

ASIAN CLAMS OFTEN FORM
IN DENSE CLUSTERS OF OVER
5000 PER SQUARE METER

ASIAN CLAMS

Asian clams (*Corbicula fluminea*) are native to South East Asia, but have been positively identified in Lake George. They were first documented on the west coast of the United States in 1938 and have since spread to over 40 states. Asian clams are small, averaging less than 25mm (1.5 inches) with an oval triangular shape, deep at the hinge. Its outer shell is yellow brown, light brown to black with distinctive elevated, evenly spaced concentric ridges on the surface. The Asian clam probably entered the U.S. as a food source eaten by Asian immigrants and is spread by boats, boat trailers, bait buckets, and the veligers (juveniles) can be transported passively with water currents.

The Asian clam is a very hardy and persistent freshwater mollusk, capable of rapid growth and spread. The Asian clam prefers to colonize in sandy substrates in quiet, warmer, sunlit waters, and can be found with one third of its shell protruding above the substrate or slightly buried below the surface. Asian clams can form dense clusters, with up to 5000 or greater per square meter. Asian clams are able to withstand freezing conditions, but their ability to reproduce



Asian clams recently found in the south end of Lake George in August 2010. These dime-size clams populate rapidly and have overwhelmed other lakes.

decreases with exposure to lower temperatures (below 10°C/50°F). For a long time, New England was considered environmentally inhospitable to the Asian clam.

Asian clams have been identified nearby in the Champlain Canal near Lock 8 in Hudson Falls. They have been found in warmer waters in the Connecticut River near industrial facilities. Lake George is the furthest north this species has been documented.

The Asian clam is hermaphroditic and therefore capable of self-

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Asian Clams

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fertilization. The young are incubated within the safety of the parent's shell, and are released after 4-5 days (approximately 1mm in size, with visible pigment and growth rings). Asian clam spawning occurs from spring to fall in northern climates. A single clam can release over 400 offspring per day, depending on the conditions. The microscopic pediveligers (the final veliger or larval stage) travel along the substrate to a new location, attaching with a single, small byssal thread to any available suitable substrate. The young that are hatched in the spring usually attain maturity by the fall (at 6-10 mm) and live an average of 2 to 4 years, with a maximum life span of 7 years.



Boat owners can take steps to prevent spread and infestation. Eradication of this species has not been successful in other waterbodies.

Asian clams are efficient filter feeders that consume microscopic plants (algae) and animals from the base of the food chain, directly competing with juvenile fish for food. They also feed from the sediment. Though small in size they grow and populate rapidly and outcompete native mollusks.

Geoffrey Schladow, director of the Tahoe Environmental Research Center (University of California, Davis), said the Asian clams promote so much algae growth that they can turn some waters from blue to green. As they filter the water and consume plankton, they deposit high concentrations of nutrients with their excretions. Another significant impact of the Asian clams infestations is the "biofouling" or the impairment or degradation of intake pipes for power plants and drinking water treatment systems.

Birds, racoons, carp, largemouth bass, sunfish, and numerous other species consume Asian clams, but the predators are too few to have a significant impact on the overall population. Physically removing the invasive Asian clam shells is labor intensive and does not successfully remove the microscopic veligers that remain in the water and will re-colonize the area. Benthic mats have been placed on populations of Asian clam in Lake Tahoe with some success, significantly reducing their numbers, but not eradicating them.

It's important not to bring Asian clams into Lake George, but just as important not to spread this contamination to other lakes. Here are steps to stop the spread of this voracious invasive species.

- Inspect and remove any plants, animals, mud, and water from your boat hull, trailer or equipment.
- Drain, wash, and where possible disinfect all water from boat bilges, live wells, bait buckets, anchor and anchor line, engines and other equipment (scuba gear). Small amounts of water carry early life stages that are not visible to naked eye.
- Dry your boat and trailer in the sun for 5-7 days when moving between bodies of water.
- Never move water from one body of water to another.

August 2010

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