



# SHELL-O-GRAM

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The Jacksonville Shell Club (JSC) will meet at the usual time, 7:00 PM, the usual place, Southeast Branch of the Jax Public Library, on the customary fourth Thursday (September 25, 2014). Charlotte Thorpe will present a travelog taking us to a half-dozen places around the world, in each of which she has done collecting and photography of mollusks. Ports-of-call include Pacific Panama, French Polynesia, and the Philippine Archipelago. The Shell-of-the-Month will be presented by John Fatu: *Thersistrombus thersites* (Swainson, 1823), collected in his native Tonga.

Because of draconian schedule restrictions related to "early voting" at the library, there is no time available for an October meeting. The November get-together will be early that month, the thirteenth, because of the annual conflict with Thanksgiving. More in the next *Shell-O-Gram*.

**NAIROBI, Kenya (AP)** — A snail once thought to have been among the first species to go extinct because of climate change has reappeared in the wild.



In this photo taken Saturday, Aug. 23, 2014 and provided by the Seychelles Islands Foundation (SIF), an adult Aldabra Banded Snail (*Rhachistia aldabrae*) is examined at the discovery site in dense mixed scrub forest on the coastal fringe of Malabar island, Aldabra Atoll, Seychelles. The Seychelles Islands Foundation says the Aldabra banded snail, previously thought to be extinct, has been rediscovered "alive and well" at the UNESCO World Heritage Site of Aldabra Atoll in the Indian Ocean island nation of Seychelles. (C. Onezia, AP / Seychelles Islands Foundation)

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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,

Our meeting for the month of October will be cancelled due to "early voting" taking place at the library. With this in mind, I am encouraging members to attend the meeting on September 25th. The following meeting will not be held until November 13th and we have two customary annual events that need to be discussed during the September meeting.

Our topics of discussion for September will be the annual Cedar Key field trip and our annual Christmas party. We will need to determine the number of interested persons for each event so we may begin planning accordingly. Our Cedar Key field trip is typically conducted from late November to early January and our Christmas party typically takes place within the first two weeks of December. In our September meeting we will need to vote on the dates each event will take place. For any members interested in these events that are not able to attend our next meeting, please contact me directly, preferably no later than the beginning of October. I look forward to seeing everyone.

Thanks, Brian Marshall

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#### **Adult Aldabra Banded Snail (*Rhachistia aldabrae*) continued.....**

The Aldabra banded snail, declared extinct seven years ago, was rediscovered on Aug. 23 in the Indian Ocean island nation of Seychelles. The mollusk, which is endemic to the Aldabra coral atoll — a UNESCO World Heritage Site — had not been seen on the islands since 1997, said the Seychelles Islands Foundation. Conservationists are celebrating the banded snail's reemergence. "Could we live without this little snail? Almost certainly," said Stuart Pimm, a conservation ecology professor at Duke University. "But we simply do not know what species are going to do for us in an economic sense.



## Scared Snails Opt For Single Parenthood Rather Than Wait For a Mate

National Evolutionary Synthesis Center (NESCent), August, 2010



These *Physa acuta* snails prefer to mate with a partner rather than fertilize themselves. But if a suitor is nowhere to be seen, solitary snails change their dating and mating strategy when danger is near.

Solitary snails in search of a mate put off parenthood as long as possible in the hopes that a partner will appear. But when *Physa acuta* snails smell predators, they don't wait as long for a mate. Scared snails settle for single parenthood much sooner than their calm counterparts, says a new study by biologist Josh Auld of the National Evolutionary Synthesis Center in Durham, NC.

"They can't wait for a mate indefinitely -- especially if the risk of mortality is high," said Auld.

A brown speckled snail found in rivers, lakes, and streams, the hermaphroditic snail *Physa acuta* has everything it needs to reproduce -- each snail is both male and female at the same time. Because each snail can produce sperm as well as eggs, they have more than one option when it comes to having kids -- they can either find a mate, or they can fertilize themselves.

Going solo comes at a price. Baby snails produced by self-fertilization have lower chances of survival. "Self-fertilization is a last-ditch effort," said Auld.

But single parenthood becomes less distasteful when snails detect danger, says a new study in the journal *Evolution*. To find out how long snails wait for a mate before reproducing on their own, Auld raised more than 700 snails in separate containers in the presence and absence of partners. Chemical cues in the water alert snails to the presence of predators. By spiking containers with water from a tank where crayfish once fed, Auld allowed half the snails in each group to catch a whiff of crayfish cues. He then measured how long they waited before laying eggs.

Single snails waited two months longer than their coupled counterparts before starting a family and laying their first batch of eggs. But they changed their dating and mating strategy when the risk of being eaten seemed high: Scared snails settled for single parenthood much sooner, said Auld. What's more, the ill effects of inbreeding weren't as bad for snails born in water laced with predator scents.

"The waiting time is shorter when there's a higher risk of mortality," said Auld. "It's better to have inbred offspring than no offspring at all," he added.



### SHELL GORGETS: Beautiful works in early Choctaw art

Choctaw people who lived before European arrival made many beautiful , intricate, and highly skilled art pieces made from durable material. Shell gorgets have been made for several thousand years in the American Southeast, but the art came into full flower during the two centuries before European arrival.

Ancestral Choctaw artisans utilized both freshwater mussel shells from local rivers, and marine shells from the ocean as raw materials for making gorgets. The most commonly used marine shells came from the whelk, specifically from the genus Busycon. Gorgets were made from the outer part, or whorl of the Busycon shell. This part is removed from the rest of the shell by hitting it very hard but very carefully with a tough, round rock. Each blow removes a small chip of shell.

Today, some gorget artists from other southeastern tribes are well known and highly respected for their work. Several Choctaw people are experimenting with shell carvings and making a few gorgets. The ancient art of gorget -making is just waiting to take off again in the Choctaw community.

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Figure 1. Pickett-style gorget made by author



Figure 2. Oktibbeha-style gorget made by author



Figure 5. Stone saw being used to cut mussel shell



Figure 3. Three views of a Busycon shell



Figure 6. Mussel shell after cuts are complete



Figure 9. Engraving a design with a stone-tipped tool



Figure 4. Left: Busycon shell with a cut being made in it; Center and Right: the shell with the whorl removed



Figure 10. Oktibbeha-style gorget made by the author with only stone tools