of Meuschen's works have been officially declared, or otherwise treated as, unavailable because of inconsistent application of binominal nomenclature (ICZN, 1954a, 1958, 1999: Article 11.4; Winckworth, 1926). Recourse to the Gronovius and Meuschen works having been denied, one must credit Gmelin (1791: 3475-6) as the first to validate the binomen *Buccinum cicatricosum*. Although he cited India as the "habitat," the consensus synonym, *B. recurvirostrum* Gmelin, 1791 (p. 3477), was placed in the Barbados. On that basis Clench (1944: 9) designated the latter as the type locality for *B. cicatricosum* Meuschen, 1787 [ergo Gmelin]. The Gmelin description is brief and not exactly diagnostic, but his (only) other indication was the Gronovius figures discussed above! Their reproduction here, perhaps for the first time, is considered central to the

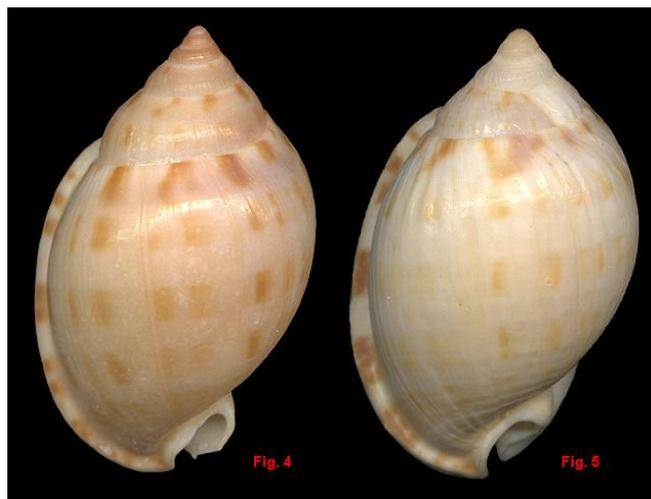


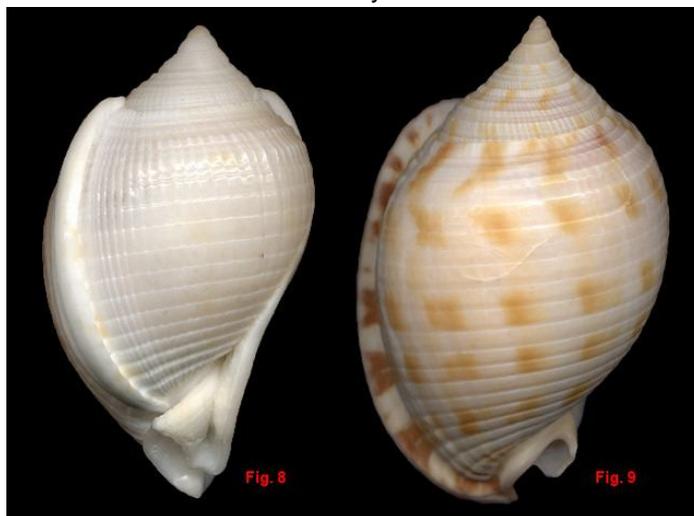
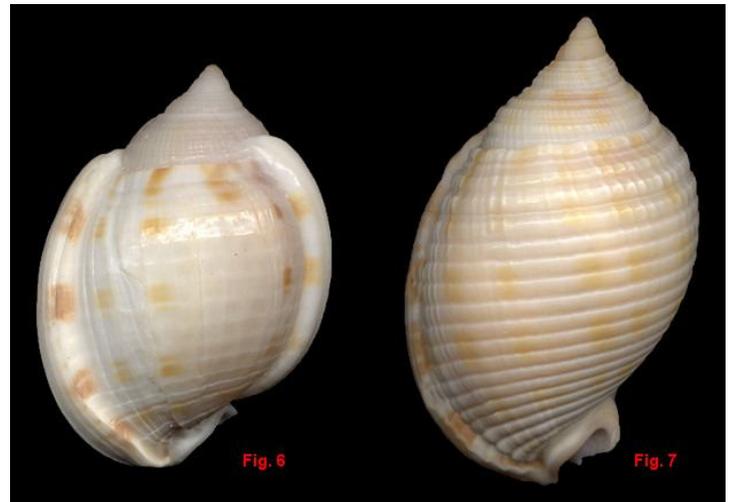
Fig. 4

Fig. 5

identity of the straw man, *Semicassis cicatricosa* (Gmelin, 1791), and is consistent with the interpretation of every work consulted.

So how does *S. cicatricosa* differ from its closest relative, *S. granulata*? I have two specimens from NE Florida [Fig. 4; Fig. 5], 3 from Bimini, and one from Cuba which I would assign to *S. cicatricosa* without hesitation. Like the

various figures in the literature, It is relatively smooth with a predominance of close-set axial ridges which may, as on the dorsal convexity of the specimen in the type figure, give way to a malleated texture as in **Figs. 5 and 6**. The shell in **Fig 5** also shows rather regular enlargement of the some axial ribs on the spire and body whorl, where about a dozen discrete ridges run varying distances across the apical aspect before beginning to fade well above the periphery (form *peristephes* Pilsbry and McGinty, 1939). These ridges may be narrowly scalloped by up to four otherwise subtle and widely-spaced spiral cords crossing the more prominent portion of the ridges. This certainly contrasts sharply with the reticulated sculpture of the body whorl on the type figure of the Born species [**Fig. 2**], but the fact is that only a few of the approximately 75 Scotch Bonnets examined by me have that even checkerboard sculpture. Most of them actually exhibit broad, flat



spiral cords separated by deep narrow grooves which clearly dominate the axial sculpture [**Fig. 7, Fig. 8**], sculpture on the spire consists of very fine, discrete, close-set cords which on the body whorl become more widely spaced and granular as they are interrupted by the spiral grooves. On a substantial number of specimens the axial sculpture undergoes distinct obsolescence on the

body whorl [**Fig. 9**], which is definitely a tendency toward the sculpture of *S. cicatricosa*. Now it's time to come clean, I took some liberties here: **Figs. 6 and 8** are different aspects of the body whorl of the **same shell**; see **Fig. 10**! This Scotch Bonnet is wearing two hats, changing abruptly at a mid body whorl varix from typical (*S. granulata*) sculpture to that of *S. cicatricosa*. Given the variability evident in this series of specimens, I think the onion has been laid bare, and Dr. Abbott's unitarian concept can be safely applied. Scotch Bonnets can come in a spectrum of textures from "granulate" to smooth, but they're all members of the same species *Semicassis granulata* (Born, 1778).

Abbott (1968: 158) reported examining shells intermediate between *S. granulata* and *S. cicatricosa*, which fact induced his synonymy of the two. However, he never produced a figure of such an intermediate, and I don't recall seeing one depicted elsewhere in the literature.

* The *Zoophylacii* have provided a challenge to bibliographers, and I have incorporated the research of Myers (1949), Higgins (1950), and Wheeler (1956) into the Gronovius citations below.

Abbott, R.T., 1968. The helmet shells of the world (Cassidae). Part 1. *Indo-Pacific Mollusca* 2(9): 7-198. Aug. 30.

Born, I.A., 1778. *Index rerum naturalium Musei Caesarei Vindobonensis Verzeichniss der natürlichen Seltenheiten des K.K. naturalien Kabinets zu Wien: Erster Theil, Schalthiere. Pars 1 : Testacea*. J.P. Kraus, Vienna. [xxxviii] + pp. 1-458 + lxxviii] + 1 plate. Available on-line at:

<<http://www.archive.org/stream/ignatiibornindex00born#page/240/mode/2up>>.

Born, I.A., 1780. *Testacea Musei Caesarei Vindobonensis, quae jussu Mariae Theresiae Augustae disposuit et descripsit Ignatius a Born*. J.P. Kraus, Vienna. ii + pp. 1-442 + xvii.

Bouchet, P. and J.-P. Rocroi, 2005. Classification and nomenclator of gastropod families. *Malacologia* 47(1-2): 1-397.

Brünnich, M.T., 1772. *Zoologiae fundamenta praelectionibus academicis accomodata*. Grunde i Dyrelaeren, Hafniae et Lipsiae. Pp. 1-254. [not seen]

- Chemnitz, J.H.**, 1788. *Neues Systematisches Conchylien-Cabinet* 10. Kaspischen Buchhandlung, Nürnberg. [xxiv] + 376 pp., pls. 137-173. post Feb 1. [not seen, but refer to Richardson *et al.* (1979: pl. 153, figs. 1463-1464), the only figure for *Buccinum abbreviatum* Gmelin (1791: 3478; species 181), a *Demoulea* incorrectly synonymized with *B. cicatricosum* Gmelin, 1791 by Clench (1944: 8)].
- Clench, W.J.**, 1944. The genera *Casmaria*, *Galeodea*, *Phalium*, and *Cassis* in the western Atlantic. *Johnsonia* 1(14): 1-16. Oct. 28.
- Dance, S. P.**, 1986. *A history of shell collecting*. E. J. Brill - Dr. W. Backhuys, Leiden, 1986, pp. 1-265 + xv + 32 pls. + frontispiece.
- De Jong, K.M. and Coomans, H.E.**, 1988. *Marine gastropods from Curaçao, Aruba and Bonaire*. E. J. Brill, Leiden. v + pp. 1-261 incl. 47 pls.
- Dillwyn, L.W.**, 1817. *A descriptive catalogue of Recent shells* 1, 2. London, xii + pp. 1-1092. Available on-line at: <http://books.google.com/books?id=qOcQAAAAIAAJ&pg=PA147&lpg=PA147&dq=Mactra+hians&source=bl&ots=maO0facshf&sig=cAQp9SfvZzAXDRMCwomZVv7iHSs&hl=en&ei=BdgKTOHOCMOclqfMk7ipDg&sa=X&oi=book_result&ct=result&resnum=1&ved=0CAYQ6AEwAA#v=onepage&q=Mactra%20hians&f=false>.
- Gibson-Smith, J. and W. Gibson-Smith.**, 1981. *Casmaria atlantica* Clench (Mollusca: Gastropoda): thoughts on its evolution. *The Veliger* 23: 352-353. 1 April.
- Gronovius, L.T.**, "1764" [1763]. *Zoophylacii Gronoviani, fasciculus primus exhibens Animalia Quadripeda Amphibia atque Pisces, quae in museo suo adservat, examini subjecit, rite examinavit systematice disposuit, descripsit, atque iconibus illustravit Laur. Theod. Gronovius J.U.D.* Gronow, Leiden. [ii] + pp 1-136 + [4] + plates 1-"13" [14: 8, 8a]. [not seen].
- Gronovius, L.T.**, 1764. *Zoophylacii Gronoviani, fasciculus secundus exhibens enumerationem Insectorum, quae in Museo suo adservavit, examini subjecit, systematice disposuit atque descripsit Laur. Theod. Gronovius J.U.D.* Gronow, Leiden. [iii] + pp. 141-236 + plates 14-17. [not seen].
- Gronovius, L.T.** [F.C. Meuschen, ed.], 1781a. *Zoophylacii Gronoviani fasciculus tertius exhibens Vermes, Mollusca, Testacea, et Zoophyta, quae in Museo suo adservat, examini subjecit, systematice disposuit atque descripsit Laur. Theod. Gronovius.* Theodore Haak & Co. and Johannes & Samuel Luchtmans, Leiden. [iii] + i-iv + pp. 241-380 + [1-19 unpaginated] + 2 + pls. 18-20. [see also Meuschen, 1781: the 19 pp. unpaginated index] [not seen].
- Gronovius, L.T.** [F.C. Meuschen, ed.], 1781b. *Zoophylacium Gronovianum exhibens Animalia Quadripeda, Amphibia, Pisces, Insecta, Vermes, Mollusca, Testacea, et Zoophyta quae in Museo suo adservavit, examini subjecit, systematice disposuit atque descripsit Laur. Theod. Gronovius.* [This is a version bound with a new title page and containing the 1763, 1764, and 1781a works] [not seen]
- Gyllenhal, L.**, 1813. *Insecta Suecica. Classis I. Coleoptera sive Eleuterata, Tomus I, pars III. Scaris*. Pp. 1-734. [not seen; see <<http://sites.google.com/site/neotropicalcassidinae/>>]
- Higgins, L.G.**, 1950, The "Zoophylacium Gronovianum," 1781 and Meuschen's Index. *Journal of the Society for the Bibliography of Natural History* 2(6): 185-186. October. Available (subscription) on-line at: <<http://www.eupublishing.com/doi/abs/10.3366/jsbnh.1950.2.6.185>>.
- ICZN** (International Commission on Zoological Nomenclature), 1910. Opinions rendered by the International Commission on Zoological Nomenclature Opinions 1 to 25. *Smithsonian Institute Washington Publication no. 1938*: 1-61. July. [Pp. 48-50: Opinion 20. Shall the Genera of Gronow, 1763, be Accepted?] [not seen].
- ICZN** (International Commission on Zoological Nomenclature), 1925. Opinions rendered by the International Commission on Zoological Nomenclature Opinions 82-90. *Smithsonian Miscellaneous Collections* 73(3):1-40. 16 Dec. [Pp. 27-33: Opinion 89. Suspension of the Rules in the case of Gronow 1763, Commerson 1803, Gesellschaft Schauptplatz 1775 to 1781, Catesby 1771, Browne 1789, Valmont de Bomare 1768 to 1775.] [not seen].
- ICZN** (International Commission on Zoological Nomenclature), 1950. Meuschen's index to Gronovius, 1763-1781, "Zoophylacium Gronovianum." *Bulletin of the International Commission on Zoological Nomenclature* 4: 502-504. [not seen]
- ICZN** (International Commission on Zoological Nomenclature), 1954a. Opinion 260. Rejection for Nomenclatorial Purposes of the Work by Meuschen (F.C.) Issued in 1778 under the title Museum Gronovianum. *Opinions and Declarations Rendered by the International Commission on Zoological Nomenclature* 5(21): 265-280, 2 plates. 10 August. [not seen].
- ICZN** (International Commission on Zoological Nomenclature), 1954b. Opinion 261. Rejection for nomenclatorial purposes of the Index to the Zoophylacium Gronovianum of Gronovius prepared by Meuschen (F. C.) and published in 1781. *Opinions and Declarations Rendered by the International Commission on Zoological Nomenclature* 5(22): 281-296, 1 plate. 10 August. [Although not apparent from the title of the paper, all three "fascicles," Gronovius, 1763, 1764, and 1781a (together = Gronovius, 1781b) of the *Zoophylacii Gronoviani* ... as well as Meuschen's (1781) Index to the last, were apparently rejected with this action; see ICZN, 1958: 3)] [not seen].
- ICZN** (International Commission on Zoological Nomenclature), 1958. *Official index of rejected and invalid works in zoological nomenclature First installment: names 1-58*. International Trust for Zoological Nomenclature, London. x + pp. 1-14. 7 July.
- ICZN** (International Commission for Zoological Nomenclature), 1999. *International code of zoological nomenclature fourth edition*. International Trust for Zoological Nomenclature, London. Pp. 1-306 + i-xxix. Available on-line at: <<http://www.nhm.ac.uk/hosted-sites/iczn/code/index.jsp>>.
- Kreipl, K.**, 1997. *Recent Cassidae*. Verlag Christa Hemmen, Weisbaden, Germany. Pp. 1-151.
- Latreille P. A.**, 1825. *Familles naturelles du règne animal, exposées succinctement et dans un ordre analitique, avec l'indication de leurs genres*. Paris, J.B. Baillière, Paris. 1-570. Available on-line at <<http://www.biodiversitylibrary.org/bibliography/34914>>.
- Linnaeus, C.**, 1758. *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species cum characteribus, differentiis, synonymis, locis. Tomus I. Editio duodecima, reformata*. Laurentius Salvius, Holmia (Stockholm). Pp. 1-823 + i. [Reprinted in facsimile by the British Museum of Natural History, London, 1956 (+ v).] On-line at <http://gdz.sub.uni-goettingen.de/no_cache/dms/load/img/?IDDOC=265100>.
- Linné, C. von, 1767.** *Systema Naturae, seu per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Tomus II Editio duodecima, reformata*. Laurentius Salvius, Holmia (Stockholm). Pp. 533-1327.

- Available on-line at <http://gdz.sub.uni-goettingen.de/no_cache/dms/load/img/?IDDOC=215230>. [species no. 453, to which Meuschen (1787: 392, species no. 1290) made reference, is *Buccinum glaucum* L.]
- [Gmelin, J. F.] Linné, C. a., 1791. *Systema naturae 13th edition, volume 1, part 6: Vermes*. Emanuel Beer, Leipzig. Pp. 3021-3909. [Vermes testacea 3202-3748]. Available online at <<http://www.biodiversitylibrary.org/item/83098#5>>.
- Martini, F.H.W.**, 1773. *Neues systematisches Conchylien-Cabinet volume 2*. Nurnberg, Berlin. vignettes 17-26 + plates 32-65, figs 341-732. [not seen, but refer to Richardson *et al.*, 1979].
- Melville, R.V.**, 1974. Opinion 1023: Cassidae (Mollusca) and Cassidinae (Insecta), placed on the official list of family-group names in zoology. *Bulletin of Zoological Nomenclature* 31(3): 127- 129. [not seen]
- Meuschen, F.C.**, 1778. *Museum Gronovianum, sive index rerum naturalium tarn Mammalium, Amphibiorum, Piscium, Insectorum, Conchyliorum, Zoophytorum, Plantarum, et Mineralium, exquisitissimorum quam arte factarum nonnullarum, inter quae emmet herbarius siccus plantarum a Toumefortio Claitonio Linnaeo aliisque botanicis collectarum, quae omnia multa cura et magnis sumptibus sibi comparavit vir amplissimus & celeberrimus Laur. Theod. Gronovius J. V.D. Civitatis Lugduno Batavae** Senator et Scabinus Societatis Regiae Londinensis Brasiliaeensis et Hollandiae quae Harlemi est aliorumque Socius &c.* Rotterdam. [i]- [vi] + pp. 3-251 + [i] + 1 plate. Available on-line at: <http://books.google.com/books?id=i5g5AAAACAAJ&printsec=frontcover&dq=Gronovianum&source=bl&ots=zewJsFa471&sig=BF0SnBujQJktoHqT-i3TjbAbqg&hl=en&ei=KWLITLORFIK88gbUhvzVDA&sa=X&oi=book_result&ct=result&resnum=1&ved=0CBMQ6AEwAA#v=onepage&q&f=false> and <http://books.google.com/books?id=i5g5AAAACAAJ&pg=PA96&lpg=PA96&dq=Meuschen,+T.+1778&source=bl&ots=zewJuKe87A&sig=rb4YHwtsvGV65q2dKJ3qrnhUbwU&hl=en&ei=4EPpTOHJOISclgrrJXQCw&sa=X&oi=book_result&ct=result&resnum=1&sqi=2&ved=0CBMQ6AEwAA#v=onepage&q&f=false>
- Meuschen, F.C.** 1781. *Index, continens nomina generica specierum propria, trivialia ut et synonyma*. In L.T. Gronovius, *Zoophylacium Gronovianum, exhibens Animalia, Quadrupeda, Amphibia, Pisces, Insecta, Vermes, Mollusca, Testacea, et Zoophyta, quae in museo suo adservavit, examini subjecit, systematice disposuit atque descripsit*. Theodore Haak & Co., Samuel and Johannes Luchtmans, Leiden. 1-19, unpaginated. [not seen].
- Meuschen, F.C.**, 1787. *Museum Geversianum et index rerum naturalium continens instructissimam pretiosissimorum omnis generis ex tribus regnis naturae objectorum quam ... Abrahamus Gevers*. P. and J. Holsteyn, Rotterdam. iv + 659 pp. Available on-line at: <http://books.google.com/books?id=dZg5AAAAACAAJ&pg=PA452&lpg=PA452&dq=Meuschen,+F.C.,+1787.+Museum+Geversianum&source=bl&ots=3dtbyU7rh&sig=dwXamCrvWEv9_2gL-A8CrgDMY78&hl=en&ei=fCXITK7pD4KB8qbhrs-DA&sa=X&oi=book_result&ct=result&resnum=2&sqi=2&ved=0CBYQ6AEwAQ#v=onepage&q&f=false>.
- Myers, G.S.**, 1949. The family name of the characid fishes. *Copeia* 1949(3): 195-204. 15 Sept. Available (subscription) on-line at: <<http://www.jstor.org/pss/1438986>>.
- Richardson, L., R.T. Abbott, and G.M. Davis**, 1979. Early references to the figures in the *Conchylien Cabinet* of Martini and Chemnitz: volumes I-XII. *Tryonia* 2(1): 1-225 + pls. 1-193 + vignettes 1-44; 2(2): 226-427 + pls. 1-237 + vignettes 1-26. August 1.
- Rosenberg, G.**, 2009. Malacolog 4.1.1: A Database of Western Atlantic Marine Mollusca. [WWW database (version 4.1.1)] URL <http://www.malacolog.org/>.
- Suter, H.**, 1913. *Manual of the New Zealand Mollusca*. Government Printer, Wellington. xxii + 1120. Available on-line at <<http://www.archive.org/details/manualofnewzeala00sute>>.
- Wenz, W.**, 1938- 944. *Handbuch der Paläozoologie, herausgegeben von O.H. Schindewolf. Band 6. Gastropoda Teil 1: Allgemeiner Teil und Prosobranchia* 1-1639 + xii + 1-9:

Teil 1	1-240	March, 1938
Teil 2	241-480	October, 1938
Teil 3	481-720	July, 1939
Teil 4	721-960	August, 1940
Teil 5	961-1200	October, 1941
Teil 6	1201-1506	October, 1943
Teil 7	1507-1639 + i-xii (the latter, of course, contained the chronology)	November, 1944. Date(s) for 9 pp. of corrigenda appearing at the end of the work not given.
- Wheeler, A.C.**, 1956. The *Zoophylacium* of Laurens Theodore Gronovius. *Journal of the Society for the Bibliography of Natural History* 3(3): 152-157. Jan. Available (subscription) on-line at: <<http://www.eupublishing.com/doi/abs/10.3366/jsbnh.1956.3.3.152>>
- Winckworth, R.**, 1926. Notes on nomenclature. 1. The *Schediasma* of Meuschen. *Proc. Mal. Soc. London* 17(2-3): 103-106. [not seen]
- Woodward, B.B. et al.** [eds.], 1903-1940. *Catalogue of the books, manuscripts, maps and drawings in the British Museum (Natural History)*. Vols. 1-5, 6-8 [supplement]. Facsimile edition. Maurizio Martino, New York.viii + Pp. 1-2403 + 1-1480 + 1-48 (addenda/corrigenda Vol. 1-2 included with vol. 6).

** *Lugdunum batavorum* is Leiden, it was a major printing and publishing center in the 16th-18th centuries

The World of Shells by Barbara Cathy



The exhibit "The World of Shells" created by the Jacksonville Shell Club, Inc. was an integral part of a celebration of the shell at The Beaches Museum & Historical Center. The club's exhibit was joined by a display of Mary Robertson's beautiful shell creations and an exhibit of shell photographs by John Kuss. The exhibit ran from November 9th 2010 to January 8th 2011.

The inspiration for the exhibit was the shell itself, which is magnificent in its diversity of form and use over the ages. The club's exhibit dealt with all facets of shells and covers scientific, cultural and

creative inspiration of these natural creations. Major themes were the science of malacology, including breathtaking photographs of living mollusk and their shells, and the wonders of shell collecting. There were separate areas for Northeast Florida mollusks, rare mollusks of the world, fresh water and land mollusks, unusual and distinctive forms and colors, arts and crafts, which use or are inspired by shells, and historic uses of shells in practical or decorative items. The exhibit was well designed and had something of interest for all viewers.

Charlotte Thorpe was the chairman for the project. Many club members shared items from their collections and helped with the installation. Notable were Harry Lee, Claire Newsome, Billy Brown, Barbara Cathey, Barbara Moon, Laura Rowley, Carmella Mastronardi and Judy Blocker.



Reports from the museum staff indicated that the exhibit was very well received by the public who viewed it. Attendance was reported as 2,000 members and visitors viewing the exhibit. The club can be proud of this effort in its ability to educate the public while it entertains. Here's hoping we can have such an opportunity again.

Photos by Laura Rowley