

# WE NEED YOUR HELP!

Alaska's native mud shrimps harmed by invasive parasite!



The above Blue Mud Shrimp from Ketchikan is infected with the invasive isopod *Orthione griffenis*. Notice the shell is bulged out and deformed on one side of the body due to the isopod growing underneath. Left inset image shows parasite removed from host. Photos by Meghan Doran



Healthy Blue Mud Shrimp. Photo by Karen Johnson

Blue Mud Shrimp, *Upogebia pugettensis*, resemble little lobsters or crayfish. They live in deep burrows on mudflats and are most often seen when people dig clams. These shrimps circulate nutrients and oxygen in the substrate, similar to the role of earthworms in your garden. Populations of blue mud shrimp have recently gone extinct in WA and OR due to infection by the *Orthione* parasite!

## How to help:

- Report all observations of parasite infected mud shrimps to your local Fish & Game office or the Invasive Species Hotline.
- Retain infected mud shrimps, freeze them, and then bring to local Fish & Game office. Include date and location found.
- We also want to hear if you find only healthy mud shrimps: no news is good news.

## More info:

- Mud shrimps and parasites are harmless to people.
- Not all shrimp parasites are introduced; several are native and should be left alone.
- Only retain and report infected mud shrimps. Release healthy shrimps.
- If you do find infected shrimps but cannot retain, please document date and location, photos encouraged!

Report: **1-877-INVASIV** / [dfg.dsf.InvasiveSpecies@alaska.gov](mailto:dfg.dsf.InvasiveSpecies@alaska.gov)



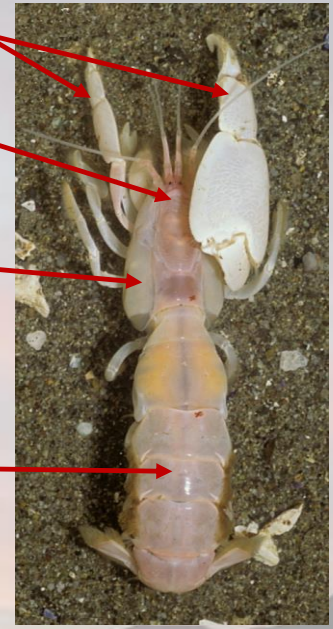
# ADDITIONAL INFORMATION:

## Blue mud shrimp:



- Claws each about same size
- Thick bristles on front end of carapace
- Color, often blue-gray, but may be yellowish or brown
- Tail longer than rest of body and much wider
- May carry *Orthione* parasite!**

## Bay Ghost shrimp:



- One claw much larger than other
- Front end of carapace smooth
- Color bright white on legs and claws, body yellowish or pink
- Tail longer than rest of body and much wider
- Never carry *Orthione* parasite!**

Photo by Dr. Gregory C. Jensen

## About *Orthione griffenis*:

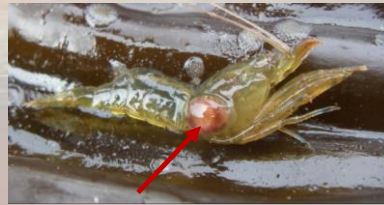


*Orthione griffenis* is a parasitic isopod originally from Asia. The isopod attaches to the gills of Alaska mud shrimp as larva and remains attached for life. The host shrimp is permanently sterilized and weakened by the isopod. The mud shrimp have no defenses, so can be completely wiped out of an area once the parasite is introduced. The photo on the left shows the large parasitic female with a dwarf male atop (arrow). The male is nearly always present.

Native parasitic isopods you may see – no need to collect or report these.



*Phyllodurus abdominalis*: always attached to underside of the tail of blue mud shrimps.



*Bopyroides hippolytes* – under carapace of multiple species of small shrimps, never blue mud shrimps.



*Argeia pugettensis*– under carapace of multiple species of sand shrimps, never blue mud shrimps.

## Report:

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