



# SHELL-O-GRAM

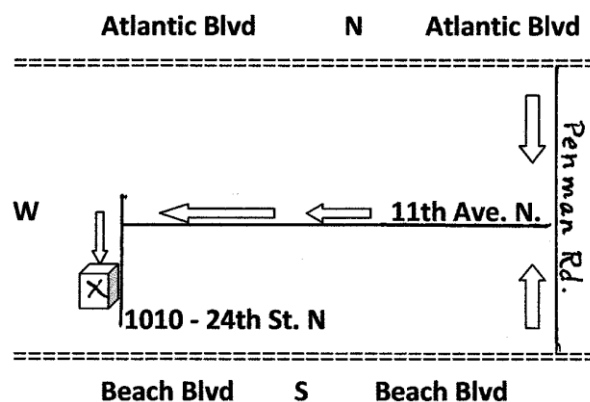
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Because of Thanksgiving (the fourth Thursday), the **November meeting** of the Jacksonville Shell Club (JSC) will be held on the fifth Thursday of the month, the 29th. The shell-of-the-month will be the tiny landsnail *Vertigo meramecensis* A. Van Devender, 1979 Bluff Vertigo. Previously known only from Missouri and Iowa, this little gem was recently found in considerable numbers near a cave entrance in Bullitt Co., Kentucky by JSC member Lori Schroeder. Harry Lee will discuss this unusual species and will follow up with a full presentation on the genus *Vertigo* Müller, 1774, a group of about five dozen species widely dispersed in the Northern Hemisphere. There are seven species in northeast Florida, four of which have been collected in Harry's back yard.

The **December meeting** will be the annual JSC Christmas party. This year it will be held at the home of Charlotte and Frank Thorpe, 1010 N. 24th Street, Jacksonville Beach on Saturday, December 8th beginning at 6:30 PM. As is customary, each attending member is asked to bring a shell-related gift (about \$10 in value) for a member of the same gender. The Club will furnish a turkey, ham and soft drinks, but attendees are asked to bring other food items. Please contact Charlotte at 246-0874 to see what other food items might be needed. We are looking forward to celebrating this holiday season with our shell-loving friends. Map to Party below: Use Atlantic Blvd. or Beach Blvd. head east until you come over the Intracoastal Bridge then keep an eye out for Penman Rd. Turn North if on Beach Blvd. or South if on Atlantic Blvd. Come down to 11th Ave. N. turn West, at the dead end turn left, come to 1010 on mailbox. Parking in driveway or on the Street. If lost call 246-0874.



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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,

The days have recently become colder and shorter as we move into the close of yet another year. Although I don't care much for either of these changes, one thing is for sure, I do look forward to our traditional field trip and festivity. We will wrap up both occasions in the month of December. Our Christmas party will be held on December 8th and our Cedar Key field trip will primarily be conducted on December 13th and 14th. Please join us for our November meeting for further details or feel free to contact me. I look forward to seeing all who will attend. Happy Holidays! Brian

### **Cedar Key Field Trip**

Our annual field trip to Cedar Key is planned for December 12th thru the 14th. Hopefully the weather will be mild, and shells will be found! Remember to collect a few extra for our 2013 Shell Show Store.

Here are the minus tides for the three days: Wed. 12/12 -1.11 at 7:01 AM, Thur. 12/13 -1.22 at 7:50 AM, and Fri. 12/14 -1.16 AM at 8:37 AM. This is one of the all-time best low tides!

If you are planning to attend make your motel reservations quickly as that time of year lots of fishermen come to Cedar key to fish, and eat great seafood. Which is what we have planned! Charlotte will make a pot of her seafood chowder and we'll have stone crab claws and clams for another meal. If you are a new member and would like to attend, call Charlotte at 246-0874, and I can tell you more about the trip.



Left: Whelk eating oysters.

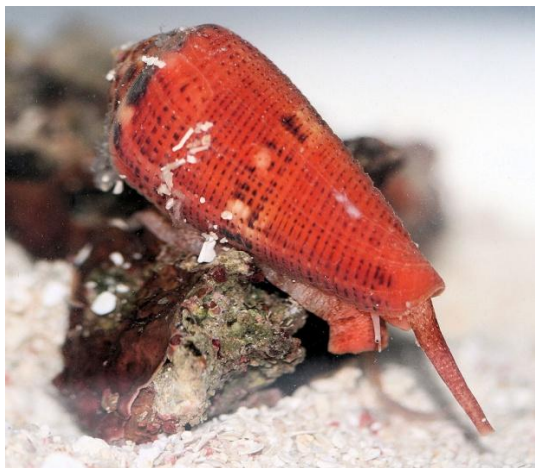
Right: President Brian Marshall examines shells

## Report on Diving Trip to Bay of Honduras

by Charlotte Thorpe

I first visited the Bay of Honduras in 1984 and from then to this past June 2012, I have made 9 trips. Most of my first 4-5 trips were to visit Utila Island, but I sometimes would fly over to Roatan to shell around that island too. This area has beautiful reefs and great areas of sand and turtle/grass flats that produced beautiful shells.

Below are some of my favorite finds.



Above: *Atlanticonus granulatus* on reef at night 45'



Above: *Morum strombiforme* (Reeve, 1842) 24mm. in size



*Turbo canaliculatus* Hermann, 1781 on sand at night in 16'



*Falsilyria polypleura sunderlandi* Petuch, 1987 At night in 36'



*Prunum anabile* (Redfield, 1852) on sand in 30' at night



*Naticarius canrena* (Linnaeus, 1758) On sand in 24' of water

## Snailing at Spalding: super strategy or serendipity (serene stupidity)?

by Harry G. Lee

Over the last four years a cadre of landsnail enthusiasts headed by Kentuckian JSC members, Lori and Jeff Schroeder, has been dedicating time and energy to the study of the fauna of a relatively undisturbed and protected area of Kentucky landscape not far from Louisville. The Bernheim Arboretum and Research Forest (BARF) is a conservation zone comprised of some 14,000 acres in Bullitt and Nelson Counties. Physiographically, the general area is referred to as "The Knobs" because of the hilly terrain, in large part resultant from the geological composition, which is dominated by limestones. The geochemistry of such areas, alkaline and rich in calcium carbonate, is particularly hospitable to terrestrial mollusks, which typically prosper both in numbers and diversity in ecosystems with such characteristics.

This favorable confluence of geography and politics provided the basis for Lori and Jeff's selection of BARF as the site for a landsnail biodiversity survey. Through the generous cooperation of the preserve's administration, most notably Forestry Director Andrew Berry, they, the senior author, and a half dozen others have collected thousands of specimens from BARF. Thanks to the varying landscape, habitat types such as ravines, open and shaded riparian areas, limestone escarpments, hardwood stands, glades, waterfalls, etc. were included in the sampling. As of last November over two dozen stations had been collected in BARF, and analysis of the collections indicated a total of 65 species of landsnails had been found.

Despite the complexity of the BARF landscape and the team's dedication to versatility of sampled habitats, one unexploited environment was the stygian (cave) zone, which, in limestone country may harbor snails that are exclusive to it. Of these "obligate stygian" snail species, five occur in Kentucky: *Carychium stygium* (Call, 1897) Cave Thorn, *Glyphyalinia specus* Hubricht, 1965 Hollow Glyph, *Helicodiscus notius specus* Hubricht, 1962 Cave Tightcoil, *H. hadenoecus* Hubricht, 1962 Cricket Coil, and *H. punctatellus* Morrison, 1942 Punctuate Coil, and all are limited to one or two cave systems in the state (Dourson, 2011).

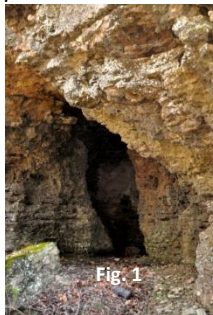


Fig. 1

Naturally, none was among the 65 species mentioned above.

Thus, when Andrew Berry provided access to what is believed to be the largest cave in the immediate vicinity of BARF, Lori and Jeff were quite willing to collect the site. The site (**Fig. 1**) is near a branch of Spalding University (SPU) and slightly E of Andrew's jurisdiction. The area has limited human access, but, according to Lori and Jeff, historically the SPU Cave (SPUC) may have been put to good use by moonshiners.

The snailing campaign was conducted in two phases. On Aug. 3, 2012, some six months after an initial survey, a more strategic sampling of ground litter was made. Regrettably, no special snails were found **inside** the actual cave on either occasion, but there were some unexpected discoveries on both occasions, including the six litter samples taken at 5 foot intervals from the cave entrance to 30 feet away along a perpendicular axis. Of the

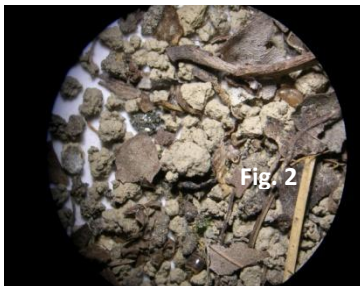


Fig. 2



Fig. 3

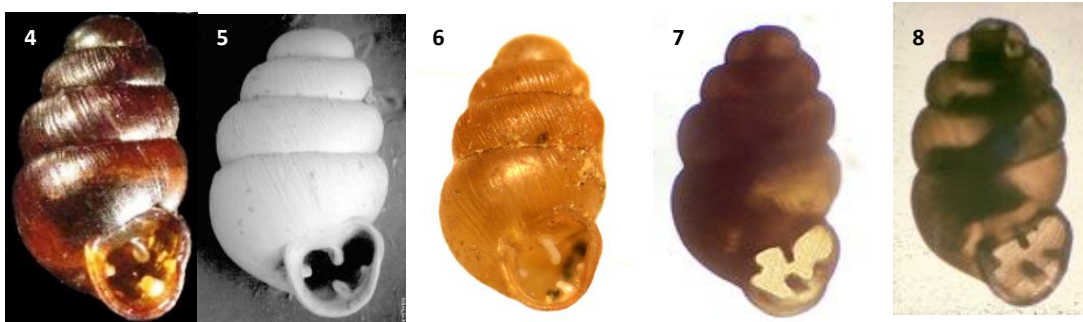
20-odd species found during the two visits, four of them had not been recorded from BARF beforehand: *Cochlicopa morseana* (Doherty, 1878) Appalachian Pillar, *Vertigo meramecensis* A. Van Devender, 1979 Bluff Vertigo, *Strobilops aeneus* Pilsbry, 1926 Bronze Pinecone, and *Stenotrema* cf. *macgregori* Dourson, 2011 Fraudulent Slitmouth. Putting aside any further discussion of this unprecedented quartet, let's focus on just the smallest of them, the 2 mm *V. meramecensis*. Interestingly, it was the most common and ubiquitous, being found in every one of the six litter samples (**Figure 2**: litter sample; look just NW of the "F" **Fig. 3**: a close-up of Fig. 2).

*Vertigo meramecensis* was initially described from wooded limestone bluffs along Huzzah Creek in Crawford Co., Missouri (Van Devender, 1979: 71). Since then it has been found in another Missouri locality (Hubricht, 1985), in at least 13 localities in 12 counties in E Iowa (Frest and Fay, 1981; Nekola and Coles, 2010), six isolated sites in three counties in SE Minnesota (Ostlie, 1990), and three counties in NW Illinois (Nekola and Coles, 2010). An analysis of the species occurrence led Ostlie (1990) to conclude the species was more widespread during the Wisconsin glacial period (>12,000 years ago) but now survives only as small relict populations with very specific habitat requirements, specifically on forested limestone or dolomite cliffs and outcrops, generally on steep, moist, shaded, and cool north-facing slopes, but it generally avoids the continuous cooling effects

in these types of habitats often being confined to the lower regions of the cliff face. In these areas, it is particularly abundant “in the finely pelleted soil of rodent runs” (Frest, 1991).

How does one reconcile the SPUC vicinity occurrence with the rather stringent habitat requirements of this well-studied but very scarce little snail with such a fragmented range? Certainly the limestone/dolomite feature is there, but the pitch of the landscape is much more moderate than heretofore recorded. Perhaps the secret is the proximity of SPUC, with its moderate air temperatures mitigating the summer (and winter) extremes much in the same way as the shaded yet cold-insulated portions of steep slopes offer other populations a special microhabitat. The survival of the Bluff Vertigo may well hinge on its finding a stable ecological niche like it occupied during the last Ice Age, when it enjoyed greater prosperity and dominion. ‘Makes one think both strategy and serendipity both had a role in this expedition’s success.

**Figs. 4 to 7 below depict shells of the Bluff Vertigo using different imaging techniques: 4. Iowa: Jeff Nekola, 5. Minnesota: Matt Barthel, 6. Kentucky (SPUC): Jeff Schroeder, and 7. Missouri: the author. Fig. 8 is *V. cristata* Sterki, 1919, Crested Vertigo, cited as the species most similar to *V. meramecensis* by Van Devender (1979); Maine: photo by the author.**



Acknowledgments: I am indebted to Bill Frank (Jacksonville, FL) for image editing, Lori Schroeder for executing an excellent collection plan, Jeff Schroeder for the photographic chronicle of the SPUC expedition, Andrew Berry and staff for assistance in the field, and Jeff Nekola (U. of New Mexico) for correcting my initial misidentification of this species (as *V. cristata*) and providing zoogeographic insights.

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