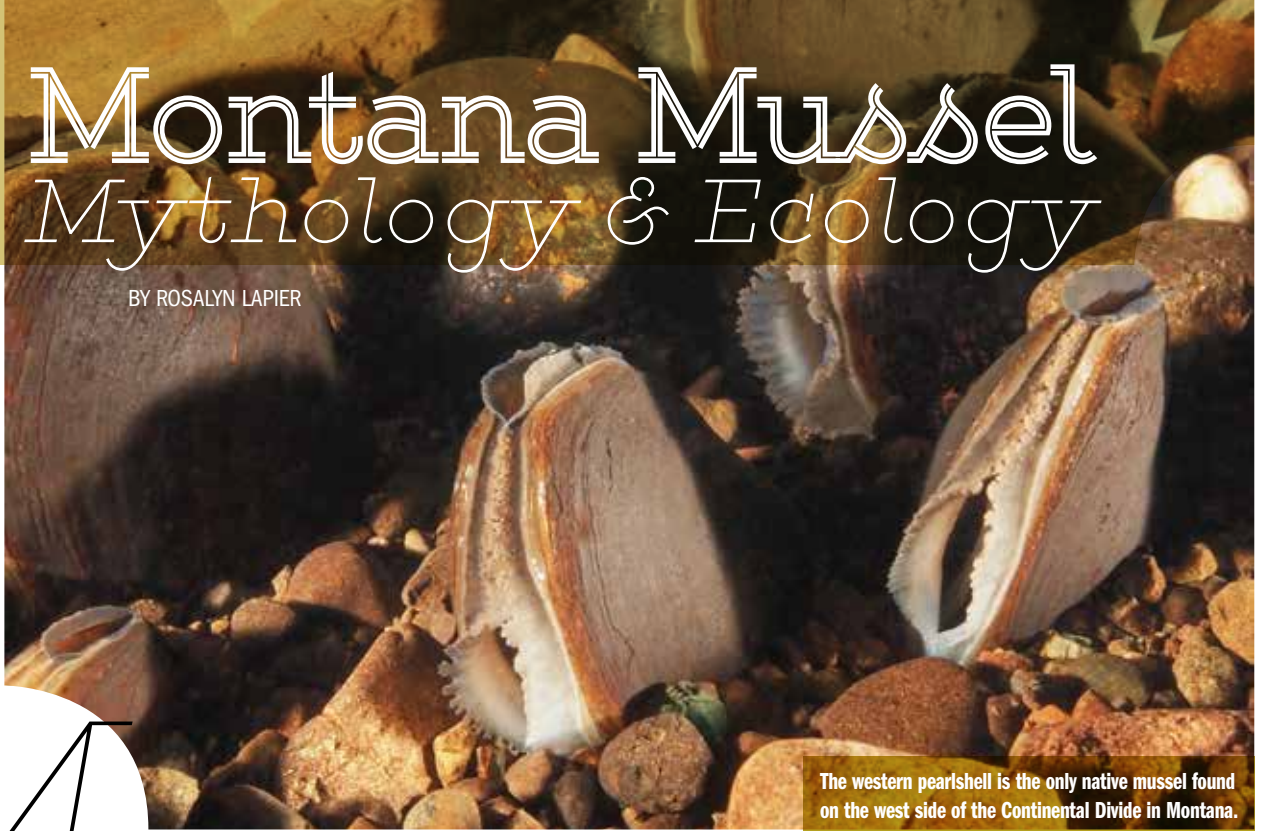


Montana Mussel Mythology & Ecology

BY ROSALYN LAPIER



The western pearlshell is the only native mussel found on the west side of the Continental Divide in Montana. Found in cold streams and rivers, some western pearlshell mussel beds include tens of thousands of individuals, quietly filtering the water around them.

ROGER TABOR (USFWS)

M ythology

One starry summer night a young Blackfeet woman named *Soatsaki*, or Feather Woman, noticed a bright star in the sky and proclaimed, "That is a very bright star. I should like him for a husband." Several days later as Feather Woman was gathering firewood, a handsome young man walked before her path. She asked his name, and he answered, "I am *lipisówaahs*, the Morning Star. One night, when you looked up at me, you said that you wished me for a husband. Now I have come for you." He then placed an eagle plume feather in her hair and together they went to the Sky World.

lipisówaahs introduced her to his father *Naató'si*, the Sun, and his mother *Ko'komiki'somm*, the Moon. His parents welcomed her and were happy that their son had a human wife. *Ko'komiki'somm* presented her new daughter-in-law with four berries and a mussel shell with water. Even though Feather Woman was very thirsty she could not finish all the water in the shell. She did not learn until that moment that this shell held all the water in the world.

BLACKFEET CULTURAL USES OF MUSSEL SHELLS

The Blackfeet once called themselves the *Saokio-tapi*, the Prairie people, when they lived on the northern Great Plains. In the streams and rivers of the wide open prairies lived two native freshwater mussels that the Blackfeet used in their everyday life: the fatmucket and the giant floater. They used the mussel shells as vessels to drink water or broth, to mix medicines or paint, to create jewelry, and as material for personal adornment.

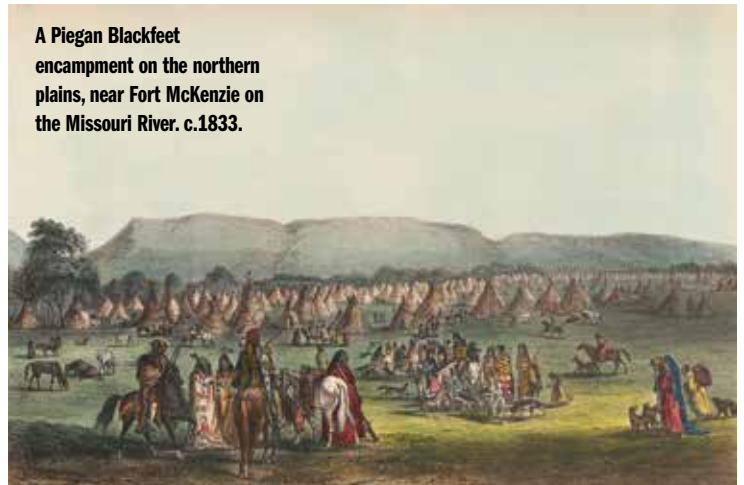
My grandmother Annie Mad Plume Wall's grandfather Spotted Bear owned a small bundle that held four mussel shells, each with a different colored inner shell: red, yellow, green, and

white. Spotted Bear used them to "make medicine," as the Blackfeet say. Individual Blackfeet came to my grandmother's grandfather to ask for assistance in changing the natural world, for they believed that they could alter it with supernatural intercession.

Spotted Bear would mix certain herbs together in a specific shell, make a tea, and then pray to his supernatural allies. Each corresponding shell could charm someone into falling in love with another person, cure an illness, improve the stamina of a horse, or win at gambling. (I will not share which colored shell did which activity.)

The Blackfeet believed that these freshwater mussel shells, in addition to being able to change the natural world, also held a female creative essence. Spotted Bear named his female relatives after each one of the mussel shells that he owned. My grandmother chose one of these names, *Iko'simiskimaki*, for my youngest daughter. Her name comes from the red shell that Spotted Bear used, and translates as "Salmon-colored Supernatural Fossilized Shell Woman."

A Piegan Blackfeet encampment on the northern plains, near Fort McKenzie on the Missouri River. c.1833.



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FRESHWATER MUSSEL ECOLOGY

Aquatic ecologist David Stagliano reports in *Freshwater Mussels in Montana* that Montana has three native freshwater mussel species, three introduced species, and one invasive species [see sidebar] currently living in our streams and rivers. The three native species—the western pearlshell (*Margaritifera falcata*), the fatmucket (*Lampsilis siliquoidea*), and the giant floater (*Pyganodon grandis*)—were all used by the Blackfeet and other tribes of Montana. There is evidence of indigenous use of both the western pearlshell and fatmucket up to 2,000 years ago at archaeological sites in Montana.

Freshwater mussels play an important role in the health of Montana's aquatic ecosystems. They are filter feeders, helping clean the water around them by removing small particles of sediment and other detritus. They serve as a food source for river otters, muskrats, and other critters. Their shells have growth rings, like trees, which tell us their age as well as show changes in their environment over the years. They are sensitive to pollution and can live up to 100 years, which makes them great indicators for the health of our rivers. Scientists can study both live specimens in streams and rivers or the empty shells to learn about mussels' lives.

Freshwater mussels are sensitive to changes in their aquatic habitat such as agricultural run-off, damming, silt, pollution, stream temperatures, changes in fish population, and other kinds of degradation. Continued scientific study and conservation efforts are important to protect our native species of mussels. As David Stagliano wrote, "Each species is an irreplaceable part of our natural heritage."

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HOLY SHELLS

A recent study by Stanford University researchers showed that freshwater mussels could clean 80 percent of the surrounding water within 72 hours. Maybe this was something the ancient Blackfeet understood, and maybe this is why freshwater mussels became important as religious articles. The Blackfeet viewed them as holy, placing restrictions on their collection and use. The mythology of the Moon's mussel shell holding all the water in the world, as metaphor, fits remarkably well with our ecological understanding that freshwater mussels can possess (and clean) the water in a prairie stream. In both mythology and ecology the freshwater mussel safeguards human life. 🐚

—Rosalyn LaPier (*Blackfeet/Métis*), Ph.D., is an Associate Professor of Environmental Studies at the University of Montana and author of *Invisible Reality: Storytellers, Storytakers and the Supernatural World of the Blackfeet*, University of Nebraska Press, 2017.



Western Pearlshell

Margaritifera falcata

- Found in cold streams and rivers on the west side of the Continental Divide
- 2.5-4 inches long
- Inner shell, or nacre, is iridescent pink to purple
- Outer shell is dark brown to black

Fatmucket

Lampsilis siliquoidea

- Found in medium to large warm prairie streams and rivers
- 4-6 inches long
- Nacre is white
- Outer shell is yellow to tan

Giant Floater

Pyganodon grandis

- Found in small to large warm prairie streams and rivers
- Grow up to 6 inches long
- Nacre is pearly blue
- Outer shell is brown to yellow-green

Zebra Mussels: Tiny Invaders

In winter 2017 the State of Montana created the Montana Mussel Response Team to "rapidly assess the extent and severity of the mussel incident affecting

Montana's waterways." The

State found freshwater zebra mussel (*Dreissena polymorpha*) larvae in both Tiber and Canyon Ferry reservoirs in the late fall of 2016. Zebra mussels are an invasive species originally from the Black Sea. Without any known native predators in the U.S. they multiply rapidly, killing fish by eating their shared food source, dramatically increasing aquatic plant life, and, by their sheer numbers, disrupting native aquatic ecosystems. Stopping their introduction and spread is the best option, because their eradication is difficult. For more information, visit musselresponse.mt.gov.

There are three other introduced species of mussels that do not have the same disruptive impact: the black sandshell (*Ligumia recta*), the mapleleaf (*Quadrula quadrula*), and the white heelsplitter (*Lasmigona complanata*).



Though small (only the size of a fingernail), zebra mussels spread rapidly.