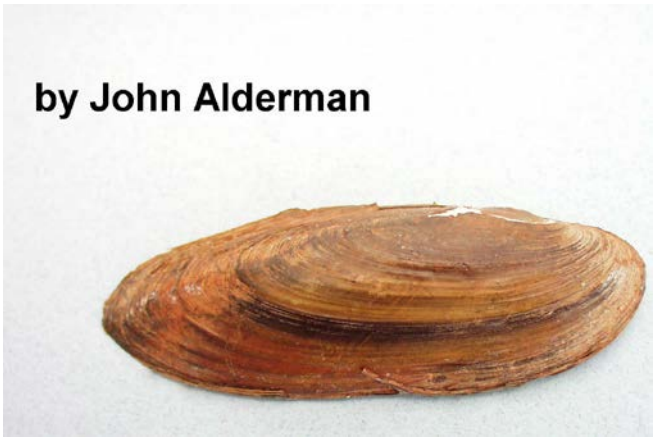
Atlantic Spike
Elliptio producta



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DESCRIPTION

Taxonomy and Basic Description

The shell of the Atlantic Spike is somewhat compressed and solid with a maximum length of nearly 140 mm (5.6 inches). The anterior margin is rounded and the posterior margin roundly pointed, with a low posterior ridge. The outer surface of the shell is slightly shiny, dark reddish-brown or greenish-brown in color without rays. The inner surface is purple (Bogan and Alderman 2004, 2008). The Atlantic Spike was once synonomized with *Elliptio lanceolata* (Johnson 1970) but is now considered to be a separate species. The taxonomic status of this species and its relationship to other similar *Elliptio* species needs to be clarified (NatureServe 2011).

Status

The global ranking for the Atlantic Spike is vulnerable (G3Q). This species is ranked as vulnerable (S3) in South Carolina and as under review/not ranked in North Carolina and Georgia (NatureServe 2011). It is recommended for a rank of S2/S1 in South Carolina (John Alderman pers. comm.).

POPULATION SIZE AND DISTRIBUTION

The Atlantic Spike ranges from the Savannah River in Georgia to the Potomac River Basin in Maryland and Pennsylvania. It is fairly widespread in South Carolina (Bogan and Alderman 2004, 2008).

HABITAT AND NATURAL COMMUNITY REQUIREMENTS

This species is found in streams or rivers with sandy, rocky, and/or muddy bottoms in sections where the current is not too rapid (Johnson 1970).

CHALLENGES

All of the general challenges to mussels are likely to apply to the Atlantic Spike. Observations suggest that this species is sensitive to channel modification, pollution, sedimentation, and low oxygen conditions, but the relative sensitivity of this species to these challenges compared to other species is unknown.

CONSERVATION ACCOMPLISHMENTS

There are no significant conservation accomplishments for the Atlantic Spike at this time.

CONSERVATION RECOMMENDATIONS

- Conduct genetic analyses of the Atlantic Spike to determine its relationship with other similar species of *Elliptio*.
- Explore the need to list the Atlantic Spike within South Carolina based on survey results.
- Protect critical habitats for the Atlantic Spike from future development and further habitat degradation by following Best Management Practices and protecting and purchasing riparian areas.
- Promote land stewardship practices through educational programs both within critical habitats with healthy populations and in other areas that contain available habitat for the Atlantic Spike.
- Encourage responsible land use planning.
- Consider this species' needs when participating in the environmental permit review process.
- Educate off-road motor vehicle operators of the negative effects of crossing streams at multiple locations and using stream bottoms as trails.
- Conduct further research to determine the degree of sensitivity of the Atlantic Spike to various point and non-point sources of pollution and land use impacts.

MEASURES OF SUCCESS

Resolving taxonomic questions regarding the relationship between the Atlantic Spike and other *Elliptio* species will be a measure of success. Persistence of identified populations will be considered indicative of success as well.

LITERATURE CITED

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