SHELL·O·GRAM
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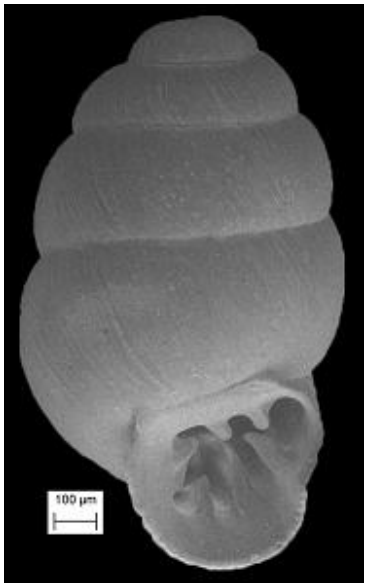
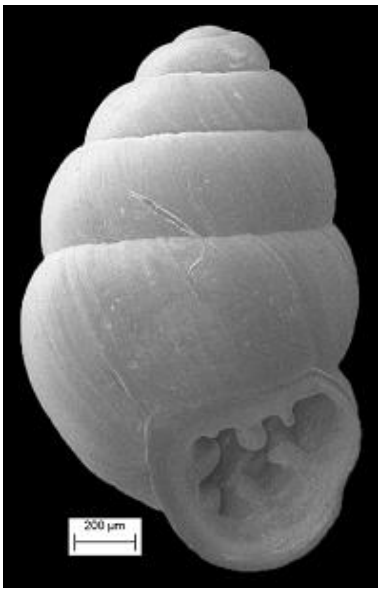
July, August, 2022 _____ Volume 63 (no. 4)

Upcoming meetings

The Jacksonville Shell Club, Inc. (JSC) customarily meets on the **fourth** Thursday of each month except for November (a week earlier due to Thanksgiving) and December (traditional Xmas get-together/TBA) in Function Room D of the Southeast Branch, Jax Public Library <https://www.jaxpubliclibrary.org/locations/southeast-regional>. At the time of this *Shell-O-Gram* issue, the library remains open to us despite the continuing COVID-19 pandemic. Of course, everyone in attendance is expected to have been fully vaccinated, be feeling well, and to comply with CDC recommendations for masking and social distancing. Our **July** meeting will convene on the **28th** at 7:00 PM. Paul Jones will present a tour-de-force treatment of the Florida Fighting Conch, *Strombus alatus* Gmelin, 1791. Inshore populations of this iconic species find their Atlantic seaboard northern limits in St. Augustine, where shells are unusually large and colorful and where Paul happens to keep the home fires burning.





The main program will deal with a recently excavated fossil bed near Orlando rich in nonmarine remains. Harry Lee will demonstrate this unusual fauna, composed mainly of a handful of freshwater mollusk species but also containing a more diverse, if less common and of generally lesser size, land shell component. Over three dozen species, e.g., *Vertigo milium* (1.32mm, **L)** and *V*. sp. cf. *V. ovata* (1.61mm **R** have been culled and imaged. A few species appear to be extinct, and one is a "lost species" with an intriguing backstory (for **August** meeting see next page).

Membership Dues are payable in **September** each year.
Many of you have complied, but if you're in arrears, please send in your dues:
Individual $15.00; Family $20.00, to
Harry G. Lee, Treasurer, JSC
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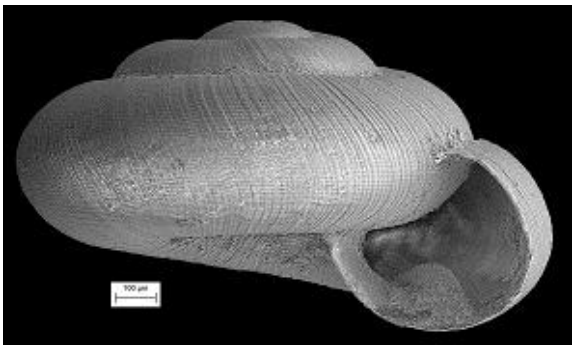
The club customarily meets monthly at the Southeast Branch of the Jacksonville Public Library, 10599 Deerwood Park Blvd,, Jacksonville, Florida <https://www.jaxpubliclibrary.org/locations/southeast-regional>. Please address any correspondence to the club's address above. Annual membership dues are $15.00 individual, $20.00 family (domestic) and $25.00 (overseas). Lifetime membership is available. Please remit payment for dues to the address below and make checks payable to the Jacksonville Shell Club. The club's newsletter and scientific journal, the *Shell-O-Gram* (ISSN 2472-2774) is issued bimonthly and mailed to an average of 15 regular members and friends by specific request and no less than ten scientific institutions with permanent libraries. An electronic (pdf) version, identical except for "live" URL's and color (vs. B&W) images, is issued two or more days later and sent to about 200 individuals who have demonstrated an interest in malacological research and/or Florida mollusks. These pdf's (ISSN 2472-2782) have also been posted to <http://jaxshells.org/letters.htm> since November, 1998. We encourage members and other friends to submit articles for publication. Closing date for manuscript submission is two weeks before each month of publication. Articles appearing in the *Shell-O-Gram* may be republished provided credit is given the author and *Shell-O-Gram* Editor-in-Chief. As a courtesy, the editor and author should receive a copy of the original and republication version respectively. Contents of the *Shell-O-Gram* are intended to enter the permanent scientific record. The club is a chartered corporation in the State of Florida and a non-profit educational organization under the provisions of Section 501(c)(3) of the US IRS Code.

Upcoming meetings, cont'd.

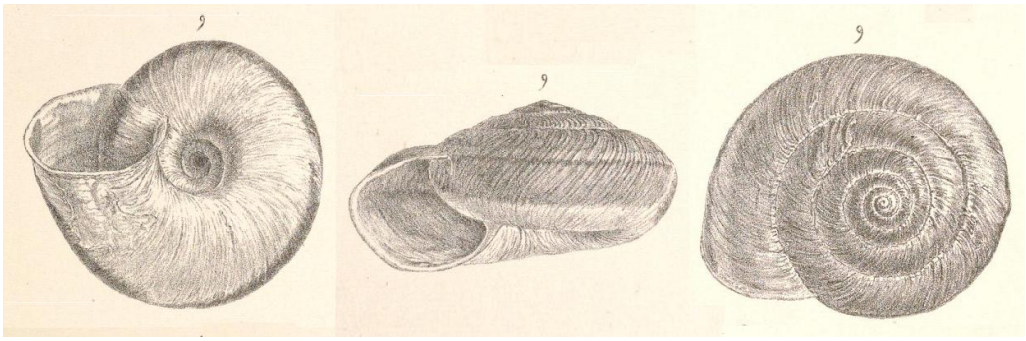
The JSC expects to meet on **August 25** at the usual time and place with COVID restrictions. The shell of the month will be presented by Harry Lee on the minute land snail genus Punctidae. Included will be several genera from around the world, all four species native to the eastern portion of North America (in the type genus *Punctum*; e.g., the one mm *P. smithi* **L**), some new records of exotic confamilials on our continent, a small group of normally sinistral species from Down Under, and last, but decidedly not least, a unique mutant sinistral specimen, the only one known in the **family** - and collected by a JSC member, Lori Schroeder!



Later Rick and William Edwards will collaborate on a report of their March, 2022 trip to the Caribbean island of Cozumel, Mexico. There they lodged at a dive resort and pretty much dedicated their time to diving in those clear waters. A profes- sional grade video and other commemoratives of the expedition will accompany their presentation.

Aenigmatic *Aegistohadra* Part 2 (conclusion)
-or-
An account of a pretty astounding clade of sinistral and enantiomorphic land snail taxa

In the preceding issue we opened the book on the genus *Aegistohadra* Wu, 2004, which was distinguished from other members of the Camaenidae: Bradybaenidae by certain unique genital characters, and focused on its original monotype, *Nanina delavaya* Heude, 1885 (iconotype **R**; Lee Collection DaLi, Yunnan Peoples Republic of China Dmax 45 mm **L below**).



Until less than three months ago, this stately sinistral snail species stood solitary in the topical genus as the original **monotype**. Then came a provocative paper by Jirapatrasilp *et al*. (2022). Using soft anatomic and molecular genetic character analyses, the authors added four species to its genus. This new constituency included variously shaped sinistral and enantiomorphic species, one new to science and the others historically assigned to other genera based on shell characters alone. For us shell collectors the mix was a rather implausible assembly. In this installment we'll look at each member of this conchological *olla podrida* while adding a little spice to it – four species not included by Jirapatrasilp *et al*. So here is a compendium the remainder of this nonconformist nonet.

2. *Aegistohadra dautzenbergi* (Fulton, 1899)

Heretofore considered a member of the genus *Amphidromus*, this species occurs in SE Asia and China, is found commonly with both dextral and sinistral chirality, and has a plethora of colors and patterns including many named forms of the synonymous "*A*." *pervariabilis* Bavay & Dautzenberg, 1909a: 246.**L** Lao Cai Province, NW Vietnam, 2019 (34.6, 34.8 mm); **R** Yunnan, Peoples Republic of China 2015 (34, 35 mm); all Lee Collection.

3. *Aegistohadra roemeri* (L. Pfeiffer, 1863)

Originally placed in the genus *Bulimus*, but, like the preceding, it had a long life in *Amphidromus* and gathered some synonyms. On **R** is the lectotype, Hmax 23.1mm NHMUK 19601540 (after Sutcharit *et al*., 2015). Thus far it appears this species is exclusively sinistral. Type locality is the Lao Mountains, Cambodia, and it has been reported from Vietnam and Laos. No material is in the Lee Collection.

4. Aegistohadra mirifica (Bavay & Dautzenberg, 1909)

The original description (Bavay and Dautzenberg, 1909a: 235-236), and the companion iconotype: Bavay and Dautzenberg (1909b: plate 6, figures 1-4; see <https://www.biodiversitylibrary.org/page/27393444>) indicate that the shell is (exclusively) sinistral and wider than high. On close examination the lectotype [MNHN 2000-2047; URL at end of entry*] seems identical to the iconotype and might be the *de facto* holotype; see also the typology of *A. contractiva* and *A. elata* herein.

First collected by Colonel Louis Gabriel Martin Messager (see Breure and Páll-Gergely, 2019) between Lac-Kha and Xiu-Mau, Tonkin (Vietnam).

Digital image on **L** compliments of Yang Hao. Another enantiomorphic pair in the Lee Collection was collected in a “Forest in mountains,” Malipo, Yunnan Province, Peoples Republic of China, 2017. The sinistral shell has a Dmax of 26.2mm and Hmax 30.8mm; the dextral: Dmax 25.6 mm, Hmax 30.9 mm. *<https://science.mnhn.fr/institution/mnhn/collection/im/item/2000-2047>

5. *Aegistohadra zhangdanae* Jirapatrasilp & C. - T. Lee *in* Jirapatrasilp *et al*., 2022

The image at the **bottom of the preceding page** depicts an enantiomorphic pair in the Lee Collection found in Guangxi Province, Peoples Republic of China; the sinistral shell has an Hmax of 34.8mm. The type locality is Baise Prefecture, Guangxi Province, China. The sinistral holotype is in the National Museum of Natural Science of Taiwan (NMNS-8338-001), and five paratypes [one sinistral and one dextral figured] were designated. The species was described as chirally dimorphic, and ovate conical to elongate conical, rather thick and glossy with "SW ≤38.5mm, SH ≤27mm" [these data are probably transposed as the figured shells have a Hmax far greater than Dmax] quite like the shells above.

6. *Aegistohadra rara* (Wang & Parsons, 2021) new generic assignment (comb. nov.)

This name replaces *Helix* (*Camaena*) *contractiva* var. *minor* Bavay & Dautzenberg, 1909b: 171- 172 [unfigured], which has numerous senior primary homonyms. Wang and Parsons discovered a syntype (dextral) from Muong-Bo, Vietnam in the Dautzenberg Collection at the Royal Belgian Institute of Natural Sciences (RBINS MT709), which they figured for the first time. Two dextral and two sinistral shells from S.E. Yunnan Province were also treated. Originally collected by Colonel Louis Gabriel Martin Messager (see Breure and Páll-Gergely, 2019). **R**: Shells collected in "forest and mountains" N. of He Kou, Yunnan, Peoples Republic of China in 2017. Dmax dextral shell 30.1mm; sinistral 31.8mm are in the Lee Collection; digital image by the late Yang Hao. Although introduced as *Camaena contractiva rara*, it is here elevated to full species status and transferred to *Aegistohadra*, wherein it is one of six enantiomorphic species – and of two (with *A. jiahei*) thus placed for the first time.

7. Aegistohadra jiahei (Yang, Fan, Quiao & He, 2012) comb. nov.

Above: Guangxi, Peoples Republic of China. Digital image by Yang Hao. The Lee Collection included six sinistral and two dextral specimens measuring 29.9-33.4 mm and 32.3-36 mm in Dmax respectively with somewhat

variable D/H ratios. Two of each chirality have been deposited at the Florida Museum of Natural History (not catalogued at this time). All are from Guangxi Province, but two are more precisely sited therein: Baise and Leye, which put them close to the border with Vietnam (S) as well as Yunnan (W) and Guizhou (N) Provinces, China [maps on **L**].

Bradybaena jiahei was described from an ununspecified number of exclusively sinistral shells collected in Leye County, Guangxi Province, Peoples Republic of China. It differs from *Aegistohadra mirifica* in being distinctly umbilicate, having a lower profile, and displaying a consistently different color pattern lacking the green tint. *A. rara* has a lower profile, a proportionately smaller aperture with a more horizontal axis, and a different color pattern. This species is transferred to *Aegistohadra* Wu, 2004 on conchological grounds, which include enantiomorphy, a characteristic of no less than five other species treated in this report.

8. *Aegistohadra contractiva* (Mabille, 1889) comb. nov.

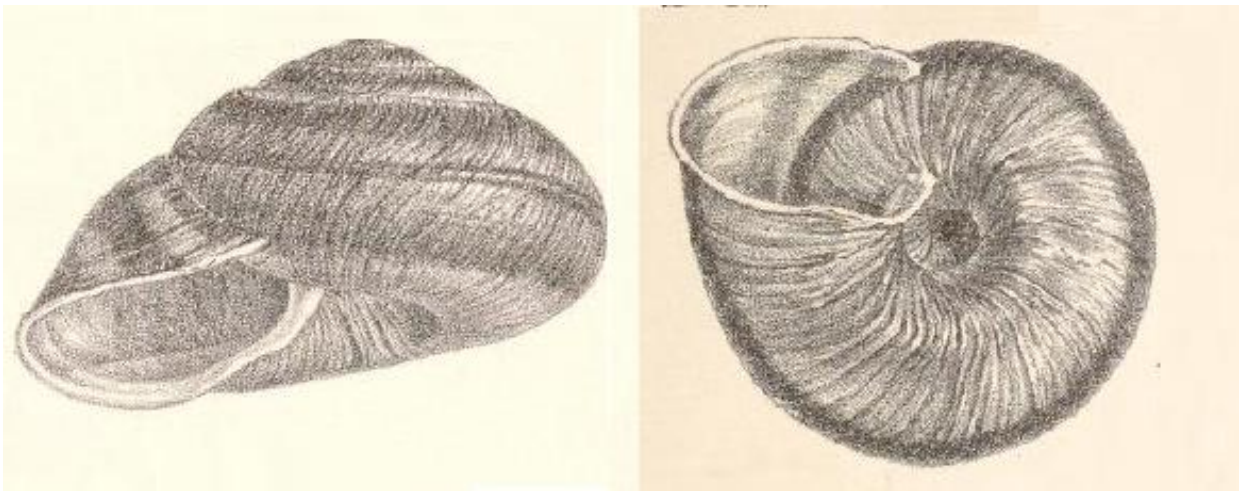
One of three nearly identical specimens in Lee Collection; collected north of Hekou, Yunnan Province, Peoples Republic of China. This one, slightly larger than the others, has a Dmax of 40.9mm.

Helix (Camaena) contractiva Mabille, 1889: 6. was described from Tonkin. Bavay and Dautzenberg (1909b: 172 <http://biodiversitylibrary.org/page/27393333>) considered this species variable in size, shape, and chirality (e.g., “Monstr. dextrorsum nov. ..... [possibly] "enroulement indifférent"). They figured “le type de cette espèce” [*fide* Joubin] for the first time (*Idem*: pl. 5, figs. 1-3: <http://biodiversitylibrary.org/page/27393442>; see next page). Three syntypes, MNHN 2000-2022, are posted on the database of the mollusk collection of the Muséum national d’histoire naturelle (Paris) at <https://www.gbif.org/occurrence/1019689119>.

The first of these syntypes [below **L**] bears a very close resemblance to the aforementioned "type" [below **R**]

Is this the *de facto* holotype that Joubin confirmed for Bavay & Dautzenberg? The other two syntypes (one of them on the **L**) look a lot more like the specimens in the Lee Collection on the preceding page, which, in accordance with Bavay & Dautzenberg (1909b), are here considered mere forms of the "type" - but with some reluctance; see the chronicle of *Aegistohadra rara* above.

Helix seraphinica Heude (1890a: 225; 1890b: 141< http://biodiversitylibrary.org/page/34061545>; pl. 38, figs. 11 [n=2] <http://biodiversitylibrary.org/page/34061605> **below**) has a type locality N. of Hekou, Yunnan



Province, China. Named for its collector, Père Séraphin Couvreur (1835-1919), it is quite similar to the specimens in the Lee Collection identified as *A. contractiva* on the preceding page as well as syntypes 2 and 3 thereof [**above**] in MNHN 2000-2022, their lips being more deflected and profile lower than syntype 1 (? "le type"). Is this a junior synonym of the Mabille taxon, as considered possible by Bavay and Dautzenberg (1909b: 172-173)? Is the "real" *H. contractiva* syntype 1, and syntypes 2 and 3 are *H. seraphinica*? Of quite

considerable interest is the fact that Wu (2004: 118) expressed belief this nominal taxon belonged in his new genus *Aegistohadra,* but confessed he had no anatomic material for confirmation and did not formalize the assignment. He found two paratypes at the Institute of Zoology, Chinese Academy of Sciences, Beijing (Wu, 2004: 118, figs. A-F: IZCAS-type-3071-1, 2 <https://www.biodiversitylibrary.org/page/28112688>), which are quite likely conspecific with the iconotype above. The holotype of this species, and all of Heude's taxa, probably remained in his museum in Shanghai (Fischer, 1904; Johnson, 1973; Li-chuan, 2013), predecessor to the Shanghai Natural History Museum. Johnson (*idem*) cited two other paratypes (MCZ 167156; USNM 472130 [both confirmed on-line but type status not indicated]. No indication of dextral material was made by the author, Père Pierre Marie Heude (1836-1902 <https://en.wikipedia.org/wiki/Pierre_Marie_Heude>) or Wu (2004). See discussion of *A. elata* below. Elaboration of available authentic, acquisition of new and better, material (e.g., for dissection molecular genetic analysis) will clarify relationships in this species (and genus!).

9. *Aegistohadra elata* (Bavay & Dautzenberg, 1909) comb. nov.

Guangxi, southern Peoples Republic of China. Dmax 50.3mm Lee Collection. This is *Helix* (*Camaena*) *contractiva* Var. *elata* Bavay & Dautzenberg, 1909b: <https://www.biodiversitylibrary.org/page/27393333>. The shell above is larger, proportionately taller, more globose, and has a proportionately wider, more deflected aperture, and smaller umbilicus than the three specimen lot from the Lee Collection treated as *A. contractiva* at the beginning of the immediately preceding vignette or the three MNHN syntypes of that taxon earlier referenced. Furthermore, the shell surface has a shagreen texture imparted by fine spirals and shows much reduced malleation vs. that of those shells, which characters impel me to afford species-level distinction as I did with *A. rara*. However, that exaltation will necessitate a replacement name as it incurs primary junior homonymy of a handful of taxa, the earliest being *Helix elata* Rossmässler, 1837, which, interestingly, remains one of a very few remaining in that genus: <https://molluscabase.org/aphia.php?p=taxdetails&id=1349638>.

A very similar, but smaller, specimen labelled *Helix* (*Camaena*) *contractiva* Var. *elata and* marked "type" was located by Yves Samyn, Conservator of the Recent Invertebrates (non insects) Collection of the Royal Belgian Institute of Natural Science (RBINS). Dr. Samyn kindly posted images at <http://virtualcollections.naturalsciences.be/virtual-collections/recent-invertebrates/mollusca/gastropoda/helicidae/helix-camaena-contractiva-var-elata-bavay-dautzenberg-1909>. Bearing catalogue no. I.G. 10591/MT.708 and reposing in RBINS Dautzenberg Collection, the shell measures in the range of 35-36 mm Dmax based on the companion scale. This is slightly more than the 34 mm in the original description, but it is certainly a syntype, perhaps the holotype, as the label confirms it was collected by Col. Messager (see Breure and Páll-Gergely, 2019) in Gia Phú, Tonkin, a low-lying rural commune (WGS 84: 20° 21′ 11″ N, 105° 48′ 51″ E) in Ninh Bình Province, 50 mi S of Hanoi, Vietnam and about 120 mi from Guangxi Province, China) during 1908. *Helix seraphinica* Heude, 1890 is closely related; see discussion of *A. contractiva* immediately above.

Caveat: The *Aegistohadra* addenda (nos. 6-9) treated above are based exclusively on conchological characters (6-7 by affinity with *A. mirifica* and *A. zhangdanae*, and 8-9 with *A. delavayana*). That approach stands in stark contrast to the reticence of Jirapatrasilp *et al*. (2022) and Wu (2004) to apply conchological characters alone in the understanding of the phylogeny of this and other taxa in the Camaenidae. My apologies to our readers if this otherwise unsupported taxonomic leap proves inaccurate in the long run.

Acknowledgments: I wish to thank Drs. Yves Samyn (Brussels) and Philippe Bouchet (Paris) for sharing insights on, and assisting access to, relevant type material under their stewardship. Chi-Tse Lee of National Chung Hsing University, Taiwan kindly provided a pdf of Jirapatrasilp *et al*. All unattributed photographs were provided by Bill Frank, who also hosts a web version of this essay at <http://www.jaxshells.org/prc26.htm>.

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Autumn Field Trip

Paul Jones <jonesp0854@gmail.com> has begun plans for a JSC return trip to the Jupiter Sound/Foster Park/Peanut Island area for short stay - arriving Wednesday, October 26, leaving Friday, the 28. He'll let folks decide their own lodging, but he highly recommends we all stay in the same motel for ease of coordination and communication. He personally loved the place where we stayed at this April, but is throwing that out for thoughts and preferences. Give him some feedback folks, and we shall proceed with firmer details!

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