# STOP THE MUDSNAIL!

## The New Zealand mudsnail is a serious threat to California's rivers, lakes and streams.

**What can you do? ...** You can stop them from spreading.

- Clean all fishing gear and boating equipment after each use.
- Use hot water, if possible, and bleach or heavy cleaner.
- Completely dry all gear, in the sun, or freeze overnight.
- Never move live fish or plants from one body of water to another.

**What is a New Zealand mudsnail?...** A New Zealand mudsnail is very small but, given time, it can carpet the bottom of lakes or streams. They have no natural enemies and all it takes is one mudsnail to infect a stream.

**Why are you concerned?...** Because New Zealand mudsnails:

- Choke out native snails and insects
- Deprive fish of their main sources of food
- Multiply rapidly
- Damage fisheries and native habitats
- Mudsnails were first detected in the Snake River in 1987 and are spreading rapidly into California!

## Only YOU can STOP New Zealand mudsnails!

For more information on New Zealand mudsnails and other invasive species, checkout: http://www.esg.montana.edu/aim/mollusca/nzms, http://protectyourwaters.net, http://wildlifefiles.com, http://invasivespecies.gov, http://anstaskforce.gov, www.dfg.ca.gov, www.fws.gov,www.fedflyfishers.org, www.spreadtheword.net or call 1-888-DFG-CALTIP to report illegal fishing

Flyer artwork and text courtesy of Idaho Fish and Game

# NEW ZEALAND MUDSNAIL (*Potamopyrgus antipodarum*) in CALIFORNIA

## WHAT CAN YOU DO?

**Reporting Sightings:**

- Report potential sightings to david_bergendorf@fws.gov or sellis@dfg.ca.gov or phone **1-888-321-8913**.
- **Please help the aquatic life in California streams and your fellow fishermen by letting them know about this resource pest and its potential impacts on trout and fish habitat.** Please report any fishing activity in closed areas at Lake Solano Park to Park Rangers at (530) 795-2990 and on Putah Creek to California Fish and Game at 1-888-DFG-CALTIP.
- Immature snails are about 1 mm long and often look like sprinkled black pepper.
- Mature snails have a light to dark brown shell and are still tiny, only growing up to 5 mm long.
- NZMS can tolerate a wide range of habitats including reservoirs, rivers, lakes and estuaries. Found in all substrates including gravel, sand, silt, and vegetation.

**Clean Your Gear Before Leaving Site or Moving To Another Site!**

- See opposite side for gear cleaning recommendations.

**Encourage Friends and Fellow Fishermen to Avoid Closed or Infested Areas, and Keep the Mudsnail from Infesting Other California Streams!**

## KNOWN LOCATIONS IN CALIFORNIA

- 2000: Owens River (Eastern CA); now found in Hot Creek near the fish hatchery.
- October 2003: Putah Creek (Western Central Valley below Monticello Dam) - Fishing Access #3.
- December 2003: Putah Creek - Found between Fishing Access #2 and #3 and between #3 and #4. **Putah Creek and Lake Solano closed to all fishing in interdam reach between Monticello Dam and diversion dam below Lake Solano Park – Closure began December 26, 2003 for 120 days**
- December 2003: Mokelumne River (Central Valley) - above Woodbridge Dam near Lodi.

## HOW THEY SPREAD

- It Only Takes One! The snails reproduce without fertilization, bear 20-120 snails per brood (multiple broods per year), and can spread from just one snail.
- Primarily spread through human activities on angling gear, shoes and boats. Can also spread on clothing and animal fur, so please check your dog or other pets before leaving any infested area.
- Snails can survive passing through the gut of a fish and may be spread that way; may hitchhike on birds.
- Can survive for 25+ days in cool, moist places, like waders, mud, boats, the tread of shoes, and so forth.

## FAST FACTS

- First discovered in mid-Snake River, Idaho in the 1980s and is spreading rapidly throughout the west.
- Snail densities as high as 750,000 per square meter have been recorded in some areas.
- At high levels, snails consume most available food leaving little for native snails and aquatic insects to feed on. This leads to a reduction or elimination of the native macroinvertebrates, and therefore a reduction in food available for fish and other members of the native aquatic ecosystem.
- The snails have the ability to close off their shell opening allowing them to live for a long time without being in water (25 days if moist).
- NZMS can travel up to 1 meter per hour and have been found over 40 feet from the water. You can pick them up without being near the water!
- Average life span is over one year.

See Opposite Side For More Information And Websites
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