

Threatened fishes of the world: *Alosa alabamae* (Jordan and Evermann, 1896) (Clupeidae)

Dwayne W. Meadows · Susan B. Adams ·
Jacob F. Schaefer

Received: 21 December 2006 / Accepted: 19 April 2007 / Published online: 14 June 2007
© Springer Science+Business Media B.V. 2007



Common names: Alabama shad, Gulf shad. **Conservation status:** US National Marine Fisheries Service Species of Concern, AFS: Vulnerable; IUCN: Endangered. **Identification:** Upper jaw median notch, protruding lower jaw, one row tongue teeth, 41–48 rakers on lower anterior gill arch; no dorsal filament. Silver with black spots on lower jaw; greenish-blue dorsally. Females 36–46 cm, males 9–42 cm SL. **Distribution:** Euryhaline, anadromous, schooling; spawns in medium to large rivers from the Mississippi

D. W. Meadows (✉)
Office of Protected Resources F/PR3, National Marine Fisheries Service, 1315 East West Highway, Silver Spring, MD 20910, USA
e-mail: Dwayne.Meadows@noaa.gov

S. B. Adams
Center for Bottomland Hardwoods Research, Southern Research Station, USDA Forest Service, 1000 Front St, Oxford, MS 38655, USA

J. F. Schaefer
Department of Biological Sciences, University of Southern Mississippi, 118 College Drive, #5018, Hattiesburg, MS 39406, USA

River drainage to the Suwannee River, Florida (Mettee and O’Neil 2003); extirpated from at least 8 of the 14 native states (Mettee and O’Neil 2003). **Abundance:** Once commercially harvested, now rare (Mettee and O’Neil 2003); largest remaining population occurs in the Apalachicola River, Florida (Barkuloo et al. 1993). **Habitat and ecology:** Juveniles are found in rivers for their first 6–8 months, eat fishes and invertebrates. Diurnally, small juveniles use sandbars, then switch to open channels and steep bank habitat; they select cooler temperatures (Mickle 2006). Little is known of their ecology in marine environments. Juveniles enter the Gulf of Mexico from late summer to early winter. Spawning starts primarily at age 2 and live 6 years (Mettee and O’Neil 2003). **Reproduction:** Broadcast spawn spring/early summer at 18–23°C over coarse sand and gravel in moderate currents; no foraging during spawning (Mills 1972). Arrival time varies by sex and age (Mettee and O’Neil 2003), return to sea after spawning (Barkuloo et al. 1993). Some homing and genetic differences among drainages (Bowen 2005). **Threats:** Dams block spawning access and alter hydrology and substrates (Adams et al. 2000; Mettee and O’Neil 2003); poor water quality, siltation, altered habitat and thermal regimes, dredging, and perhaps bycatch in marine fisheries. **Conservation recommendations:** Implement effective fish passage; restore hydrologic regimes. Research into the marine phase including migrations, feeding and bycatch; and spawning, rearing, and other habitat needs. **Remarks:** Allopatric species pair with *A. sapidissima*.

References

- Adams SB, Ross ST, Warren Jr ML (2000) Literature review, information needs assessment, and research proposal for Gulf sturgeon, Alabama shad and American eel: diadromous fishes of USFS Region 8. USDA Forest Service, Southern Research Station, Center for Bottomland Hardwoods Research, Oxford, MS
- Barkuloo J, Mettee M, Jenkins L (1993) Systematic and population status of Alabama shad in rivers tributary to the Gulf of Mexico. Report to US Fish and Wildlife Service
- Bowen BR (2005) Alabama shad phylogeography. MS Thesis University of Southern Mississippi, Hattiesburg, p 95
- Mettee MF, O'Neil PE (2003) Status of Alabama shad and skipjack herring in Gulf of Mexico drainages. In: Limburg K, Waldman J (eds) Biodiversity, status, and conservation of the world's shads. American Fisheries Society Symposium 35, Bethesda, MD, pp 157–170
- Mickle PF (2006) Life history of the juvenile Alabama shad, *Alosa alabamae*, in the Pascagoula River. MS Thesis, University of Southern Mississippi, Hattiesburg, p 54
- Mills Jr JG (1972) Biology of Alabama shad in northwest Florida. Florida Department of Natural Resources, Technical Series #68, p 24