

ARTIFICIAL SPAWNING SITE FOR PIRATE PERCH



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We have been breeding Pirate Perch (*Aphredoderus sayanus*) for several years now and have developed an interest in having fish consistently use spawning sites that are easy to observe, retain and protect embryos and pro-larvae, and are cheap and easy to construct. Pirate Perch are known to spawn in root wads and beaver dams (Poly and Wetzel 2003, Fletcher et al. 2004, McCallum 2012), but in confinement have a tendency to abort eggs resulting in shed ova being found on the tank bottom (Brill 1977, Fontenot and Rutherford 1999).

Pirate Perch have been observed successfully spawning in a vertically oriented matrix made of filter media typically used in aquarium filters (Poly and Wetzel 2003), but the media was mounted to heavy, rock-like materials that are cumbersome and/or allow fish into locations where observation is difficult. We tried repeatedly to create a simpler setup using root wads, but they are hard to present as a consistent spawning site and, unless boiled, can be a challenge with respect to bio-security. Filter media mounted to bricks with rubber bands was attractive to spawning adults, but many embryos/pro-larvae fell out, making quantitative harvests difficult unless carried out in a bare-bottomed tank. Spawning mops like those used for killifishes and darters were tried, but eggs fell out during removal from the tank or were damaged during harvesting.

We designed an artificial spawning site to provide the fish with sensory stimuli approximating the fibrous nature of root wads, and which could be positioned so any spawn that fell from the matrix would be confined so we could isolate embryos/pro-larvae. It is stable on a range of surfaces to allow photography and interactions of spawning groups of Pirate Perch.

We had been using tubes to house sunfish egg zygotes during triploidy induction, and found cut strips of coconut fiber mats to which sunfish eggs adhere were ideal spawning sites for Pirate Perch. Pirate Perch eggs are not adhesive, so eggs fell through and were lost. We inserted the fiber strips into opening cut in 1.25" PVC schedule 40 pipe. To keep the pipe from rolling, 90 degree elbows were placed on one end. This enabled keeping the openings at a 45 degree angle. Pirate Perch seem to prefer spawning in vertical fibrous masses, but the angle is a compromise that also ensured any spawn that fell through would collect in the pipe. Pipe ends were covered by Nitex®

screen hot-glued in place, which prevented adults from placing all spawn in too small of an area and kept pro-larvae from swimming out the end of the pipe.

The setup is likely to be useful in this or a slightly modified form for Spring Cavefish (*Forbesichthys agassizi*) and Swampfish (*Chologaster cornuta*), which are suspected to spawn in a manner similar to Pirate Perch. It may also work with species such as darters, where adhesive eggs adhere to the matrix and pro-larvae can be collected in the pipe below. Spawning sites can also be positioned to enable easy visual monitoring. Nitex® screen can be replaced with fiberglass window screen for a much lower cost, although more advanced pro-larvae may be able to squeeze through the larger openings in the mesh.

Literature Cited

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Pipe with strip inserted and elbow maintaining desired angle.