

*A Field Guide to the*  
**FRESHWATER MUSSELS**  
*of Connecticut*



Connecticut Department of Environmental Protection  
Bureau of Natural Resources - Wildlife Division



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CONNECTICUT

Bureau of Natural Resources / Wildlife Division  
Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127  
[www.dep.state.ct.us](http://www.dep.state.ct.us)

Department of Environmental Protection  
Arthur J. Rocque, Jr., Commissioner  
David K. Leff, Deputy Commissioner

Bureau of Natural Resources  
Edward C. Parker, Chief

Wildlife Division  
Dale W. May, Director

Prepared by  
Ethan J. Nedeau, BIODRAWVERSITY  
Julie Victoria, Wildlife Biologist, DEP

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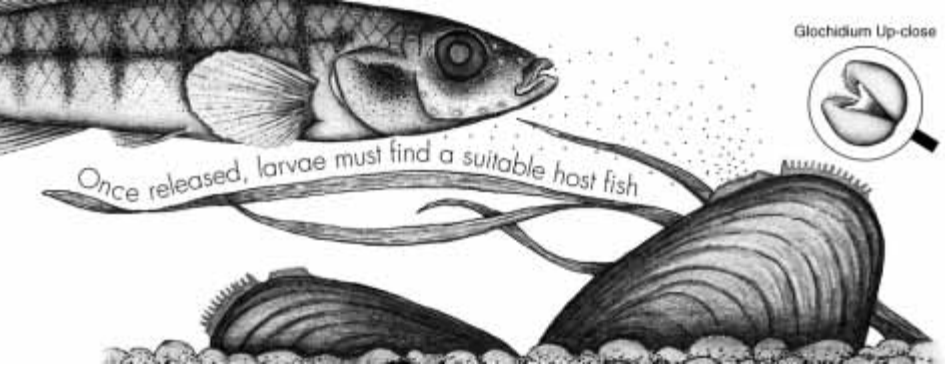


## Introduction

Freshwater mussels are a fascinating group of animals that live on the bottom of streams, rivers, ponds, and lakes. They spend most of their lives partially buried, sucking water into their bodies, filtering it to remove food, and pumping the rest back into the environment. These “living filters” play an important role in natural ecosystems by helping to clean our water bodies, eating algae and zooplankton, and providing food for many types of fish and mammals. Mussels often comprise the largest proportion of animal biomass in a waterbody and they store enormous amounts of minerals and nutrients.

Freshwater mussels have a remarkable life cycle. Male mussels release sperm into the water, and sperm are then filtered by female mussels. The fertilized eggs develop into microscopic larvae called glochidia. Glochidia look like tiny mussels, and they are parasites that must attach themselves to the fins or gills of a fish. Mussels are specific about the fish they parasitize—for example, the alewife floater is only known to parasitize the alewife, *Alosa pseudoharengus*. After being attached to a fish for one to several weeks, glochidia let go of the fish and sink to the bottom of the waterbody, where they will spend the rest of their lives. Most mussels live eight to 20 years, but the eastern pearlshell, found in small trout streams throughout Connecticut, has been reported to live over 100 years!





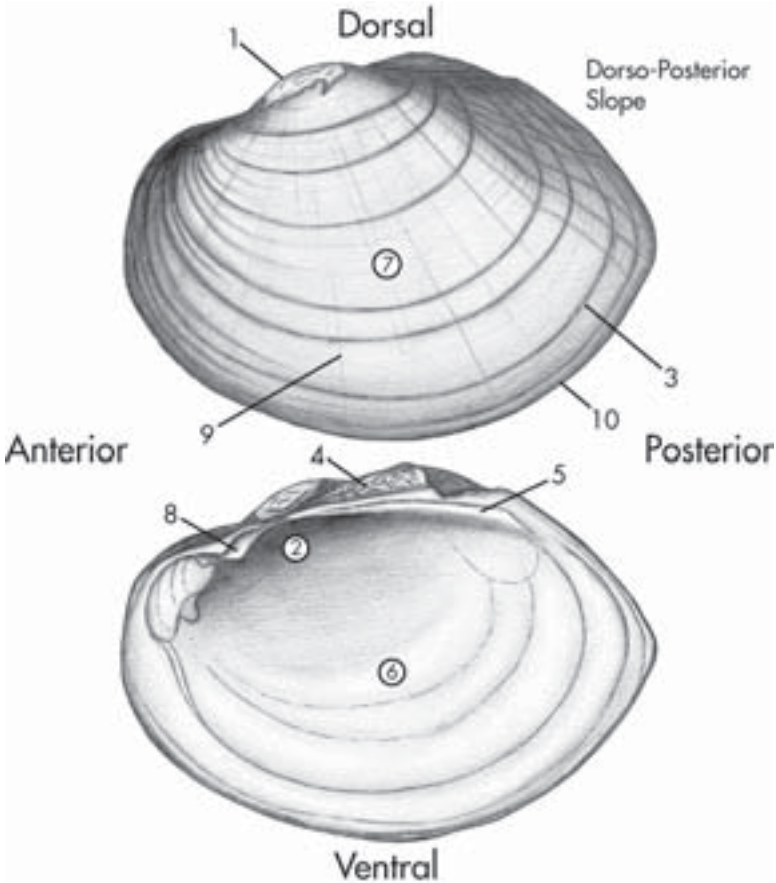
Freshwater mussels are very vulnerable to disturbance and pollution. Anything that threatens our lakes and rivers also threatens mussels, such as pollution from our cars and industries, erosion caused by land use management and construction, water diversions and dams, and exotic species. The result of these threats is that 75% of North America's 297 species of mussels are listed as special concern, threatened or endangered. Nearly 35 species have gone extinct in the last 100 years.

In Connecticut, six of the 12 native freshwater mussel species are listed as special concern, threatened, or endangered. The yellow lamp-mussel has not been seen in Connecticut for over 80 years and is thought to be extinct in the State—a unique and beautiful part of our natural heritage that may be lost. Freshwater mussels provide scientists with a way to determine the health of lakes and rivers by providing clues about different types of pollution or environmental disturbance. Such clues come from the species that exist, changes in the abundance of species over time, shells that provide evidence of excessive mortality or population changes, and even the animals themselves that store pollutants in their shells and bodies, such as heavy metals and certain chemicals.

In Connecticut, scientists are gathering information about freshwater mussels to better understand this important resource and the health of the State's lakes, ponds, rivers, and streams. The public can play an important role in the State's efforts by helping gather data on where freshwater mussels occur and how their populations may be threatened. This guide is designed to stimulate an interest in freshwater mussels and provide a user-friendly tool to identify all of Connecticut's species. Whatever brings you to a riverbank or lakeshore—whether it is a class field trip, fishing trip or just curiosity about freshwater habitats—we hope that you will bring this field guide and learn about the freshwater mussels. And tell us what you find—we would really like to know!

# Identifying Freshwater Mussels

It may seem a little tricky at first, but with practice anyone can become good at identifying freshwater mussels. Identification relies on size, shape, color, and other morphological traits. This field guide emphasizes visual cues and provides illustrations and photographs, but it also uses technical words that you should learn.

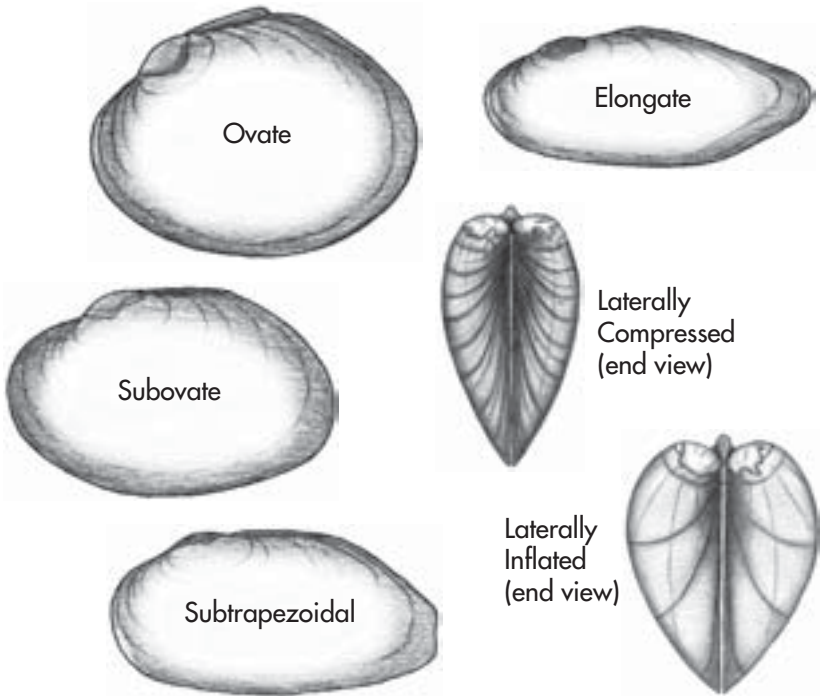


1. BEAK: prominent raised area along dorsal edge, usually eroded 2. BEAK CAVITY: recessed area on the inside of the valve, under the beak 3. GROWTH LINE: dark concentric lines on the shell that show periods of growth 4. HINGE: area of connection between the two valves, and includes connective tissue and hinge teeth 5. LATERAL TEETH: thin elongate teeth located along the hinge 6. NACRE: the smooth mother-of-pearl shell material on the inside of the valve 7. PERIOSTRACUM: outer lining of the valve 8. PSEUDOCARDINAL TEETH: short stout teeth located below or just anterior to the beak 9. SHELL RAYS: faint lines that radiate from the beak, perpendicular to growth lines 10. VALVE: one of the opposing halves of a mussel shell.



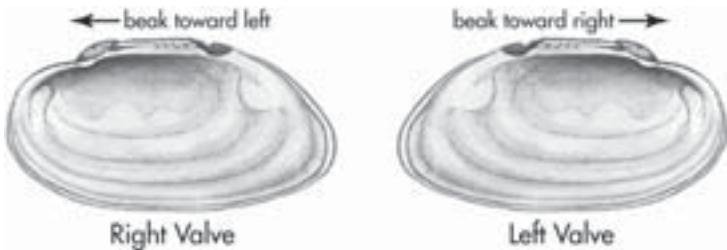
# Shell Shape

Several terms are used to describe the shape of shells, and though we try not to use too many of them, all of the terms we use are illustrated below.



# Right vs. Left Valve

You must know the difference between the left and right valve to learn hinge teeth morphology. Place the valve in your hand with the nacre facing toward you and the beak pointing up. If the beak is toward the right, it is the left valve, and if the beak is toward the left, it is the right valve.



# Searching for Freshwater Mussels

Freshwater mussels are surprisingly easy to find, making them ideal animals for environmental education lessons and volunteer monitoring programs. Students and volunteers can use survey methods similar to those of scientists and have a good chance of finding rare species. The methods used to survey mussels are:

**Shoreline Searches:** Walk along the riverbank or lakeshore and look for shells. This method is a safe and easy way to find out what lives in a water body and allows you to collect shells without killing any animals.

**Bucket Surveys:** Using a plastic pail fitted with a clear bottom, you can wade in shallow water and peer through the bucket to see the stream or lake bottom. This survey method works well in shallow water (< 3 feet) and allows you to see live animals situated in the substrate.

**Snorkeling:** For those people with snorkel gear, snorkeling can be a fun way to search for mussels. Snorkeling allows you to survey large areas, in deeper water, and see live undisturbed mussels up-close.

When searching for mussels, always beware of potential dangers such as poison ivy on the streambanks, slippery banks and rocks, deep mud, broken glass, pollution, dangerous flow conditions, heavy boat traffic and other hazards. Safety is the top priority! Please respect the rights of private property owners when accessing potential survey areas.



Two biologists searching for mussels



# Eastern Pearlshell

**SPECIAL CONCERN!**

*Margaritifera margaritifera*

## Key Features

**Size:** Up to six inches.

**Shape:** Elongate. Older individuals often have a pronounced ventral curvature that gives them a slight “banana-shaped” appearance.

**Periostracum:** Thick. Dark. Shell rays absent. Color light brown (juveniles) to black (adults).

**Lateral Teeth:** Absent.

**Pseudocardinal Teeth:** Present and well developed—two on the left valve and one on the right valve.

**Nacre:** Usually white, with faint pits centrally located, each with a faint “tail” that points toward the beak cavity.

## Often Confused With...

Eastern Elliptio (p. 16)

## Habitat

The eastern pearlshell is found in streams and small rivers that support trout or salmon populations, and exists in a variety of substrate. This species is not found in lakes or ponds.

## Range in Connecticut

The eastern pearlshell is found in most major watersheds in Connecticut, though it is most common in the northern and northwestern parts of the State.



## Conservation

The eastern pearlshell is listed as special concern in Connecticut. The scarcity and continual loss of coldwater habitats in the State contribute to its rarity. It is more common in northern New England where there are more coldwater streams and rivers. Its host fishes include Atlantic salmon, brook trout and brown trout. Climate change may negatively affect this species if rivers become too warm to support trout or salmon.





A.



B.



C.



D.



Average Adult

Large

### Eastern Pearlshell

A. External shell B. Internal shell, right valve C. Close-up of pits on the nacre D. Hinge teeth



# Dwarf Wedgemussel

**ENDANGERED!**

*Alasmidonta heterodon*

## Key Features

**Size:** Up to 1.5 inches, though usually around one inch.

**Shape:** Somewhat triangular or “wedge-shaped” at the posterior end, which is sometimes pointed. Adults are small and often exhibit much more shell erosion than comparably sized juveniles of other species.

**Periostracum:** Color yellowish-brown, olive-brown, or blackish-brown. Shell rays present but sparse, particularly in adults.

**Lateral Teeth:** Present but thin. Two on the right valve and one on the left valve, which is the opposite of all other North American freshwater mussel species that possess lateral teeth.

**Pseudocardinal Teeth:** Present. Two on the left valve and one on the right valve.

**Nacre:** Color usually bluish-white and somewhat iridescent along the posterior margin, sometimes with greenish or yellowish markings toward the beak cavity.

## Often Confused With...

Creeper (p. 14), brook floater (p. 12), and triangle floater (p. 10)

## Habitat

The dwarf wedgemussel is found in streams and rivers, where it prefers stable substrates in slow or moderate currents. In slow moving, sandy rivers it is often found near the banks among roots.

## Range in Connecticut

Though once distributed throughout parts of the Connecticut River and Quinnipiac River watersheds, it is now thought to exist in only a few Connecticut River tributaries.



## Conservation

This is the only federally endangered freshwater mussel in New England. Historically, it was found in nearly 70 locations in 15 watersheds along the Atlantic seaboard, but its range and population sizes have dramatically decreased in the last century.



A.



B.



C.



### Dwarf Wedgemussel

A. External shell B. Internal shell, right valve C. Hinge teeth



# Triangle Floater

*Alasmidonta undulata*

## Key Features

**Size:** Up to three inches.

**Shape:** Subovate. Ventral margin rounded. Its laterally inflated valves and subovate shape give it a “plump” appearance. Beaks prominent.

**Periostracum:** Color yellowish-green (juveniles) to greenish-brown (adults) or black. Shell rays numerous.

**Lateral Teeth:** Absent.

**Pseudocardinal Teeth:** Present and well developed. The stout teeth are buttressed by a heavy ridge.

**Nacre:** Usually distinctly bicolored. Posterior half thin and an iridescent bluish-pink, and the anterior half thick and usually whitish-pink.

## Often Confused With...

Dwarf wedgemussel (p. 8), brook floater (p. 12), creeper (p. 14)

## Habitat

The triangle floater is found in streams, rivers, and lakes, where it seems to prefer sand and gravel substrates. It is the only *Alasmidonta* species in Connecticut that can be found in lakes, though it is more commonly found in small to medium-sized rivers.

## Range in Connecticut

The triangle floater exists in most watersheds in Connecticut, though it is particularly common in the Connecticut River watershed.



## Conservation

The triangle floater is widespread in Connecticut and there are many large healthy populations. It seems to be less sensitive to pollution and habitat disturbance—and uses a broader range of host fish—than its close relatives, the brook floater and dwarf wedgemussel. It is an important indicator of river health, and may be declining in southern parts of its range, such as Maryland where it is listed as endangered. It is listed as special concern in Massachusetts and Maine.

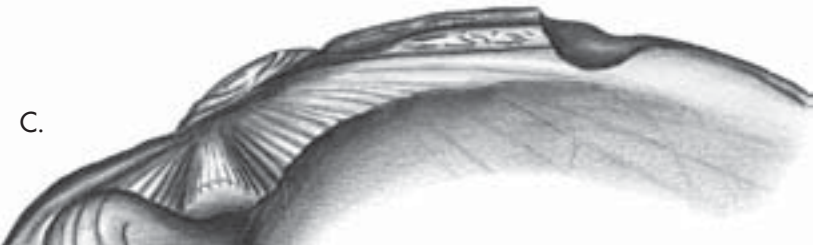
A.



B.



C.



Large  
Average Adult

**Triangle Floater**

A. External shell B. Internal shell, right valve C. Hinge teeth



# Brook Floater

**ENDANGERED!**

*Alasmidonta varicosa*

## Key Features

**Size:** Up to three inches.

**Shape:** Subovate or subtrapezoidal. Ventral margin flat or indented. Valves laterally inflated, appearing swollen in cross section.

**Periostracum:** Color yellowish-green (juveniles) to greenish-brown (adults). Shell rays numerous, usually green. Well-defined ridges present on the dorso-posterior slope, perpendicular to growth lines.

**Lateral Teeth:** Absent.

**Pseudocardinal Teeth:** Present but poorly developed—one small thin tooth on each valve.

**Nacre:** Color variable, but usually bluish-white or pale orange.

**Other:** Cantaloupe colored foot. Animals gape (relax muscles and allow shells to open) when removed from the water.

## Often Confused With...

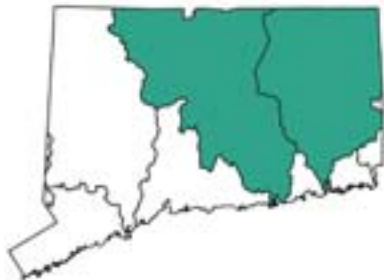
Dwarf wedgemussel (p. 8), triangle floater (p. 10), creeper (p. 14)

## Habitat

The brook floater is found in small to medium-sized rivers, usually in gravel and cobble substrates in swift current. This species is not found in lakes or ponds.

## Range in Connecticut

The brook floater is found in fewer than a dozen streams in the Connecticut and Thames River watersheds.



## Conservation

The brook floater is endangered in Connecticut. Only a few known populations remain, and they are small and show little evidence of successful reproduction. Pollution, dams, and introduced species are thought to be the primary culprits for its rarity. The species is also endangered in Massachusetts and New Hampshire, threatened in Vermont, special concern in Maine, and possibly extinct in Rhode Island.



A.



Average Adult

Large

B.



C.



### Brook Floater

A. External shell B. Internal shell, right valve C. Hinge teeth



# Creeper

## *Strophitus undulatus*

### Key Features

**Size:** Up to three inches.

**Shape:** Subovate to subtrapezoidal. Valves usually laterally compressed, thin and fragile.

**Periostracum:** Color yellowish to greenish-brown (juveniles) to dark brown or black (adults). Shell rays usually only visible in juveniles or light-colored adults. Surface rough due to prominent growth lines.

**Lateral Teeth:** Absent.

**Pseudocardinal Teeth:** Present but extremely reduced—they are very simple swellings that are sometimes difficult to discern.

**Nacre:** Color usually white or bluish-white, and often yellowish-green toward the beak cavity.

### Often Confused With...

The creeper can be confused with several other species, and it is important to examine the key features of all these species before making a positive identification. They include the eastern elliptio (p. 16), brook floater (p. 12), triangle floater (p. 10), alewife floater (p. 20), eastern floater (p. 18), and dwarf wedgemussel (p. 8).

### Habitat

The creeper only inhabits streams and rivers, and prefers sand and gravel.

### Range in Connecticut

The creeper is widespread but rarely abundant in Connecticut.



### Conservation

Although the creeper appears to be doing well in Connecticut, it shares habitat with other listed species such as the brook floater and dwarf wedgemussel, and experiences many of the same environmental threats. Careful monitoring is needed to understand population trends in Connecticut. It is listed as special concern in Massachusetts and Maine.



A.



B.



C.



Average Adult

Large

**Creeper**

A. External shell B. Internal shell, right valve C. Hinge teeth

# Eastern Elliptio

*Elliptio complanata*

## Key Features

**Size:** Up to five inches.

**Shape:** Highly variable, but most often subtrapezoidal or subovate. Valves heavy, strong, and laterally compressed.

**Periostracum:** Color tan (juveniles) to dark brown or black (adults). Shell rays may or may not be present.

**Lateral Teeth:** Present. Two on the left valve and one on the right valve.

**Pseudocardinal Teeth:** Present. Two on the left valve and one on the right valve.

**Nacre:** Color usually white, rose-colored, or purple, and is often discolored.

## Often Confused With...

Eastern pearlshell (p. 6) or creeper (p. 14). Rayed specimens may sometimes resemble eastern lampmussels (p. 28).

## Habitat

The eastern elliptio is found in virtually any large pond, lake, stream, or river, where it is nearly always the most abundant mussel species. It can be found in all types of substrates.

## Range in Connecticut

Statewide.

## Conservation

The eastern elliptio is the most abundant and widespread freshwater mussel in northeastern North America. Its ability to parasitize a variety of different host fish, inhabit both flowing and standing water, and withstand many forms of habitat disturbance and environmental pollution have made this species so common. It often greatly outnumbers all other mussel species, and may comprise the largest proportion of animal biomass in many lakes and rivers, often far exceeding the combined biomass of other invertebrates and fish. It is a staple food item for muskrats and otters.



A.



B.



C.



Average Adult

Large

### Eastern Elliptio

A. External shell B. Internal shell, right valve C. Hinge teeth

# Eastern Floater

*Pyganodon cataracta*

## Key Features

**Size:** Up to seven inches, though infrequently specimens may grow nearly ten inches long!

**Shape:** Somewhat elongate, with a rounded ventral margin. The hinge ligament is either straight or curves slightly upward. Valves laterally inflated, thin, and fragile.

**Periostracum:** Color yellowish-green, green, or greenish-brown. Shell rays either absent or very faint.

**Lateral Teeth:** Absent.

**Pseudocardinal Teeth:** Absent.

**Nacre:** Color silvery-white or metallic blue, sometimes with a yellowish tinge toward the beak cavity.

## Often Confused With...

Alewife floater (p. 20), creeper (p. 14)

## Habitat

The eastern floater exists in a wide variety of habitats and substrate types. It is particularly tolerant of deep silt and mud at the bottom of lakes and ponds. It has been introduced into many man-made ponds such as farm ponds, where it thrives in the nutrient-rich water.

## Range in Connecticut

Statewide.

## Conservation

The eastern floater is widespread and abundant in Connecticut, and unlike many other species, it is tolerant of habitat modification and many forms of pollution. Predators, such as muskrats and otters, may prefer this species because its thin shell is relatively easy to break.



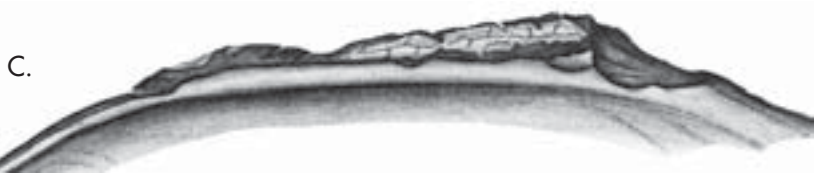
A.



B.



C.



Average Adult

Large

### Eastern Floater

A. External shell B. Internal shell, right valve C. Hinge teeth



# Alewife Floater

*Anodonta implicata*

## Key Features

**Size:** Up to seven inches.

**Shape:** Somewhat elongate, with a rounded ventral margin. The hinge ligament is usually straight. The valves are laterally inflated.

**Periostracum:** Color variable—may be yellowish, greenish, reddish, brown, or black, though most commonly yellowish-brown. Growth lines are prominent, and shell rays are often only evident in juveniles.

**Lateral Teeth:** Absent.

**Pseudocardinal Teeth:** Absent.

**Nacre:** Color usually white, pinkish, or a pale copper color. The ventral margin of each valve is noticeably thicker toward the anterior end [this is important for distinguishing this species from the eastern floater].

## Often Confused With...

Eastern floater (p. 18), creeper (p. 14)

## Habitat

The alewife floater is found in streams, rivers, ponds, and lakes that have runs of anadromous clupeids, particularly the alewife, *Alosa pseudoharengus*. It inhabits a variety of substrate types.

## Range in Connecticut

The alewife floater exists in nearly all major watersheds in Connecticut but is confined to the upstream limits of its anadromous host fish.



## Conservation

The alewife floater is usually abundant but has a restricted distribution because of its reliance on anadromous fish. Disruption of anadromous fish migration, due to dams, may have caused the extirpation of the alewife floater in some locales throughout Connecticut. Installation of adequate fish passage facilities may allow the re-establishment of alewife floater populations upstream of dams.



Average Adult

Large

### Alewife Floater

A. External shell B. Internal shell, right valve C. Hinge teeth



# Eastern Pondmussel

**SPECIAL CONCERN!**

*Ligumia nasuta*

## Key Features

**Size:** Up to six inches.

**Shape:** Narrow and elongate, tapering to a blunt point posteriorly. Females are often distinctly more rounded along the posterior ventral margin. Valves laterally compressed, thin, and strong.

**Periostracum:** Color yellowish or greenish-black (juveniles) to dark brown or black (adults). Shell rays are often only visible in juveniles or light-colored adults.

**Lateral Teeth:** Present but delicate. Two on the left valve and one on the right valve.

**Pseudocardinal Teeth:** Present but delicate. One or two on both the left valve and right valve.

**Nacre:** Color usually silvery-white, pinkish, or purple.

## Often Confused With...

Not easily confused with any other species in Connecticut, although the eastern pearlshell may have a similar elongate shape (p. 6).

## Habitat

The eastern pondmussel inhabits a variety of habitats such as coastal ponds, streams, and rivers.

## Range in Connecticut

Known from the Connecticut River watershed and south-central coastal watersheds.



## Conservation

The eastern pondmussel is listed as special concern in Connecticut.

Many of its historic populations are thought to be extirpated or in decline, and there are few remaining populations that are considered healthy and stable. Environmental pollution and habitat degradation are considered the primary reasons for its decline. It is also listed as special concern in Massachusetts.





Average Adult

Large

### Eastern Pondmussel

A. External shell B. Internal shell, right valve C. Hinge teeth



# Tidewater Mucket

**THREATENED!**

*Leptodea ochracea*

## Key Features

**Size:** Up to three inches.

**Shape:** Ovate. Valves laterally inflated. Females usually more rounded toward the posterior ventral margin. Valves strong and uniformly thick.

**Periostracum:** Color yellowish or greenish-brown, sometimes with a bronze or reddish-yellow tint. Shell rays present, particularly in juveniles and light-colored adults.

**Lateral Teeth:** Present. Two on the left valve and one on the right valve.

**Pseudocardinal Teeth:** Present. Two on both the right valve and left valve. The teeth are thin and elongate, and are located well anterior of the beak [this feature is important to distinguish this species from the yellow lampmussel].

**Nacre:** Color pinkish or salmon-colored.

## Often Confused With...

Yellow lampmussel (p. 26), eastern lampmussel (p. 28)

## Habitat

The tidewater mucket is usually found in medium to large-sized rivers and coastal ponds, and inhabits a variety of substrates.

## Range in Connecticut

Though rare, the tidewater mucket is found throughout the Connecticut River and its tributaries. It has not been found in the Housatonic River watershed since the 1800s.



## Conservation

The tidewater mucket is listed as threatened in Connecticut. Some recent evidence suggests that its range may be expanding, presumably due to river restoration and recovery of anadromous fish runs. Thorough surveys in the Connecticut River and its principal tributaries are needed to determine its population status and trends. It is listed as threatened in Maine and special concern in Massachusetts.



A.



B.



C.



Average Adult

Large

### Tidewater Mucket

A. External shell B. Internal shell, right valve C. Hinge teeth



# Yellow Lampmussel

*Lampsilis cariosa*

**SPECIAL CONCERN!**

(extirpated)

## Key Features

**Size:** Up to five inches.

**Shape:** Ovate. Valves laterally inflated. Mature females usually more rounded toward the posterior ventral margin. Valves strong and thick, particularly toward the anterior end.

**Periostracum:** Color bright yellow in young individuals, sometimes becoming yellowish-brown with age. Faint green shell rays present on the dorso-posterior slope, particularly evident on young specimens.

**Lateral Teeth:** Present. Two on the left valve and one on the right valve.

**Pseudocardinal Teeth:** Present. Two on the left valve and two or three on the right valve. The teeth are stout, with striations on the surface, and usually located directly under the beak [this is an important feature for distinguishing this species from the tidewater mucket].

**Nacre:** Color white or bluish-white. Nacre thicker and more lightly colored toward the anterior end.

## Often Confused With...

Tidewater mucket (p. 24), eastern lampmussel (p. 28)

## Habitat

Elsewhere in New England, the yellow lampmussel inhabits medium to large-sized rivers and lakes, and exists in a variety of substrate types.

## Range in Connecticut

Presumed extirpated.

## Conservation

Though historically known from the Housatonic and Connecticut River watersheds, this species has not been collected in Connecticut for over 80

years, and it is presumed extinct. Until a population can be found in the State, it will be listed as special concern. It does currently exist in the upper Connecticut River in Massachusetts, upstream of Springfield. The yellow lampmussel is listed as endangered in Massachusetts and threatened in Maine.



A.



B.



C.



Average Adult  
Large

### Yellow Lampmussel

A. External shell B. Internal shell, right valve C. Hinge teeth

# Eastern Lampmussel

*Lampsilis radiata radiata*

## Key Features

**Size:** Up to six inches.

**Shape:** Ovate or subovate. Mature females usually more rounded toward the posterior ventral margin. Valves slightly inflated, strong, and thick.

**Periostracum:** Color yellowish-green (juveniles) to yellowish-brown, greenish-brown, or brownish-black (adults). Shell rays numerous and prominent.

**Lateral Teeth:** Present. Two on the left valve and one on the right valve.

**Pseudocardinal Teeth:** Present. Two on the left valve and two or three on the right valve.

**Nacre:** Color white, bluish-white, or pink. Usually lighter in color and much thicker toward the anterior end.

## Often Confused With...

Tidewater mucket (p. 24), yellow lampmussel (p. 26), and eastern elliptio (p. 16)

## Habitat

The eastern lampmussel inhabits streams, rivers, ponds, and lakes, where it is usually quite common. It can be found in a variety of substrates but prefers sand and gravel.

## Range in Connecticut

The eastern lampmussel is found in most major watersheds in Connecticut but is particularly common in the Connecticut River watershed.



## Conservation

The eastern lampmussel is widespread and abundant throughout Connecticut, and is apparently tolerant of moderate habitat degradation and pollution. It is one of only four species in New England that is considered healthy and stable throughout its range.

A.



B.



C.



Average Adult

Large

### Eastern Lampmussel

A. External shell B. Internal shell, right valve C. Hinge teeth



## Introduced Bivalves

Two bivalve species were accidentally introduced into Connecticut. They may have negative impacts on natural ecosystems, fisheries, and water-dependent industries. **Please notify the Connecticut DEP if you see either of these species in your area!**

### Zebra Mussel

*Dreissena polymorpha*



The zebra mussel is small, usually less than one inch, with conspicuous black stripes. Unlike our native freshwater mussels, the zebra mussel attaches to objects with strong byssal threads. It attaches to virtually any permanent surface, including boats, piers, pipes, and even native mussels.

This species is native to the Caspian and Black Sea region of Eastern Europe. It was introduced into North America in the 1980s and quickly spread throughout much of the continent. It was found in Connecticut's East Twin Lake in the late 1990s. Its spread in Connecticut has been temporarily halted, but citizens should remain cautious and vigilant. It is spread by boaters and fishermen who do not clean their boats, empty bilge water, or empty bait buckets before driving to a new water body.

### Asiatic Clam

*Corbicula fluminea*



The Asiatic clam is a small bivalve that resembles a small marine clam. It is usually yellowish, light brown, or black in color and 0.5 to 0.75 inches wide. The beak is centrally located and high, giving them a triangular shape, unlike most oval-shaped clams.

This species was introduced into North America in the early 20<sup>th</sup> century. It spread throughout middle and southern parts of the continent, but did not spread far northward because it could not tolerate cold water. It was accidentally introduced into the Connecticut River and for years was only found below the power plant in Haddam, presumably because the plant's warm effluent created favorable conditions. It has recently spread upstream in the Connecticut River.





## Reporting Mussels

Connecticut's citizens have the opportunity to help the State assess the distribution and health of its freshwater mussels. Citizens are encouraged to report mussel data to the Connecticut DEP to help the State learn more about its freshwater mussels and develop ways to protect them. When submitting data, you need to include specific information about the survey site and what you found. An example survey form is provided on the next page, and can also be downloaded from the Connecticut DEP website ([www.dep.state.ct.us](http://www.dep.state.ct.us)). The DEP website also includes an on-line version of this field guide and additional instructions for reporting mussel data.

PLEASE DO NOT KILL ANY ANIMALS! Some species are protected by the Connecticut Endangered Species Act or the federal Endangered Species Act, and purposefully killing these animals or possessing their shells is a punishable crime. If you think you have found a state-listed species, submit a data form or contact the Connecticut DEP, and a biologist will help to confirm the report. Information and shells can be sent to the following address:

Julie Victoria  
Franklin WMA  
391 Route 32  
N. Franklin, CT 06254  
Phone: 860-642-7239 / Fax: 860-642-7964.

## Further Reading

### *The Freshwater Mussels of Maine*

By Ethan Nedeau, Mark McCollough, and Beth Swartz. 2000. Maine Department of Inland Fisheries and Wildlife. 118 pages.

### *The Pearly Mussels of New York State*

By David Strayer and Kurt Jirka. 1997. New York State Museum Memoir 26. 113 pages + color plates.

### *Keys to the Freshwater Macroinvertebrates of Massachusetts*

By Douglas Smith. 1995. 243 pages.



Freshwater Mussel  
FIELD SURVEY DATA FORM

Observer(s):..... Contact Information:.....

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Date:..... Time:.....

Weather:.....

Waterbody Name:.....

Town:..... County:.....

Brief Directions to Survey Location (attach map):.....

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Habitat Description (include photos or sketches):.....

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Estimated Area Surveyed (also indicate on map).....

Species Found\*

Eastern Pearlshell.....\_\_

Eastern Floater.....\_\_

Dwarf Wedgemussel.....\_\_

Alewife Floater.....\_\_

Triangle Floater.....\_\_

Eastern Pondmussel.....\_\_

Brook Floater.....\_\_

Tidewater Mucket.....\_\_

Creeper.....\_\_

Yellow Lampmussel.....\_\_

Eastern Elliptio.....\_\_

Eastern Lampmussel.....\_\_

\* Mark "S" for shells, "L" for live, and put numbers of each in parenthesis. For example, if you found 3 shells and 2 live animals, put S(3), L(2)

Special Notes (Evidence of mortality, threats, and other observations):

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## Notes