

Threatened fishes of the world: *Typhlichthys subterraneus* (Girard, 1860) (Amblyopsidae)

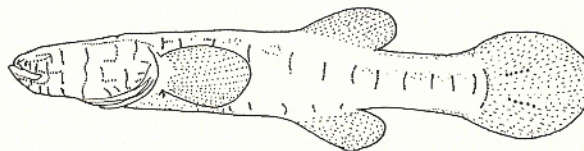
Aldemaro Romero

Department of Biology, University of Miami, P.O. Box 249118, Coral Gables, FL 33124, U.S.A.
 (e-mail: aromero@umiami.ir.miami.edu)

Common name: Southern cavefish (E).

Conservation status: Vulnerable (World Conservation Monitoring Centre). It has received a number of designations in the states where it is found: Endangered (Indiana), Threatened (Alabama), Special Concern (Kentucky), Rare (Georgia), Watchlist (Missouri), In Need of Management (Tennessee), Inventory Element (Arkansas), and Extirpated (Oklahoma).

Identification: As one of the four species of troglotic fishes it is small, SL range between 16.5 and 61.0 mm. Body elongated, dorsally flattened, head very depressed, lower jaw slightly projecting, snout rounded, gill membranes joined to isthmus, mouth large and oblique, pelvic fins absent. Rudimentary eyes, hidden under the skin. Scales minute and embedded. Lateral line present with external and internal neuromasts on the head and sides. Body depigmented with few nonfunctional pigmented cells. Head length: 0.296–0.399; head width: 0.167–0.236; depth: 0.124–0.194; anal-ventral: 0.296–0.405; D 8–9 (7–10), A 8–9 (7–10), P 10–11 (9–12); branched caudals 12–13 (10–15). Brachistegal rays 6. Caudal fin with two horizontal rows of papillae and a vertical basal row. Vertebrae 28–29. Differs from *Amblyopsis spelaea* in the number of dorsal, anal, and caudal rays, the absence of pelvic fins, and from *Amblyopsis rosae* in having a postcleithrum bone and in having sensory papillae absent on the tail or present in only a single row on the upper and lower half of the caudal fin. Drawing by Loubna Bennis.



Distribution: Subterranean waters in two major disjunct ranges being separated by the Mississippi River: Ozark Plateau of central and southeastern Missouri and northeastern Arkansas; and Cumberland and Interior Low plateaus of Northwest Alabama, northwest Georgia, central Tennessee and Kentucky and southern Indiana. **Abundance:** Very little abundant but there are not specific figures. **Habitat and ecology:** Mostly lentic but also in pools of streams at or near water table. Cobble is its preferred substrate. Most populations seem to be isolated. It is a species of solitary habits. Feed mostly on copepods, amphipods, isopods, and other aquatic arthropods. They have a depressed metabolic rate that allow them to survive food shortages. **Reproduction:** Low reproductive capacity (less than 50 ova per female) restricts its ability to recover from even moderate population declines. About 50% of the adult females breed per year. Young brood in the female parent's gill chamber. Sexual maturity is reached after 2 years and life span is about 4 years. **Threats:** Environmental impacts are due to pollution, lowering of the water table, and, in some areas, flooding by reservoirs, collecting and cave vandalism. Recent surveys have shown a dramatic decrease in both geographical range and population size. **Conservation action:** It has been placed under different conservation categories in the states throughout its range. **Conservation recommendations:** Eliminate and/or reduce destructive land use practices, sediment and runoff control for construction projects, eliminate use of agrochemicals in critical watersheds. To manage genetically distinct lineages independently over the largest continuous tracts of their available habitat. Increase vigilance to avoid illegal collecting and cave vandalism. **Remarks:** Unlike other cave fish species of the same family it shows unresponsiveness to light. It has been proposed that this species should be considered a subspecies of *Amblyopsis spelaea* (*A. s. subterraneus*).

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