

## Eastern Pondmussel

*Ligumia nasuta*

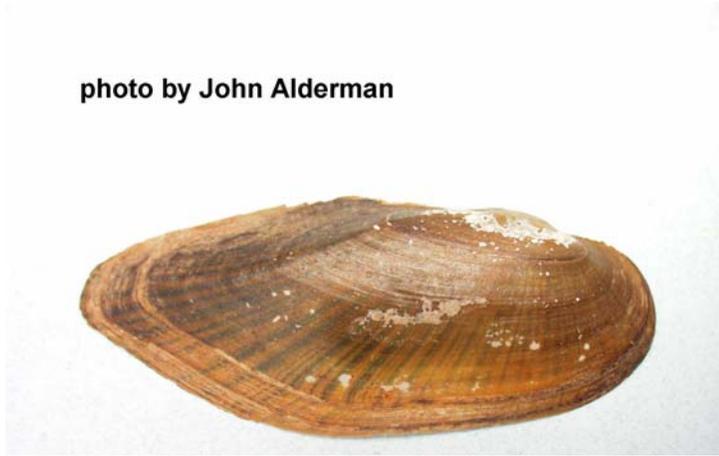
Contributor: Jennifer Price

photo by John Alderman

### DESCRIPTION

#### Taxonomy and Basic Description

The shell of the eastern pondmussel is elongated and subelliptical with a rounded anterior margin and a broadly curved ventral margin. The posterior margin is rounded and drawn out into a posterior angle or blunt point near the midline of the shell and the posterior ridge well developed. The ventral margin of female shell is expanded in the postbasal region. The outer surface of the eastern pondmussel shell is dark olive green to brownish, often with faint dark green straight and narrow rays, especially in juveniles. The shell also has irregular growth lines; sometimes a few ribs are present below the posterior ridge. The inner surface of the shell is bluish white, sometimes with salmon in the beak area and is iridescent posteriorly. The shell can reach a maximum length of 102 mm (4.1 inches) (Bogan and Alderman 2004).

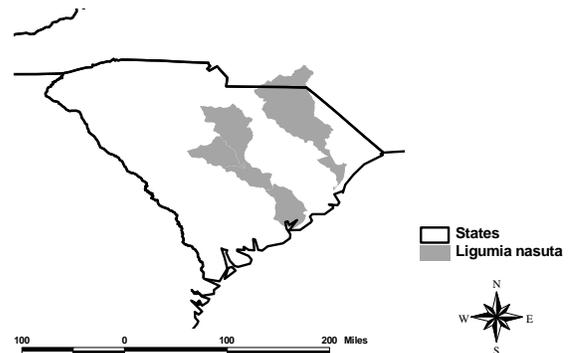


#### Status

NatureServe (2005) currently identifies the eastern pondmussel's status as apparently secure to secure (G4/G5). This mussel is currently not ranked in South Carolina, but is ranked critically imperiled (S1) in North Carolina (NatureServe 2005). It is difficult to determine the status of this species in South Carolina without further surveys and detailed examination of museum records for information on its historic range.

#### POPULATION DISTRIBUTION AND SIZE

This historic range of the eastern pondmussel extends from the Savannah River basin in Georgia north to Maine and Ontario and as far west as Michigan. In South Carolina, it was historically documented in the Savannah, Santee-Cooper and Pee Dee basins (Johnson 1970). It has recently been documented in the Savannah, Congaree and Pee Dee Rivers. The species can be abundant when found, but extant populations are quite rare (Taxonomic Expertise Committee 2004).



## HABITAT AND NATURAL COMMUNITY REQUIREMENTS

The eastern pondmussel can be found in lakes, ponds, streams and rivers of variable depths with muddy, sandy or gravelly substrates. Often it is found in very shallow water near the banks of rivers (Taxonomic Expertise Committee 2004).

## CHALLENGES

Observations suggest that this species is sensitive to channel modification, pollution, sedimentation and low oxygen conditions, but we do not know how the relative sensitivity of this species to these threats compares to other species. The tendency for the eastern pondmussel to inhabit shallow water near riverbanks may make it especially sensitive to sudden drops in water levels (Taxonomic Expertise Committee 2004).

## CONSERVATION ACCOMPLISHMENTS

There are no significant accomplishments for the eastern pondmussel at this time.

## CONSERVATION RECOMMENDATIONS

- Conduct additional surveys to determine the status and distribution of the eastern pondmussel.
- Evaluate the need to list the eastern pondmussel based upon survey results.
- Examine museum specimens to determine the historic range of the eastern pondmussel; compare its present and historic distributions.
- Protect critical habitats for the eastern pondmussel 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 other areas that contain available habitat for the eastern pondmussel.
- Encourage responsible land use planning.
- Consider species needs when participating in the environmental permit review process.
- Educate off-road motor vehicle operators of the negative affects of crossing streams at multiple locations and using stream bottoms as trails.
- Conduct further research to determine the degree of sensitivity of the eastern pondmussel to various point and non-point source pollution sources and land use impacts.

## MEASURES OF SUCCESS

Once the distribution of the eastern pondmussel is thoroughly evaluated, persistence of populations and increases in numbers where rare will indicate successful conservation efforts.