



New Zealand Mudsail in Arizona Best Gear Cleaning Practices

Native and Wild Trout Conference
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New Zealand mudsnail

Potamopyrgus antipodarum

Description

- Small freshwater snail
- Less than $\frac{1}{8}$ " in length
 - Typically 3-7mm
- Native to: New Zealand

Preferred Habitat

- Streams, reservoirs with low velocities
- Found adjacent to riffles
- Gravel, cobble beds
- Aquatic vegetation beds

Diet

- Plant and animal detritus
- Algae
- Diatoms



New Zealand mudsnail

Potamopyrgus antipodarum

Reproduction

- Asexual – all female clones
- Born with developing embryos

Survivability

- Damp surface: Up to 50 days
- Dry surface: Up to 30 days

Mode of transport

- Contaminated fishing gear/footwear/boats



Impact

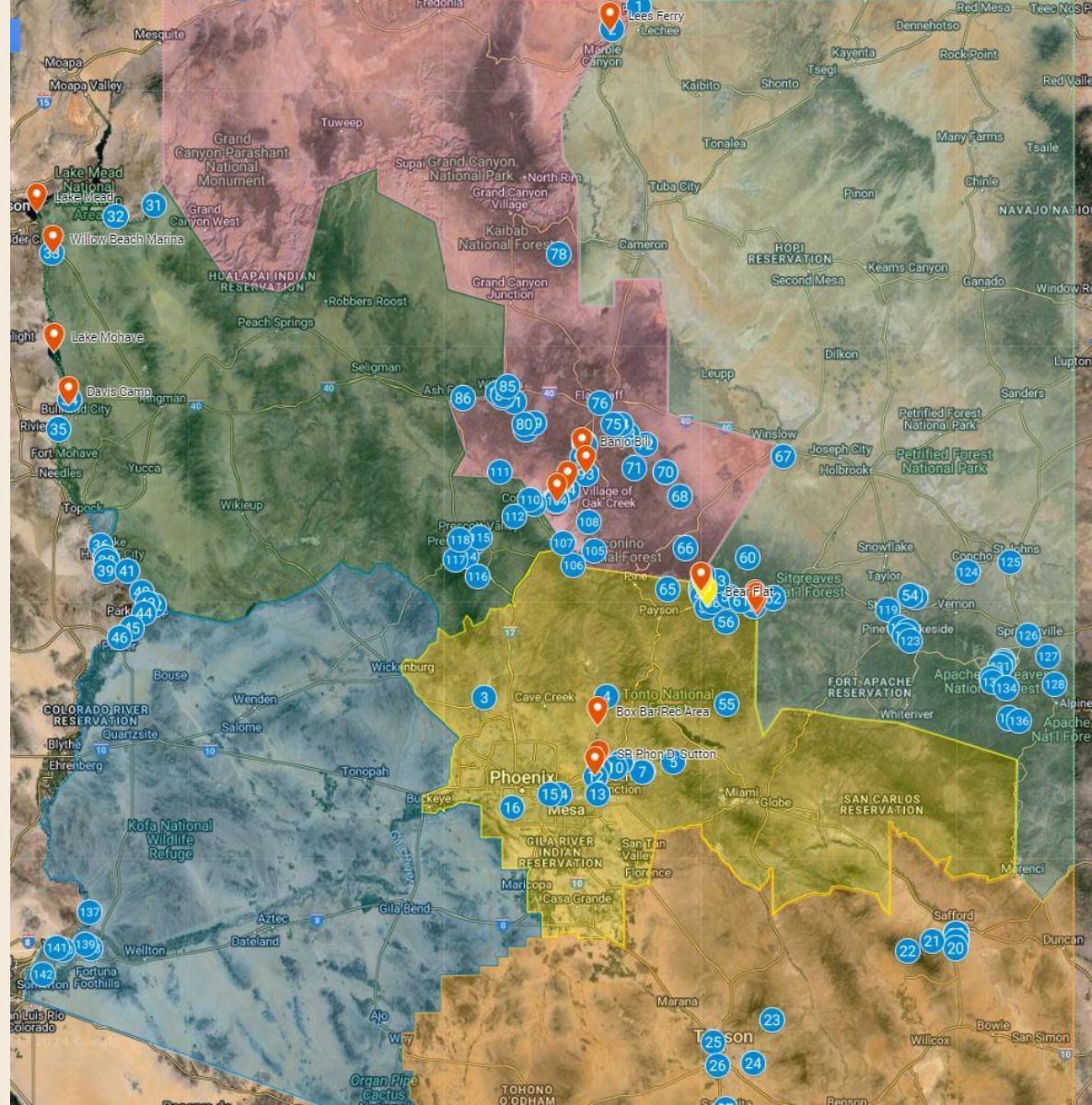
- Compete other aquatic grazers (primary consumers)
 - Competes with native snails
- Biomass/Nutrient Sequestration
 - Dense populations can change nutrient availability
- Reduction in the growth of fishes and other higher-level consumers
 - Operculum allows NZMS to pass through gut unharmed





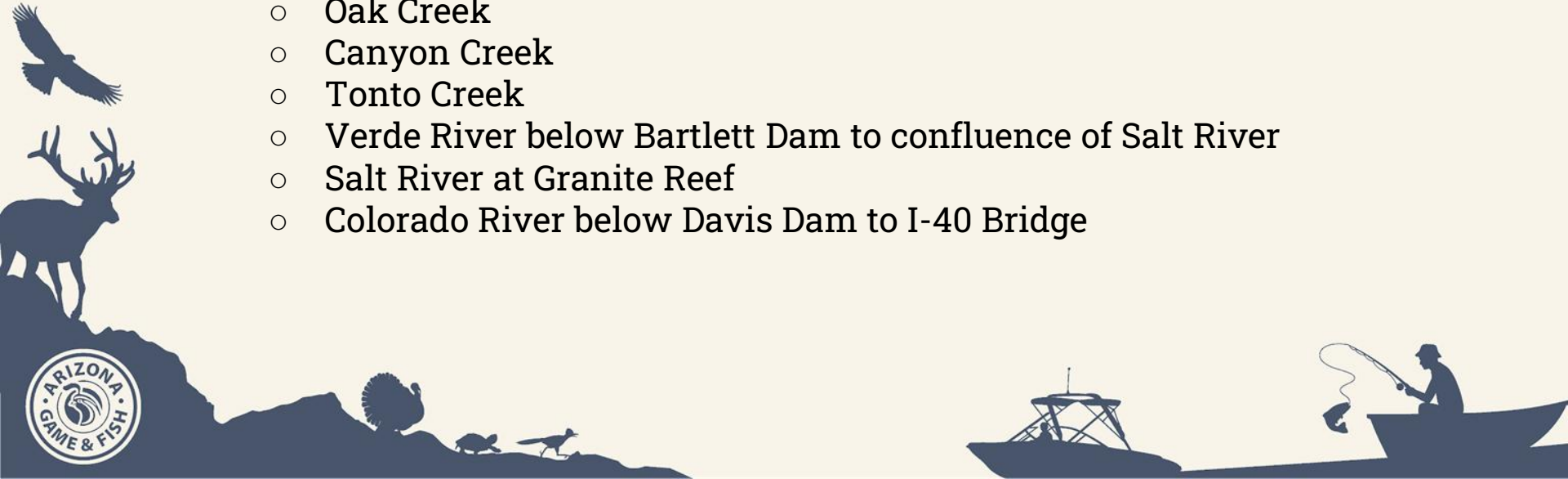
NZMS Distribution

- ★ Oak Creek
- ★ Canyon Creek
- ★ Tonto Creek
- ★ Colorado River
 - Lees Ferry
 - Lake Mead
 - Lake Mohave
 - Below Davis Dam



Director's Orders Updates - 2023

- Effective February 27, 2023, DO 1 and 3
- Effective June 19, 2023: DO 2
- Director's Order 1 & 3: No changes. Updated contact information.
- Director's Order 2: For NZMS added:
 - Oak Creek
 - Canyon Creek
 - Tonto Creek
 - Verde River below Bartlett Dam to confluence of Salt River
 - Salt River at Granite Reef
 - Colorado River below Davis Dam to I-40 Bridge



Director's Order 3: Ways to Decontaminate Gear

Remove any visible plants, algae, animals, and mud, and disinfect the equipment using one or more of the following decontamination methods:

- Option 1:** Submerge waders and gear in a large tub filled with a quaternary ammonia-based institutional cleaner. If using consumer-grade 409*, the solution does not need to be diluted. If using a product such as Super HDQ Neutral, mix 6 ounces per gallon of water. Equipment must be soaked for at least 20 minutes, scrubbing and inspecting all items before rinsing. The rinse water must be from a source free of AIS (to avoid re-exposure), and the chemical bath must be properly disposed of away from the body of water.
- Option 2:** Place waders and boots in a freezer overnight between uses.
- Option 3:** Dry waders and equipment completely for seven consecutive days (May through October) or 18 consecutive days (November through April).
- Option 4:** Spray or soak waders and gear with 140 degree Fahrenheit water for at least 10 minutes.

Complete Director's Orders available on azgfd.gov/AIS

* AZGFD does not endorse any particular product. Mention of any brand is for example only.



Examples of Gear to Decontaminate

- Boots
 - Soles
 - Laces
 - Insoles
- Waders
- Nets
- Lures
- Rod and reel
- Hiking poles
- Float tubes



Angling Techniques to Reduce Spread of NZMS

Options to help minimize the spread of these aquatic invasive species

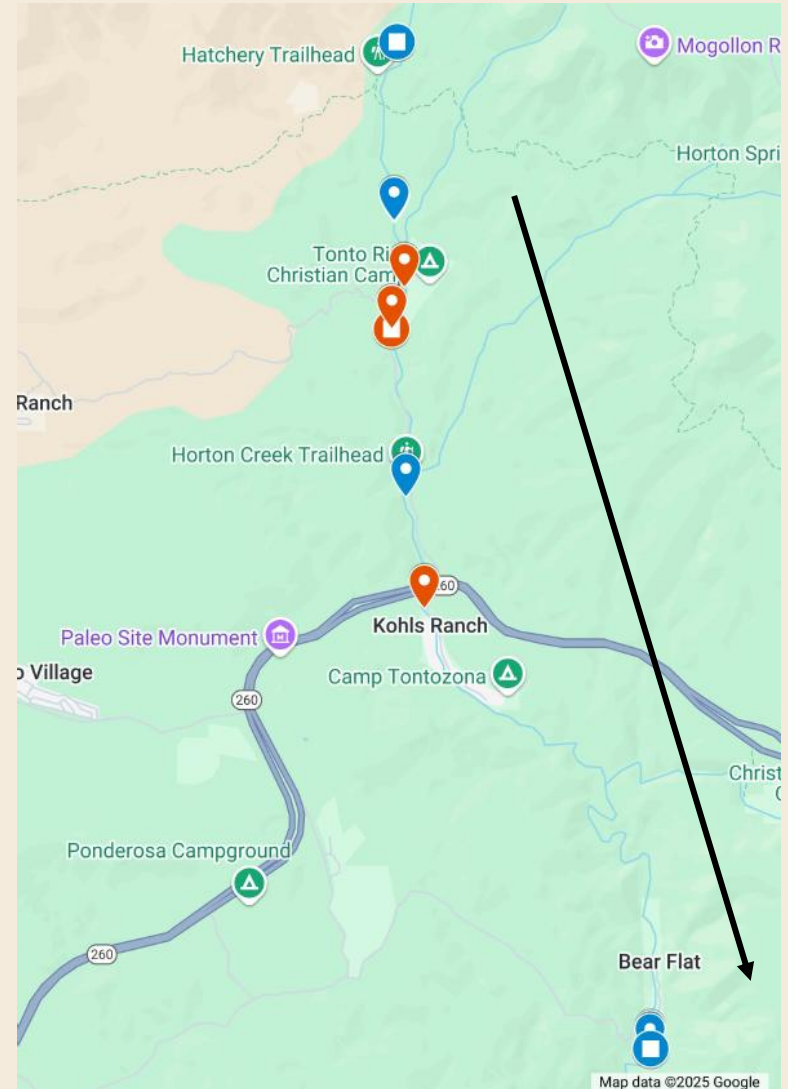
- Start your fishing trip at the most upstream point, then move downstream
- When fishing in multiple lakes/streams on the same trip
 - A second pair of wading equipment (waders and wading boots) is recommended until-gear can be properly cleaned and decontaminated.
- Avoid felt-bottom boots and waders to prevent the spread of pathogens and aquatic invasive species.

Available on azgfd.gov/AIS



NZMS Distribution in Tonto Creek

- Start fishing from upstream
- Work way downstream
- Use caution fishing near hatcheries



Angling Techniques

Options to help minimize the spread of these aquatic invasive species

- Start your fishing trip at the most upstream point, then move downstream to avoid introducing aquatic invasive species into unoccupied areas.
- When fishing in multiple lakes on the same trip, a second pair of wading equipment (waders and wading boots) is recommended until-gear can be properly cleaned and decontaminated.
- Avoid felt-bottom boots and waders to prevent the spread of pathogens and aquatic invasive species.



Bottom Line... CLEAN DRAIN DRY

No MUD

No ANIMALS

No PLANTS





THANK YOU

