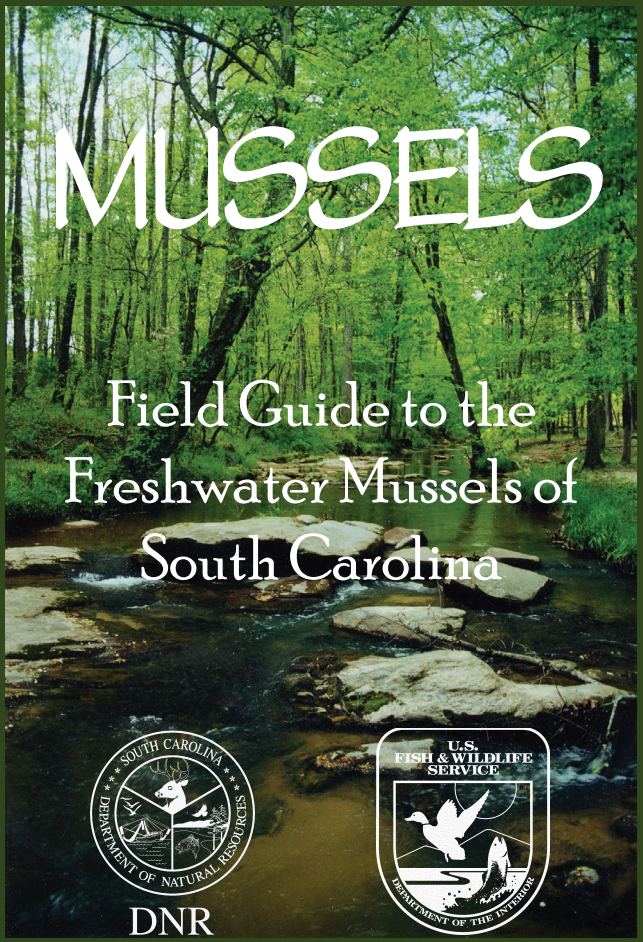


South Carolina Department of Natural Resources

About this Guide

Citation for this publication: Bogan, A. E.[1], J. Alderman[2], and J. Price. 2008. *Field guide to the freshwater mussels of South Carolina.* South Carolina Department of Natural Resources, Columbia. 43 pages

This guide is intended to assist scientists and amateur naturalists with the identification of freshwater mussels in the field. For a more detailed key assisting in the identification of freshwater mussels, see Bogan, A.E. and J. Alderman. 2008. *Workbook and key to the freshwater bivalves of South Carolina.* Revised Second Edition. The conservation status listed for each mussel species is based upon recommendations listed in

Williams, J.D., M.L. Warren Jr., K.S. Cummings, J.L. Harris and R.J. Neves. 1993. *Conservation status of the freshwater mussels of the United States and Canada.* Fisheries. 18(9):6-22.

A note is also made where there is an official state or federal status for the species.

Cover Photograph by Ron Ahle

Funding for this project was provided by the US Fish and Wildlife Service.

[1] North Carolina State Museum of Natural Sciences
[2] Alderman Environmental Services

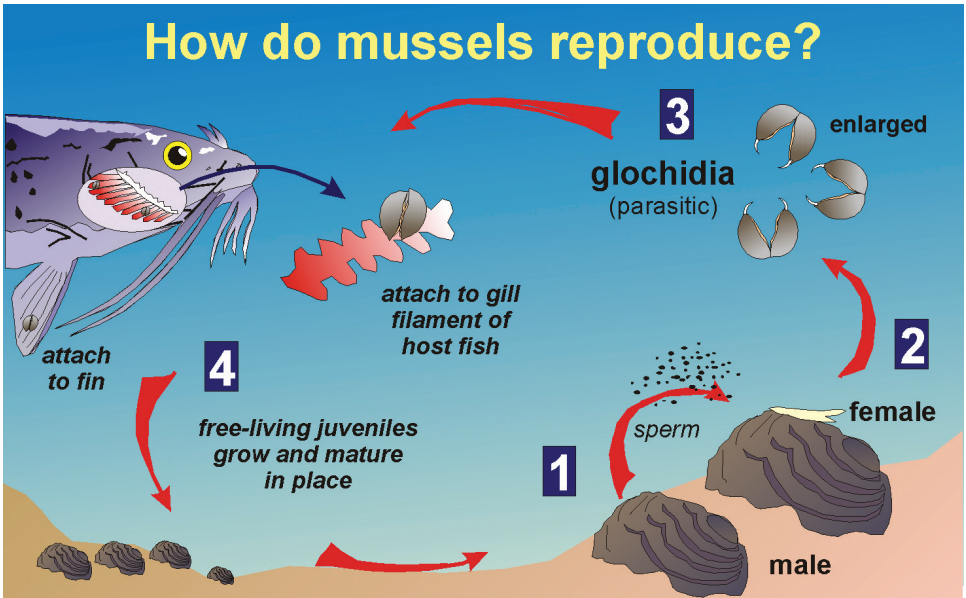
Diversity and Classification

Mussels belong to the class Bivalvia within the phylum Mollusca. North American freshwater mussels are members of two families, Unionidae and Margaritiferidae within the order Unionoida. Approximately 300 species of freshwater mussels occur in North America with the vast majority concentrated in the Southeastern United States. Twenty-nine species, all in the family Unionidae, occur in South Carolina. Approximately 1000 species occur worldwide. Invasive freshwater bivalves from two families, Corbiculidae and Dreissenidae, also occur in North America. The Asian Clam, *Corbicula fluminea*, is widespread throughout North America including South Carolina. Several members of the family Dreissenidae, including *Dreissena polymorpha*, the Zebra Mussel, and *Dreissena bugensis*, the Quagga Mussel, have invaded North America, but have not yet reached South Carolina.

Life History

In most species of freshwater mussels, the sexes are separate. Males release sperm into the water column, and females take in the sperm when filtering the water. Fertilization occurs internally, and the female mussel remains gravid, anywhere from several weeks to several months. Most species of larval mussels, called glochidia, must undergo a parasitic stage in which they attach to the gills or fins of a fish in order to complete development. Some mussel species can use a variety of different fish species as hosts, while others are limited to one or very few fish species. A few species are able to use salamanders as hosts, and a few others can complete development without the use of a host. In order to increase their chances of finding a suitable host, many female mussels grow an extension of the mantle flap that looks like a small fish, crayfish, insect, or worm to attract a predatory fish host. When the fish attacks, the female releases her glochidia at just the right time. Other species extend strands of mucus with lures or gelatinous packets attached, or deposit tubes containing glochidia on the substrate. The glochidia inside are

ingested by a foraging fish. If glochidia attach to an appropriate host, they drop off the fish as fully developed juveniles. If they attach to an unsuitable host, they will not survive. To increase the chances of reproductive success, the female mussel produces anywhere between several thousand and a few million glochidia. Using a fish as a host allows juvenile mussels to disperse much farther than mussels are able to move as adults.



Photograph courtesy of Karl J. Scheidegger, a fisheries biologist for the Wisconsin Department of Natural Resources.

Habitats

Mussels were historically abundant in most permanent rivers and streams in North America. Sometimes, mussels can be found in temporary bodies of water such as sloughs and oxbow lakes, that occasionally receive water from rivers during flood events. Mussels are not usually found in streams that experience frequent drying or dry periods of long duration. However, some species can survive in streams that occasionally dry up for short periods of time. The degree to which mussels can survive out of water or avoid dessication by burying themselves in the sediments appears to vary greatly between species and between habitats. Some species of mussels also survive well in impoundments, but many species adapted to free-flowing rivers and streams are unable to survive in stagnant water after a section of stream becomes impounded. Despite the historic abundance of freshwater mussels, many species are now quite scarce. Seventy species are federally listed as endangered or threatened, and many more are known to be in decline but do not currently receive federal protection.

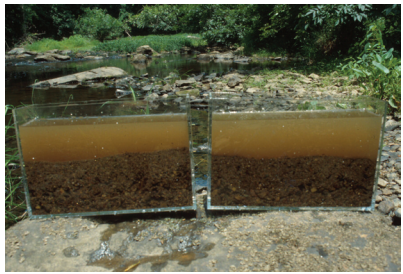
Threats

Many factors have been implicated in the decline of freshwater mussels. Mussels were once harvested heavily for pearls and for the use of their shells for buttons. In some states, mussels are still harvested commercially in the cultured pearl industry, although not in South Carolina. In areas where mussels are not harvested, they continue to decline due to habitat degradation. Sedimentation of streams and rivers may be the most damaging aspect of habitat degradation. In areas with unstable streambanks, erosion causes soil and debris to wash into the channel. In watersheds with a low percentage of forested land, runoff from great distances is carried into the stream or river and brings with it sediments and toxins from household wastes, fertilizers, animal fecal material, car washes, and many other sources. Because mussels are filter feeders, they may become stressed when their gills become clogged with large amounts of sediments that cannot be digested, such as sand or silt suspended in the water column. Mussels are also quite sensitive to many pollutants including heavy metals and ammonia from sewage treatment plants or agriculture. The ability of

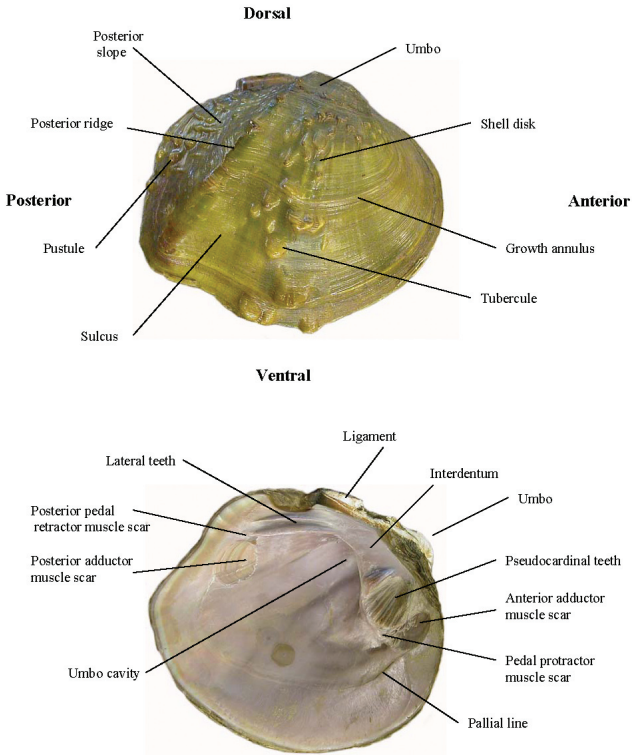
different species to tolerate various pollutants is not well understood, and is in need of further research. The physical alteration of habitat can also harm mussels. Dams not only modify habitat but can also block the ability of host fishes to disperse mussels. Many species adapted to flowing water are unable to survive in impoundments. Some impoundments also modify the temperature and oxygen content of water flowing below the dam. Excessive use of water by humans can also harm mussels. Drought is a naturally occurring phenomenon, but the effects of drought may be much more severe than mussels are able to cope with when additional water is being withdrawn from the water body. In some areas, mussels are declining for unknown reasons, and additional research is needed to protect these fragile populations.

Why are freshwater mussels so important?

Freshwater mussels have important effects on their habitats and implications for the survival of other species. Freshwater mussels feed by filtering large volumes of water and removing tiny food particles such as algae, bacteria, diatoms and fine particulate organic material. Several studies have shown that they can improve water quality by reducing quantities of excessive algae and nutrients. This can improve the ability of the water body to serve as appropriate habitat for other species and for human uses, such as drinking water and recreation. Some species depend upon freshwater mussels as a critical food source, and others use empty mussel shells as sites for depositing eggs. As sensitive aquatic species that respond to a variety of pollutants and habitat disturbances, mussels are also indicators of habitat quality. When we notice the disappearance of mussels from a water body, we know that something is wrong. If we can protect dense populations of mussels, we know that we are being good stewards of the environment and keeping our ecosystems healthy enough to serve people as well as aquatic plant and animal communities.



Photos illustrate an experiment that demonstrates how mussels play a key role in aquatic ecosystems. The two aquaria were filled with turbid water (top photo). After 15 minutes, the bottom photo compares the condition of the water due to natural settlement on the left versus settlement and water filtering by mussels (*Elliptio complanata*) on the right. One can see the difference in water clarity between the tank with the mussels versus the one without. Photos by John Alderman.



Morphology of a freshwater unionid shell, illustrating structures and terminology. Top figure: exterior of right valve; Bottom figure: interior of left valve.

CORBICULIDAE
Corbicula fluminea (Müller, 1776)
Asian Clam
South Carolina

Distribution: This introduced species is widespread in all rivers, most reservoirs, and many lakes.

Description: The shell is fairly small, seldom exceeding 50 mm in length, very solid, ovate when young, and triangular in outline when mature. There are three cardinal teeth directly below the umbos in each valve. The periostracum is a light yellowish-olive to cream colored in immature clams, changing with age to tan, olive, and finally, dark brown to black in old individuals. Very young individuals possess a characteristic dark stripe or band on the anterior slope of the valves. The nacre is white to a shiny light purple.

Status: INTRODUCED; The Asian clam appears to have been introduced into North America sometime during or before the 1920s.

UNIONIDAE
Alasmidonta undulata
(Say, 1817)
Triangle Floater

South Carolina

Distribution: The Triangle Floater is found in the Savannah River basin in South Carolina, and the Pee Dee River basin in North Carolina.

Description: Shell shape is subtriangular to ovate, solid, thicker anteriorly than posteriorly, shell is subinflated to inflated with maximum inflation at the middle of the shell, maximum shell length about 75 mm. Posterior ridge present and usually quite distinct. Posterior slope sometimes marked by oblique ridges or corrugations. Periostracum is smooth and shiny. Periostracum is yellowish, greenish, with broad, green or blackish rays of variable width in juvenile specimens, becoming black with age. Nacre color is typically white anteriorly, but includes salmon, pink or red, becoming iridescent posteriorly.

Status: Special Concern

Alasmidonta varicosa (Lamarck, 1819) Brook Floater

South Carolina Distribution: The Brook Floater is found in the Savannah and historically in the Cooper-Santee and Pee Dee River basins.

Description: Shell shape is oblong, long rhomboid, thin-shelled, slightly inflated with the maximum inflation at the posterior ridge, maximum length is about 70 mm. Posterior ridge is broad, rounded, and inflated. Periostracum is yellowish but more often greenish and partly or completely covered with dark greenish rays in juveniles, becoming brownish with rays partially obscured to almost black in adult specimens.

Status: Threatened

Anodonta couperiana (Lea, 1840) Barrel Floater

South Carolina Distribution: This species is known from the Savannah, Salkehatchee-Combahee, Edisto, and Cooper-Santee River basins.

Description: The Barrel Floater may reach over 100 mm in length. Like other *Anodonta*, this species lacks pseudocardinal and lateral teeth. In *A. couperiana* the umbos just barely extend above the hinge margin. Additionally, the Barrel Floater's length to height ratio is around 1.5 compared with 2 for *Utterbackia imbecillis.*

Status: Special Concern

Anodonta implicata (Say, 1829) Alewife Floater

South Carolina Distribution: This species is found in the Pee Dee River Basin.

Description: Shell shape is elliptical, oblong to ovate in outline, approaching subcylindrical in cross-section, shell thickness rather solid, with a pronounced thickening of the anterior ventral margin from about the middle of the shell anterior, inflated, shell length reaching about 142 mm. This is a typical *Anodonta* completely lacking any indication of pseudocardinal or lateral teeth.

Status: Currently Stable

Elliptio angustata (Lea, 1831)

Carolina Lance

South Carolina Distribution:
This species ranges from the Savannah River Basin north to the Pee Dee River Basin.
Description: Shell elongate, elliptical to subrhomboid and slightly compressed and rather thin, shell length to 140 mm. Posterior ridge is well developed, often double ending slightly below the middle of the posterior end of the shell. Periostracum is olive becoming nearly black in older specimens. Nacre is a shade of purple.
Status: Special Concern

Elliptio complanata (Lightfoot, 1786)

Eastern Elliptio

South Carolina Distribution: This species is widespread in the Atlantic Slope rivers in South Carolina from the Savannah River Basin north to the Pee Dee River Basin.

Description: Shell shape is trapezoidal to rhomboid or subelliptical, compressed to inflated, shell thickness varies from thin to solid, length 120 mm. The posterior slope is flat. Periostracum is yellowish to brown and blackish. Young specimens have indistinct greenish rays present. The rays generally disappear in older shells. Nacre varies from white, pink, salmon, to various shades of purple.

Status: Currently Stable

Elliptio congaraea
(Lea, 1831)
Carolina Slabshell
South Carolina Distribution: This species is known from the Savannah, Edisto, Cooper-Santee and Pee Dee River basins in South Carolina.
Description: Shell is rhomboid, subcompressed, rather thin to subsolid, surface with irregular growth lines, usually wrinkled on the posterior slope. Epidermis is dirty greenish-yellow or tawny, generally rayed, especially in young shells. Nacre is purplish.
Status: Special Concern

Elliptio folliculata (Lea, 1838) Pod Lance

South Carolina Distribution: This species is found in the Savannah River Basin north to the Waccamaw and Pee Dee River basins.
Description: This is a narrow, uninflated, elongated mussel that in its lake form resembles a straight-edged razor. The umbo is flat and the dorsal and ventral shell margins are parallel to each other. The shell is covered by a rough dark brown to black periostracum. The nacre varies from bluish to pink.
Status: Special Concern

Elliptio fraterna
(Lea, 1852)
Brother Spike

South Carolina Distribution: Restricted to the Savannah River Basin in South Carolina.

Description: Shell elongate, rather thin, subrhomboid, shell reaching 65 mm in length. Posterior ridge well developed single dorsally becoming double near the posterior margin. Periostracum smooth and shiny, reddish-brown to yellowish often with fine green rays becoming obscured with age and darkening periostracum. Nacre varies from white to pink, salmon, and purple.

Status: State Endangered, Not Federally Listed

Elliptio icterina (Conrad, 1834) Variable Spike

South Carolina

Distribution: This species is found from the Savannah River Basin north to the Pee Dee and Waccamaw River basins.

Description: Shell is oblong, subelliptical or subrhomboid, with a prominent posterior ridge. Epidermis is greenish-yellow to tawny or tawny- brown, usually showing dark rest marks, scarcely rayed. The nacre is white, often silvery, and a little thicker in front. Pseudocardinal teeth subcompressed to solid and rough; lateral teeth long and curved.

Status: Currently Stable

Elliptio producta (Conrad, 1836) Atlantic Spike

South Carolina Distribution: This species is wide spread in South Carolina ranging from the Savannah River Basin north to the Pee Dee, including the Waccamaw River Basin.

Description: Shell elongate, somewhat compressed, solid, with a maximum length of nearly 140 mm. Anterior margin is rounded, posterior margin roundly pointed with the most posterior point slightly above the midline of the shell. Periostracum has fine uneven incremental growth lines, slightly shiny, dark reddish-brown or greenish-brown without rays.

Nacre is a shade of purple.

Status: Special Concern

Elliptio roanokensis (Lea, 1838) Roanoke Slabshell

South Carolina

Distribution:
This species is found in the Cooper-Santee and Pee Dee River systems and in the Savannah River Basin.

Description: Individual Roanoke Slabshells may grow to greater than 150 mm total length. The posterior ridge varies from being well defined to being uniformly rounded. The periostracum is generally smooth except near the margins of the shell. Color of the periostracum is usually a yellow reddish-brown, which darkens with age. Narrow greenish rays are often present from the anterior end of the shell to the posterior ridge, but are less distinct in older individuals. The nacre is usually purple.

Status: Special Concern

Elliptio waccamawensis (Lea, 1863) Waccamaw Spike

South Carolina

Distribution: The Waccamaw Spike is restricted to the the Waccamaw River in South Carolina.

Description: This mussel has a moderately inflated elliptical shell with a prominent angular ridge on its posterior slope. The ventral margin is straight, and the umbo has a trapezoidal umbo sculpture. Pseudocardinal teeth are present on the hinge and variable in shape. There is a white to bluish nacre on the inner shell surface. A light to dark brown, smooth periostracum covers the outer shell surface.

Status: Special Concern

Fusconaia masoni (Conrad, 1834)
Atlantic Pigtoe

South Carolina Distribution: Historically, this species is known from the Savannah River Basin. It may exist in the Pee Dee River Basin in South Carolina, since it is found in this river basin in North Carolina.

Description: Atlantic Pigtoes are sub-rhomboidal except in individuals from headwater areas. Such individuals tend to be more elongate. The posterior ridge is very distinct, and the umbos extend well above the dorsal margin. The periostracum is yellow to dark brown and parchment like. The nacre ranges from an iridescent blue, to salmon, to white, to orange. Pseudocardinal and lateral teeth are well developed except for the anterior pseudocardinal tooth in the right valve, which is vestigial.

Status: State Endangered, Not Federally Listed

Lampsilis cariosa (Say, 1817) Yellow Lampmussel

South Carolina Distribution: This species is known from the Savannah, Cooper-Santee, Pee Dee, and Waccamaw River basins.

Description: Shell shape is obovate, shell thickness begins as thin in juveniles becoming thicker with age, moderately inflated, shell length 120 mm. Periostracum is waxy and shiny. Interdentum is narrow but obvious compared with *Leptodea ochracea*. Periostracum is waxy yellow, often with a trace of green in it, rays are either absent or restricted to the posterior slope or slightly in front of it. The nacre is bluish-white, often tinged with cream or salmon.

Status: Threatened

Lampsilis radiata (Gmelin, 1791) Eastern Lampmussel

South Carolina Distribution: The Eastern Lampmussel is found in the Pee Dee, and Cooper-Santee River basins.

Description: Shell shape is subelliptical to subovate in outline, shell valves are thick and solid, shell valves vary from hardly inflated to quite inflated, shell length is often greater than 120 mm. Interdentum is lacking. Periostracum is yellowish or brownish green with dark green or black rays over the entire surface, rays are not well defined. Nacre color is white, may be tinged with pink or salmon or may be completely pink or salmon.

Status: Currently Stable

Lampsilis splendida (Lea, 1838) Rayed Pink Fatmucket

South Carolina Distribution: This species occurs in the Savannah River Basin, the Wateree River and the Santee River, both in the Cooper-Santee River Basin and the Waccamaw River of the Pee Dee River Basin.

Description: Shell shape is elongate oval, greatly inflated with a shell length of 110 mm. Posterior ridge rather sharp, often with a secondary ridge, posterior slope wrinkled. Periostracum wrinkled giving the surface a fuzzy appearance, entire surface yellowish-green to reddish-brown and the entire surface covered with numerous wide and narrow green rays, becoming dark brown with the rays obscured in old specimens. Nacre color varies from bluish to white but often pinkish and iridescent ranging to a light purple.

Status: Special Concern

Lasmigona decorata (Lea, 1852) Carolina Heelsplitter

South Carolina Distribution: The Carolina Heelsplitter occurs in the Lynches River (Pee Dee River system), eight creeks in the Catawba River basin, a single creek in the Saluda River basin, and two creeks in the Savannah River basin.
Description: The Carolina Heelsplitter can reach a length of 118 mm. The shell is an ovate trapezoid. The dorsal margin is straight and may end with a slight wing. The unsculptured shell can have a yellowish, greenish, or brownish periostracum. The Carolina Heelsplitter can have greenish or blackish rays. The pseudocardinal teeth are lamellar and parallel to the dorsal margin, and there is a slight interdentum. The nacre varies from an iridescent white to a mottled pale orange.
Status: Endangered. This species is federally and state listed as Endangered.

Leptodea ochracea (Say, 1817) Tidewater Mucket

South Carolina Distribution: The Tidewater Mucket is known from the Waccamaw and Savannah River basins.

Description: Shells of the Tidewater Mucket are usually relatively small, at times nearly 100 mm in length, elliptical to ovate in outline with a thin to subsolid, strong, subinflated shell. Posterior ridge is well developed ending in a blunt point about half way up from the base on the posterior margin. The periostracum is slightly shiny to mat. The interdentum is virtually nonexistent in this species. Periostracum is dull, not a bright yellow but grayish, greenish, or brownish olive and the rays have a different character. The rays become obscure on the posterior slope. Nacre is white to reddish pink.

Status: Special Concern

Ligumia nasuta (Say, 1817) Eastern Pondmussel

South Carolina

Distribution: This species is known historically from the Savannah, Pee-Dee, and Cooper-Santee River basins.

Description: Shell shape elongated, subelliptical, thin to subsolid and more or less compressed, shell length 102 mm. Sexual dimorphism in the shells is well marked. The posterior margin of the male shell tapers evenly to a blunt point. The ventral margin of the female shell is expanded in the postbasal region, becoming a broad rounded projection. The posterior ridge is well developed, distinct and angled near the umbo, becoming rounded posteriorly. Periostracum is dark olive-green to brownish and often with faint dark green, straight and narrow rays present, especially in juvenile specimens. The rays may be completely absent. Nacre is bluish-white, some with salmon in the umbo area, iridescent posteriorly.

Status: Special Concern

Pyganodon cataracta (Say, 1817) Eastern Floater

South Carolina Distribution: This is a wide-ranging species and is found in South Carolina from the Savannah, Cooper-Santee, Pee Dee, and Waccamaw River basins.

Description: Shell shape is ovate, subelliptical and elongate, shells of juveniles not very inflated but much more inflated in adult shells, shells are uniformly thin, often with a low post dorsal wing; shell length 135 mm. The Eastern Floater has no hinge teeth or any indication of swellings in this area. Periostracum is light to dark green, rarely becoming brownish or black, often quite brightly colored, with concentric light and dark bands and with dark green rays most distinct on the disc of the shell, broad green rays on the posterior slope are often well developed, giving the area a much darker color. Nacre is bluish-white.

Status: Currently Stable

Strophitus undulatus (Say, 1817) Creeper [formerly the squawfoot]

South Carolina

Distribution: The Creeper is widely distributed in the Atlantic slope drainages including the Savannah, Cooper-Santee, and Pee Dee River basins.

Description: The shell is elliptical, somewhat rhomboid, solid, compressed, and thin when young, moderately inflated and thick in mature and old individuals. Shell length is usually less than 110 mm. Lateral teeth are absent or suggested by a thickened hinge line. The periostracum is yellowish or greenish, marked by greenish, often wavy rays; old shells are dark brown or black and usually rayless. The nacre is white or bluish-white and iridescent around the margins.

Status: Currently Stable

Toxolasma pullus
(Conrad, 1838)
Savannah Lilliput

South Carolina

Distribution: This species is known from the Savannah, Cooper-Santee, and Pee River basins.

Description: The Savannah Lilliput has a small, oval or elliptical shell. A large specimen would be 30 to 35 mm long, with a height of 19-20 mm and a width of 15-16 mm. The shell is somewhat inflated. The shells are sexually dimorphic. The females have a broader more truncated posterior end, whereas the males have a narrower rounded posterior end and a point below the median line. The periostracum is most frequently blackish, satiny and coarse because of the numerous closely spaced growth lines. The nacre is bluish-white with a pink to purplish iridescence at the posterior end.

Status: Threatened

Uniomerus carolinianus (Bosc, 1801) Eastern Pondhorn

South Carolina Distribution: This species is found in all river basins from the Savannah north to the Pee Dee and Waccamaw River basins in South Carolina.

Description: Shell medium to large reaching 114 mm in length. Outline rhomboid or long rhomboid. Valves subinflated or inflated, subsolid. Posterior slope often with two radial sulci. Umbos low to slightly elevated, located in the anterior quarter of the shell. Periostracum is generally black and slightly roughened, but with a satiny sheen over most of the surface. Sometimes the surface is smooth and shiny, especially in the umbonal area, and may then be brownish-yellow or yellowish mixed with green, not rayed. The nacre is white, bluish-white or pinkish to lurid purple.

Status: Currently Stable

Utterbackia imbecillis (Say, 1829) Paper Pondshell

South Carolina Distribution: The Paper Pondshell occurs throughout South Carolina and has been reported from the Savannah, Edisto, and Cooper-Santee River basins.

Description: The shell is thin, oblong, and inflated. Juveniles, however, are greatly compressed. In especially favorable habitat, individuals may exceed 100 mm in length and become extremely inflated, almost circular in cross section. The Paper Pondshell lacks hinge teeth, and the umbos are flush with the hinge line. The periostracum is yellowish or greenish with numerous fine green rays. The nacre is bluish-white or silvery.

Status: Currently Stable

Villosa constricta (Conrad, 1838) Notched Rainbow

South Carolina Distribution: This species is found in Pee Dee and Cooper-Santee River basins in South Carolina.

Description: Shell rather small and short, subelliptical, subsolid, subcompressed; surface nearly smooth or marked with irregular concentric growth lines. The nacre is bluish, sometimes purplish in the center, slightly thicker in front. The female shell is pointed behind a little more than midway up from the base. The male shell is often subrhomboid, with the posterior point generally less than midway up from the base.

Status: Special Concern

Villosa delumbis
(Conrad, 1834)
Eastern Creekshell

South Carolina Distribution: This species' range in South Carolina includes the Savannah, Salkehatchee-Combahee, Edisto, Cooper-Santee, Pee Dee, and Waccamaw River basins.

Description: The shell long ovate, very thin and fragile. The female shell is very enlarged on the posterior end while the male is oval in shell outline. The periostracum is yellow marked by numerous green rays, interrupted by the prominent growth lines.

Status: Currently Stable

Villosa modioliformis (Conrad, 1834) Southern Rainbow

South Carolina Distribution: The Southern Rainbow is found from the Savannah, Salkehatchee-Combahee, Edisto, Cooper-Santee, and Pee Dee River basins.

Description: Shells vary from thin to subsolid, being elliptical to elongate obovate in outline. Male shells are often subrhomboid with a bluntly pointed posterior margin, while female shells are slightly inflated with a broadly rounded posterior margin. The shell length of adults averages about 60 mm but may reach 100 mm. Color varies from a greenish-yellow to olive-brown, the surface covered with rather broad, unbroken to slightly wavy dark green rays over the entire surface. The nacre color is a bluish-white, often becoming iridescent posteriorly.

Status: Currently Stable

Villosa vaughaniana (Lea, 1838) Carolina Creekshell

South Carolina

Distribution: The Carolina Creekshell has been collected from creeks in the Cooper-Santee River Basin in North Carolina and the Pee Dee River Basin.

Description: The somewhat inflated shell is elliptical in the male and obovate in the female. Males may be up to 60 mm long and females up to 54 mm long. The shell is moderately shiny with strong irregular growth lines. The periostracum is greenish-yellow to dark brownish-yellow with numerous, continuous dark green rays covering most of the shell. The overall appearance of the shell can sometimes be a uniform dark brown, but the actual color is a dark brownish-yellow with numerous dark green rays. The nacre is shiny, iridescent white or bluish-white, frequently with a pale salmon shade deepening toward the ventral margin.

Status: Special Concern

GLOSSARY OF BIVALVE TERMS

Cardinal teeth – teeth located between the lateral teeth in Corbiculidae and Sphaeriidae.
Corrugated – marked by wrinkles or ridges and grooves.
Epidermis – exterior or outside (corneous) layer of the shell.
Gravid – carrying embryos in the marsupium.
Growth lines – compact lines of temporarily arrested growth or rest periods appearing on the epidermis of the shell as a raised or darker concentric line.
Lateral teeth – the elongated, raised and interlocking structures along the hinge line of the valve.
Nacre – the interior iridescent, thin layer of a mussel shell.
Periostracum – see epidermis.
Pseudocardinal teeth – triangular shaped hinge teeth near the anterior dorsal margin of the shell.
Serrated – notched or grooved.
Sulcus (plural – sulci) – a longitudinal furrow or depression.
Tubercle (tuberculate) – small, raised, rounded

knob on the outside of the shell.
Umbo – the dorsally raised, inflated area of the bivalve shell.