

A NANFA BREEDERS AWARD PROGRAM REPORT

Spawning the Okefenokee Pygmy Sunfish (*Elassoma okefenokee*)

Philip Kukulski

34341 Viceroy Dr., Sterling Heights, MI 48310
kukulski@umich.edu

Some may find it amusing that after a score of years breeding *Betta splendens*, I now keep even *smaller* fish. A fourth generation of *Badis* “scarlet” now occupy two of my tanks. This report is on my other tiny fish, the Okefenokee pygmy sunfish (*Elassoma okefenokee*).

On 7 April 2002, after kayaking the Suwannee River with the Sierra Club, I went collecting in Florida in an area south of the Suwannee. I brought back a number of fish species. The bluefin killies (*Lucania goodei*) got their own tank, some apple snail eggs went into a bucket on the floor, and in one tank I put a dozen half-inch sunfish. Three weeks later I gave these sunfish to a friend. Days later one fry appeared in the tank. Where did this fish come from? I only put 12 fish from Florida into this tank, and no plants. Did a snail make a move up the Lamarckian escalator? Did this fish spontaneously generate from inanimate matter? I never did figure it out.

I took my Mystery Fish to the monthly Greater Detroit Aquarium Society (GDAS) meeting. Since the fish was stressed, its color pattern was washed out. No one could offer a positive ID. Maybe a *Nothobranchius*. Maybe a pupfish. Maybe a pygmy sunfish. I gave away some fish and later discovered that I had inadvertently given away my Mystery Fish too. A week after that I discovered a second mystery fish in the same exact tank. With a bit of detective work over the phone, I relocated my lost Mystery Fish and got it back. I then had Leo Long sketch the Mystery Fish, complete with raised fins and the proper coloration. I took the sketch to the next GDAS meeting, and again no one could offer a positive ID. My brother joined the quest to identify the Mystery Fish when he was visiting in July. He took a digital photo, which I sent to two professionals. The guess was pygmy sunfish.

Finally, after seeing the fish’s full colors (he’s a male) and white lips, I was able to make an accurate identification: Okefenokee pygmy sunfish.

The two Okefenokees went into their own 20-gallon long. I fed them live brine shrimp nauplii, and added egg yolk suspension almost daily to promote zooplankton growth. The tank was bare bottomed with eight apogonets in a tray with soil and gravel, Java moss, and a shredded plastic pot scrubber for cover. The water was a stable 78°F, medium hardness, slightly acidic, and filtered by a single sponge filter. A shop light above the tank was on 15 hours a day to simulate summer. With the male displaying, I decided to let the water conditions drift, hoping that eventually the proper spawning conditions would result. Translation: I deliberately let the gunk build up in the tank.

Most days I could see the male in the tank. I saw the other fish, which turned out to be a female, only once or twice a week. To see her, I had to lift up the Java moss to chase her out, only for her to stay hidden elsewhere in the tank. Watching the male display was amazing. He turned jet black with iridescent blue stripes on his sides, near his gills, and on the edges of his fins. He flipped his dorsal, pectoral, and anal fins in a repeating sequence of four independent moves. Imagine a fish that keeps its body level and uses its fins to swim straight down. When he really got going, he looked like a fishing lure dragging in a fast current—not moving upstream or downstream, but bucking six inches up and down.

Finally, the algae got so bad that I had to clean the tank. On 18 October, I siphoned five gallons of the water, silt, and algae from the bottom of the tank and the *Aponogeton* tray into a bucket. Two days later, I spotted a 7-mm fry, already with the body shape of an adult. I estimate that the Okefenokees

spawned on 27 September. I caught whatever fry I could see in the tank. Luckily, I still had the bucket of dirty water. (It's a good practice to keep dirty fish water until the silt settles and the water can be checked one more time for fish.) It took two days to find all the fry and assure myself that none remained in the bucket. I checked the spawning tank again and found two dead fry. I think that the male, which chased or displayed for the female whenever he saw her, may have killed the fry. I removed the adults and did a more thorough search, finding six more fry.

I raised the fry on nauplii, egg yolk suspension, and weekly feedings of vinegar eels. The fry ranged in size from 5-8 mm, so I guess there was more than one spawning. The fry were colorless with a few black spots. Even with the tank's bare bottom, the fry were nearly invisible. Moving the Java moss didn't always help; the fry moved with the plant and remained hidden within it. (Be careful not to remove plants with fish hidden inside!) On 3 November, I saw an 11-mm long fish seen cruising in the open. On 21 November, one fish was smoky-colored and beginning to exhibit the black coloration of males.

I set up one pair from this spawn into their own 20-gallon long. Silt from peat and Spanish moss covered the glass bottom. I boiled the moss and discarded the yellow wash water. Then I shredded the moss to cover as much of the tank

bottom as possible. I learned that even after boiling, Spanish moss makes a brown and sandy mess when shredded.

Based on my experience, I believe that some Okefenokee pygmy sunfish spawn before April 7 in the wild. My fish spawned at 5-1/2 months (F1) and four months (F2) of age. Wintering was not required. Adults sometimes kill their fry. They're a great fish for a planted 10- to 20-gallon tank. Watching the male display makes males of other fish species seem a measure short in flamboyance. I'm just sorry I didn't shoot some video.

Addendum: While at the 2003 American Killifish Association convention, I met Henri DeBruyn, who has seen pygmy sunfish spawn. He says the adults clean and then lay eggs on plant stems. After multiple passes, a mass of 200 eggs, similar in appearance to a mass of frog eggs, is produced. The eggs hatch in three days. ←

Membership directory available

A state-by-state listing of NANFA members, designed to bring regional members closer together, is available upon request. You may receive a hard-copy version in the mail, or a PDF version via e-mail. To request a copy, contact Chris Scharpf at 1107 Argonne Dr., Baltimore, MD 21218, 410-243-9050, ichthos@charm.net.



Home of the Perfect Dipnet

- Live Aquarium Fishes
- Aquarium & Pond Supplies

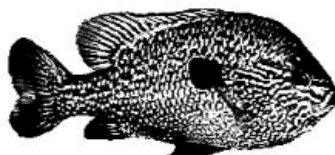
Jonah's Aquarium

Ace seines now available

Native fishes delivered to your door. Now in stock: Longear Sunfish, Grass Pickerel, Bowfin, Rock Bass, Pygmy Sunfish, Livebearers ... see the Fish List at jonahsaquarium.com

See us in the July 2003 issue of *Tropical Fish Hobbyist* magazine, available from Jonah's Aquarium

American Aquarium Fishes by R. J. Goldstein **\$45.00**



jonahsaquarium.com

On the web at jonahsaquarium.com
Email – jonah@jonahsaquarium.com

Toll free – 877-417-4871

Phone – 330-262-1864

Jonah's Aquarium PO Box 1618, Wooster OH 44691 USA