

QUAGGA MUSSEL

Dreissena burgensis



Aquatic Invasive Species: Control and Prevention

Aquatic Invasive Species (AIS) impede recreation, degrade water quality and, once established, are very difficult to control. There currently are invasive plants, invertebrates, mollusks, and fish in Lake Tahoe. Partner organizations around the lake have been implementing preventative measures to ensure that additional AIS are not introduced. Species of the highest concern that are not currently present in the Tahoe Basin include Zebra mussels, Quagga mussels, and New Zealand mudsnails. A diverse group of dedicated partner agencies, including the TahoeRCD, University of Nevada-Reno, University of California-Davis, and the Tahoe Regional Planning Agency, have collaborated to prevent, monitor, and control AIS in Lake Tahoe.

How could quagga mussels get here?

NOT CURRENTLY IN LAKE TAHOE. Quagga mussels were discovered in 1989, a year after zebra mussels, in the Great Lakes. They were found in Lake Mead in 2007, and have spread to Lakes Mojave and Havasu in the Colorado River and reservoirs in San Diego County. Quagga mussels differ from zebra mussels in that they are heartier and can live at greater depths and colder temperatures.



Photo Credit: California Department of Fish and Game

Origin: Dneiper River (Ukraine) and Ponto-Caspian Sea

Means of Introduction: Attach to hard substrates (can survive out of water for up to a week) and are spread by human-activity

Habitat: Hard and soft substrate from 10 to 400 feet

Spread: Rapidly reproduce (up to 1 million eggs in a season)

Characteristics: Small shellfish widely varying color patterns (black, cream, white bands); do not have flat underside

Size: Typically ¼ to 1½ inches (5-40 mm)

Food: Filter particles suspended in water including bacteria, algae, and detritus

Why is it a threat to the Tahoe Basin?

- ⊗ Consume significant amounts of phytoplankton, thereby
- ⊗ competing with native species
- ⊗ Can cause extensive economic damage by colonizing on hulls of boats and submerged surfaces (e.g. water intakes)
- ⊗ Impacts aesthetic and recreational values of beaches

Current Management

Preventative programs and monitoring are being utilized in Lake Tahoe to prevent the invasion of zebra mussels.

ONCE ESTABLISHED, CANNOT BE ERADICATED

Prevention: The lake-wide watercraft inspection program, coordinated by TRCD and TRPA, is an effort to ensure that quagga mussels are not introduced to Lake Tahoe.

Monitoring: Veliger (mussel larvae) monitoring is taking place in Lake Tahoe to confirm that quagga mussels are not present in Lake Tahoe.



Photo Credit: Michigan Sea Grant Archives