Mussels of Montana

Native

Giant Floater
Pyganodon grandis

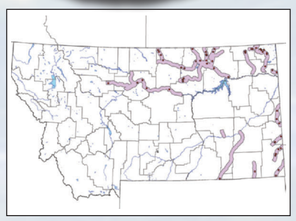
DESCRIPTION: Shell is up to 6 inches long. Generally thin, elliptical & light weight. Hinge has no teeth. Shell color is brownish to tan-green, inside pearly-blue sheen.

STATUS: Native-G5 S4, globally common, statewide common and secure populations.

PRIMARY HABITAT: Prefer pool and side channel areas of small to large warm prairie rivers with a mud, sand or gravel substrate. This mussel is tolerant of silt and warm water temperatures.

HOST FISH: *Native species:* Iowa Darter, Brook Stickleback and Channel Catfish. *Introduced Species:* Common Carp, Yellow & Black Bullhead, Centrarchids and Yellow Perch.

Key Watersheds: Within the Missouri, Milk and Little Missouri River drainages, more evenly distributed in the Northern Glaciated Basins (Battle, Big Muddy, Frenchman, Poplar River, Rock Creek).



Fatmucket
Lampsilis siliquoidea

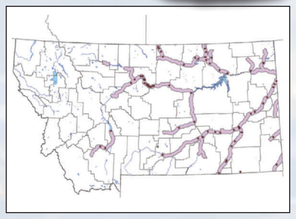
DESCRIPTION: Shell is 4 to 6 inches across. Generally heavy shell with large hinge teeth. Outside of shell can be light brown, yellowish to tan, often w /greenish rays, inside white.

STATUS: Native-G5 S5, globally common, statewide common and widespread populations.

PRIMARY HABITAT: Prefer side-current areas, runs and pools of medium to large cool to warm rivers with pebble, gravel, sand or silt substrates. Fatmuckets are fairly tolerant of silt.

HOST FISH: *Native species:* Freshwater Drum, Channel Catfish, Stonecat and Sturgeons. Introduced Species: Common Carp, Black Bullheads, Centrarchids and Yellow Perch.

KEY WATERSHEDS: Within the Missouri, Marias, Milk, Yellowstone and Little Missouri River drainages. Largest populations are found in the Missouri River Wild and Scenic reach.



Species of Concern

Western Pearlshell
Margaritifera falcata

DESCRIPTION: Elongate shell is normally 2.5-4 inches in length with a concave ventral edge. Interior shell (nacre) has a purple to pink hue. Outside of shell can be dark brown to black.

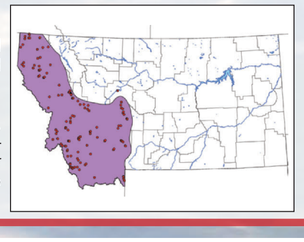
STATUS: Native-G4 S2, globally uncommon, statewide uncommon, declining and at-risk. Species of Concern (SOC) in MT, WY & ID.

PRIMARY HABITAT: Prefer stable gravel substrates in low-gradient trout streams and intermountain rivers. Found in runs and riffles in main-current channel areas.

HOST FISH: *Native species*: Westslope Cutthroat Trout, Steelhead and Chinook Salmon (Idaho). *Introduced Species*: Rainbow and Brook Trout.

KEY WATERSHEDS: In the upper Missouri: Beaverhead and Big Hole, (Deep Creek, Clam) and the Madison River. Upper Clark Fork—Upper Rock Creek (Willow, Sand Basin), Blackfoot-Clearwater River, Thompson River, Kootenai-Yaak River (East Fisher, Fivemile Creek).

Photo by: Daniel Gustafson



Freshwater Mussels:
Montana's Hidden Biological Treasure

Mussels are a seldom seen and under-appreciated biological component of many Montana trout streams and prairie rivers.

Montana's only trout stream mussel, the Western Pearlshell has been disappearing from watersheds for decades. Before mining and dams, the Clark Fork River had abundant populations.

Few people know Montana has native freshwater mussels; even fish biologists and fishing guides who spend thousands of hours on rivers may not realize that they are floating over or "stepping on" these cryptic organisms (most resemble rocks on the river bottom).

Missouri River Mussels

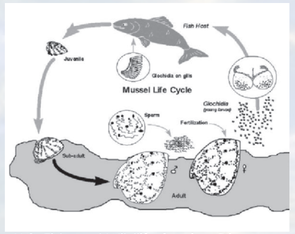
Mussel searching:
White Cliffs Missouri River

Freshwater mussels, sometimes called "clams", are a group of mollusks within the class Bivalvia (meaning 2 valves or shells joined by a hinged ligament). Freshwater mussels require a larval host-fish parasitic stage, while "true clams" have a free-living larval stage. Some species have developed elaborate 'lures' to trick the host fish to bite them and become infected with glochidia (mussel larvae).

Mussels are really amazing invertebrates!

Because larvae can be attached to the host fish for up to 3 months, mussels may be carried to new areas within the watershed many miles from their parents or even to different states; this is the case with our introduced mussels brought in on stocked fish species.

North America contains the most diverse mussel fauna (~300 species) of any continent. Unfortunately, 38 of these species are presumed to be extinct and another 77 are considered critically endangered or threatened in their range.



U.S. Fish and Wildlife Service Diagram

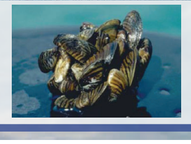
Report Your Mussel Sightings

If you see dead mussel shells or live mussels, note:

1. Where you are: stream name and major road crossing (GPS coordinates are best)
2. Are the shells abundant, fresh or old (fresh mussels will have flexible hinge ligaments still attached, maybe internal muscle parts and may smell bad)
3. Take a photo of live specimens for verification (if you have a camera) and release them or send shells in (wrap in paper towels in a Ziploc bag) as a voucher. Please report them!!

Contact Information:
David Stagliano - Aquatic Ecologist
1515 E. 6th Avenue
PO Box 201800
Helena, MT 59620-1800
406-444-7329
dstagliano@mt.gov
www.mtnhp.org

Watch for Exotic Nuisance Bivalve Species



If you spot these exotic "mussel" species anywhere in Montana's rivers or lakes please contact:
Eileen Ryce,
Aquatic Nuisance Species Coordinator,
Fish Wildlife and Parks
(406) 444-2448
eryce@mt.gov

Introduced

Black Sandshell
Ligumia recta

DESCRIPTION: Elongate, pointed shell normally 5-6 inches long with a convex ventral edge. Shell interior (nacre) has a purple to pink hue. Outside of shell can be dark brown to black.

STATUS: Introduced-G5 SNA, globally common, statewide common, Regionally Rare (a species of concern S2 & S3 in many Midwestern states).

PRIMARY HABITAT: Medium to large warm prairie rivers in riffles or runs with pebble, gravel or firm sand substrates. This mussel is fairly intolerant of silt and warm water temps.

HOST FISH: Native Species: Sauger. Introduced Species: Centrarchids, Walleye and Yellow perch

KEY WATERSHEDS: In the Missouri, Musselshell and Milk Rivers, spreading upstream from a Fort Peck Reservoir introduction. Highest densities in the Missouri River Wild and Scenic reach.

White (Creek) Heelsplitter
Lasmigona complanata

DESCRIPTION: Ovate shell rounded and laterally compressed, normally 4-6 inches long. Dorsal margin straight with a large wing. Outside of shell dark brown, interior a bluish-pearl to white.

STATUS: Introduced-G5 SNA, globally common, statewide uncommon.

PRIMARY HABITAT: Pools in medium to large sluggish prairie rivers with a mud, sand, or fine gravel bottom. Tolerant of silt and warm temperatures.

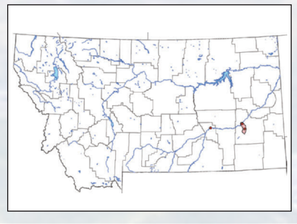
HOST FISH: *Native species*: Sauger. *Introduced Species*: Carp, Green Sunfish, Largemouth Bass, Walleye

KEY WATERSHEDS: In the Missouri Basin, known from the Lower Milk River upstream, and Beaver Creek, a tributary of the Little Missouri River.

Photo by: Daniel Gustafson

Mapleleaf
Quadrula quadrula

Photo by: Daniel Gustafson



DESCRIPTION: Ovate shell thick and heavy, normally 3-5 inches long and about as wide as long. Outside of shell tan to dark brown. Generally 2 rows of "bumps" pustules on raised ridges.

STATUS: Introduced-G5 SNA, globally common, statewide uncommon.

PRIMARY HABITAT: Pools or runs in large prairie rivers or reservoirs with a mud, sand, or gravel bottom. It is usually not found in stream reaches with swift current.

HOST FISH: *Native species:* Channel Catfish *Introduced Species:* Yellow and Black Bullhead

KEY WATERSHEDS: Known only from the Tongue River and potentially the Lower Yellowstone River. Point of Introduction: Tongue River Reservoir.

Montana Natural Heritage Program
The University of Montana

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Montana Fish, Wildlife & Parks
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