



SHELL·O·GRAM

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The club will not meet in July because some members will be out of town. Use this time to think of a Shell-of-the-Month you'd like to present to the group later this year. Call or email Harry Lee: (904) 389-4049; shells@hglee.com and tell him how you plan to help the club in this way.

The August meeting will be on Thursday, the 22th. After Harry Lee presents a recently discovered new species of landsnail, the Florida Scrub Threetooth, we'll open an "ID Clinic." There will no Shell-of-the-Month, but there will be two short programs. Charlotte Thorpe will report on the COA Convention held from July 17 to 21, and her four days of diving offshore of Panama City, Florida. Harry Lee will present a memoir of a five-day shelling expedition to North Carolina.

— A fossil unearthed in Great Britain may end a long-running debate about the mollusks, one of life's most diverse invertebrate groups: Which evolved first, shelled forms like clams and snails, or their shell-less, worm-like relatives?



The small new fossil, found in marine rocks along the English-Welsh border, provides the best fossil evidence yet that the simpler worm-like mollusks evolved from their more anatomically complex shelled brethren, rather than the other way around.

The discovery reinforces previous findings from molecular sequencing studies and helps clarify the evolutionary relationships of mollusks, a broad category that includes not only oysters and mussels but also slugs, squids and octopuses.

Left:

Scientists have discovered a rare fossil called *Kulindroplax*, the missing link between two mollusc groups, which is revealed (at left) in a 3D computer model.

(Credit: Image courtesy of Imperial College London Image courtesy of Yale University)

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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.

President's Message:

Dear JSC Members,

Thank you to everyone who attended and contributed towards our 2013 Shell Show. Although it was not as successful as we had hoped, there were many lessons learned of which will be the primary topic of discussion in our next Board of Directors meeting slated for early August. In our August JSC meeting we will present the information discussed, gather additional ideas from members and document a new action plan for next year. For those eager to get into the field, we have some very low tides in the fourth week of July. (**Low tides are listed on page 7.**) I look forward to seeing everyone at our meeting in August.

Take Care!

Brian

Kulindroplax continued:

"This is a kind of missing link with a worm-like body, bearing a series of shells like those of a chiton or coat-of-mail shell," said Derek E. G. Briggs, director of the Yale Peabody Museum of Natural History and one of the paleontologists who studied the new fossil, *Kulindroplax perissokomos*. The researchers report their findings online Oct. 3 in the journal *Nature*.

The evolutionary relationships of worm-like mollusks, known as Aplacophora, has been a subject of controversy. Previously thought to be a product of the explosion of diversity during the early Cambrian period, they are now shown to have evolved probably 40-50 million years ago by losing shells like those on *Kulindroplax*.

Kulindroplax represents the first mollusk with an unambiguous combination of valves, or exterior shells, and a worm-like body, said Mark D. Sutton of Imperial College London, the paper's lead-author.

The researchers found the specimen of *Kulindroplax* more than 10 years ago in the Herefordshire fossil deposit, a rich assemblage of ancient marine life forms more than 400 million years old. About 2 cm wide and 4 cm long, *Kulindroplax* was buried in volcanic ash deposited on the sea floor. The researchers later reconstructed its three-dimensional shape using computer software, revealing both form and structure in fine detail. In addition to its seven shells, *Kulindroplax* had a dense covering of spicules over the rest of the body, which it probably used to gain purchase as it crawled on the muddy sea bed.

Kulindroplax is coined from the Greek words for a cylinder and a plate, referring to the rounded body with its series of shells.

The other authors of the paper are David J. Siveter of the University of Leicester, Derek J. Siveter of the University of Oxford and Julia D. Sigwart of Queen's University, Belfast.

Support for the research was provided by the Natural Environmental Research Council.

Hirsute Hermaphrodite Hobo from Eurasia working his/her way through Cornell

by Harry G. Lee

A decade ago, Awaiting the airport shuttle vehicle while concluding a short stay at the La Tourelle Inn on the outskirts of Ithaca, New York, I decided to take a look around a half-acre artificial "fishing pond" on the spacious premises. The setting was a picturesque pasture-like hillside overlooking Cornell University and Lake Cayuga and to the north and northwest. Although overcast, the temperature was mild for a mid-November day; Ithaca had yet to receive more than token snowfall this autumn.

Ignoring the few gawkers, I nosed around the pond's margins and easily found a fair number of living landsnails on the lawn, especially under hewn larger weeds. There were four species - *Novisuccinea ovata* (Say, 1817), *Cochlicopa lubrica* (Müller, 1774), a small nearly black slug, and, most abundantly, a quarter-inch, five-whorled globular snail (**Figs 1a, b below**) I took to



be a Slit-mouth (*Stenotrema*^b) of some sort because of its having Pussy-willow-bud-like texture. I popped the snails into an evacuated (and thoroughly-rinsed) shampoo sampler supplied by the inn, pocketed the collection, and shuttled to the Ithaca Airport. While languishing in La Guardia, I couldn't resist the urge to retrieve the "collecting vial" and inspected the shells more closely. I noticed that a densely hirsute *Stenotrema*-like periostracum^b accounted for the shell's unusual surface but no evidence of the thickened lip and constricted aperture that characterizes that North American genus (**Fig. 2; the sole FL species**). After some reflection, and prompted by a flicker of déjà-vu, my mind finally broke loose from the box, and I considered this critter might be a non-native species.

On arrival in Jacksonville that night, despite temporary dismay with the Jaguars' last minute loss to the Titans, I went to microscope, collection, and



books to sort out the identity of this probable vagabond. Conclusion: I had picked up my second batch (the first first was in ME on my 45th birthday) of Hairy Helicellid, a species native to northwest Europe east through through northern Asia, where it reaches the Amur River. The scientific cognomen at the time was *Trichia*^a *hispida* (Linnaeus, 1758) literally: the Hairy (Latin), Hairy (Greek) Snail], and its taxonomy goes like this: Mollusca: Gastropoda: Stylommatophora: Pulmonata: Helicoidea: Hygromiidae: Hygromiinae.

Since I wondered how far and how long it had traveled in North America, I dug further into my library and found **no mention** of the species in a host of state and regional surveys including NH, CT, NY, NJ, OH, IN, IL, MI, and WI. Nonetheless, I found a few references and, using the Internet (including good advice from my friends on the Conch-L list-serve), patched together the following summary over about a ten day period:

CANADA:

NEWFOUNDLAND: "Scattered localities around the province" (Newfoundland Mus.; Ron Noseworthy, pers. comm. 11/28/04)
 NOVA SCOTIA. Halifax. (T. Bland! Binney, 1878: 385); Pictou Co., Granton (Museum of Comparative Zoology (MCZ); Dundee, 1974); Wolfville (Moore, 1962); Victoria; Cape Breton Co.; Inverness Co. (Macmillan, 1953)
 PRINCE EDWARD ISLAND. Charlottetown (B. Long! 1912; Pilsbry, 1939)
 NEW BRUNSWICK. (MCZ; Dundee, 1974)
 QUEBEC. Montreal (Cockerell, 1889: 87); Quebec City (La Roque, 1940)
 ONTARIO. Ottawa (La Roque, 1940); Drift, Kemptville Creek (Wayne Grimm! Fred Schueler pers. comm. 12/15/97); "Scattered but widely distributed on roadsides, towns, and gardens throughout the Mixedwood Plain ecozone" (Grimm, 2004; linked below)

UNITED STATES:

MAINE: Knox Co., Rockland and Thomaston (Lermond, 1908).; Hancock Co., Stonington (H. G. Lee! 8/2/85; Lee Coll.); [Not recorded for ME by Morse (1864)]
 MASSACHUSETTS. Martha's Vineyard, near Gay Head (Thomson, 1885: 369; not collected by Thomson)
 VERMONT. Washington Co., Montpelier (before 6/94; University of Florida (UF) 222351)
 NEW JERSEY. Atlantic Co., Atlantic City (before 6/94; UF 222607)
 NEW YORK. Schoharie Co., 1.4 miles S of Sharon (L. Hubricht! 1958; Field Museum of Natural History (FMNH) 78676); 3.6 mi NW of Richmondville (L. Hubricht! 1981; FMNH 267849; 267850); Tompkins Co., Taughannock Falls (H. J. Hopman! 10/81; Hopman, 1982)
 ILLINOIS. Cook Co., Glencoe, Chicago Botanic Garden (J. Gerber! 2001; FMNH uncatalogued); Cook Co., along Skokie River, 0.25 miles west of Willow Road Dam (J. Slapcinsky! before 12/04; UF 294176); Will Co., Lillycache, near Joliet (E. E. Hand! 1911; FMNH 65020) *Stenotrema* sp. misidentified as *T. hispida* on collection database fide J. Gerber, 11/29/04 *in litt.* 10/28/04.
 ALABAMA. Mobile Co., Mobile (before 11/97; UF 97804; identification confirmed in litt. J. Slapcinsky 12/1/04)

Among the special resources on the Internet were an excellent report on the [landsnail fauna of the Mixedwood Plain Ecozone of Ontario and Quebec](#) by Wayne Grimm, images of living snails at <http://www.biopix.dk/Photo.asp?Language=da&PhotoId=14389>, and the searchable databases of the [Florida Museum of Natural History \(Gainesville\)](#) and [Field Museum of Natural History \(Chicago\)](#).

Thus "NEW YORK: 1 mi. south Ithaca College, Ithaca (H. Lee! 11/21/04; Lee Coll.; Carnegie Museum [CM 70366])" can be added to the apparently expanding range of this little snail, whose peregrinations seem to have been less extensive (or otherwise less noticed) in our country than across the eastern portion of our northern neighbor. Of special interest is the record by Dr. Hopman from Taughannock Falls, near the opposite end of Lake Cayuga, at a time when the Dutch physics professor found no *T. hispida* in Ithaca. Not unlikely the snail has extended its range locally in the intervening 23 years, and human agency may well have contributed thereto. How much further it has spread is an open question, but we can be certain of one thing, we shouldn't underestimate its potential to girdle the continent as it nearly has in its native Eurasia, wherein natural enemies are more likely encountered. Consider this: as of thirty years ago, *Trichia*^a *hispida* had been intercepted by the U. S. Department of Agriculture in 13 states and the District of Columbia hitchhiking on 33 species of plants, from shamrock to cauliflower to a walnut log (as well as military cargo) originating in 17 countries from Europe to Iran to Australia (Dundee, 1974).

Footnotes:

^a*Trichia* Hartmann, 1840, of which our snail is the type species by subsequent designation (Herrmannsen, 1849), is actually a junior homonym of the crustacean genus *Trichia* De Haan, 1839. A petition for the conservation of the Hartmann *nomen* was rejected (ICZN, 2004; Polaszak, 2004), and the earlier *Trochulus* Chemnitz, 1786, considered an objective synonym, was placed on the *Official List of Generic Names*. Thus the vagabond is more properly referred to as *Trochulus hispidus*. This action is quite exceptional in the annals of molluscan nomenclature since the masterwork in which the genus was named (Martini and Chemnitz 1769-1795 *Conchylien Cabinet*; see Lee, 2013) was officially rejected as non-binominal (ICZN, 1944, 1954).

^b In his description of *Helix hirsuta*, Thomas Say (1817: 17) made comparison to *Trochulus hispidus* (then *Helix hispida*). Say's species was ultimately placed in *Stenotrema* Rafinesque, 1819, in which genus, although not the type species, it is the first to have been described. Thus I was not the first to appreciate the similarity between the two convergent taxa.

Acknowledgements:

I thank Jochen Gerber (FMNH) and John Slapcinsky (FLMNH) for checking records in their respective collections as well as Tim Pearce (CM) for solicitation of voucher material. Marien Faber, Richie Goldberg, Lubos Kolouch, Ron Noseworthy, Aydin Örstan, Jody Thompson, and Tom Watters of the Conchologists of America Listserv (Conch-L) made helpful suggestions. Bill Frank took the photographs and did some of the image editing.

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Nassa update: Application of the genus-level taxon *Uzita* H. and A. Adams, 1853 to a large and ubiquitous group of nassariids (Gastropoda: Buccinoidea)

by Harry G. Lee

Very recently, Lee (2013: 4) concluded that a substantial group of locally-occurring *Nassa* snails (Family Nassariidae) belonged to a circumglobal genus *Mirua* Marwick, 1931 rather than *Nassarius* Duméril, 1805 and some other generic units where it has historically been placed (e.g., Abbott, 1974: 225; Turgeon, Quinn, *et. al.*, 1998: 97; and Lee, 2009: 111).

Regrettably, that recent contribution overlooked the taxon *Uzita* H. and A. Adams, 1853 [type species *Buccinum miga* Bruguière, 1789 **Fig. 3, L**] SD SD Cossmann (1901: 205) Recent, Eastern Atlantic (EA)], which paleoconchologists such as Woodring (1928: 265), Gardner (1948: 248), Olsson and Harbison (1953: 221), and Petuch (1994: 188) had applied to fossil western Atlantic (WA) nassariids.

The genera *Hima* and *Uzita* were both diagnosed by H. and A. Adams (1853: 120), and numerous species were assigned to each. *Uzita* was said to have the outer lip simple whereas *Hima* was said to have a labral varix. However, the subsequent type designations for both taxa placed the species of each in the same group with a thick final lip. *Hima* is the older name by one year, but that taxon was found to be unavailable (Lee, 2013: 3).

Besides the type species, numerous tropical eastern Pacific (EP) and WA species seem to conform to *Uzita*. Furthermore, numerous Indo-West Pacific (IP) species have been placed in the "subgenus *Hima* and its distribution noted to be worldwide although, inexplicably, no New World species were thus assigned (Cernohorsky, 1984). It now appears that *Uzita* is the proper placement for this ubiquitous and speciose group, e.g., the type [EA]; *Nassa paupera* A. Gould, 1850 [IP], *Buccinum antillarum* d'Orbigny, 1847 [WA], and *Nassa versicolor* C.B. Adams, 1852 [EP]; see **Fig. 3**.

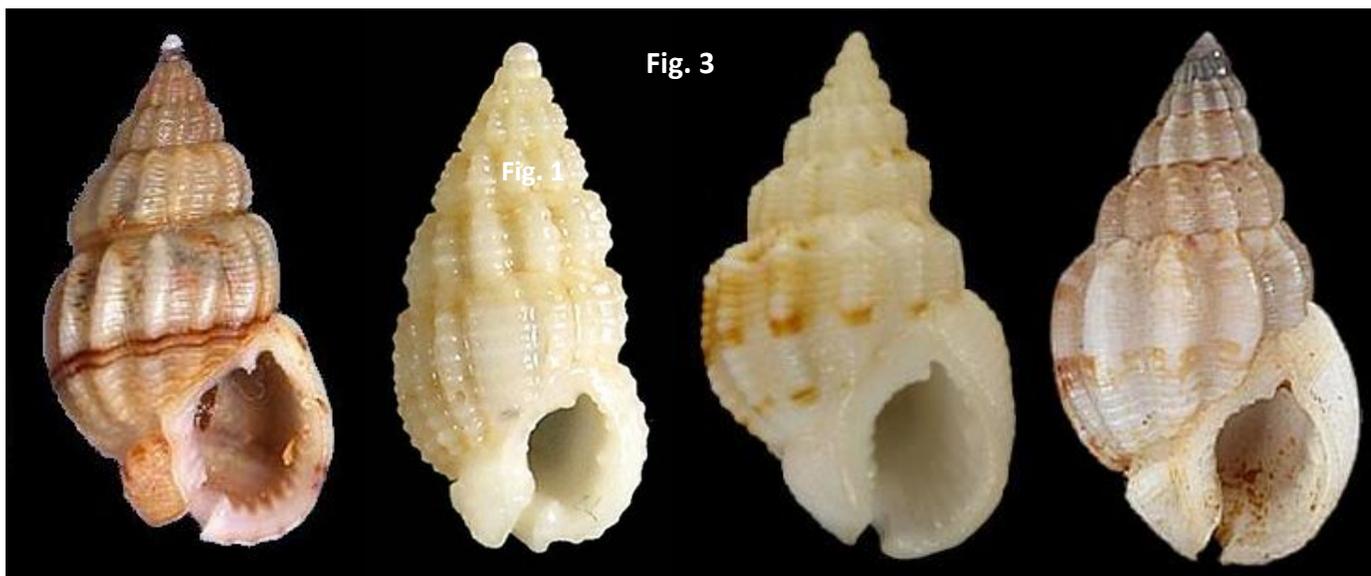


Figure 3. L to R *Uzita miga* (Bruguière, 1789) Type *Uzita* H. and A. Adams, 1853; *U. paupera* (A. Gould, 1850); *U. antillarum* (d'Orbigny, 1847); and *U. versicolor* (C.B. Adams, 1852).

Figure 3. L to R *Uzita miga* (Bruguière, 1789) Type *Uzita* H. and A. Adams, 1853; *U. paupera* (A. Gould, 1850); *U. antillarum* (d'Orbigny, 1847); and *U. versicolor* (C.B. Adams, 1852).

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Here are some shell collecting areas that you can check out for July and the upcoming months.

Mayport, FL Minus-low tides:

7-21	13:41	-0.88
7-22	14:37	-1.01
7-23	15:33	-1.01
7-24	16:27	-0.87

St. Simons, Georgia minus-low tides:

7-20	12:33	-0.68
7-21	13:32	-0.89
7-22	14:29	-1.01
7-23	15:25	-1.01

Cedar Key, Florida minus-low tides:

12-29	6:17	-0.86
12-30	7:07	-1.01
12-31	7:05	-1.18
1-1-14	7:53	-1.22
1-2-14	9:38	-1.18
1-3-14	9:21	-1.01

Vilano Beach Bridge, Tolomato River, Florida

Under both sides of the Bridge

08-19	13:29 EDT	-2.92 feet
08-20	14:23 EDT	-3.04 feet
08-21	15:14 EDT	-3.06 feet
08-22	16:03 EDT	-2.95 feet
08-23	16:52 EDT	-2.72 feet
08-24	17:44 EDT	-2.41 feet