

NAME OF SPECIES: Chinese mystery snail (*Cipangopaludina chinensis* also found under *C. chinensis* var. *malleata* and *Viviparus malleatus* among other names) Many references consider the Chinese and Japanese mysterysnails to be the same species, so information listed here likely applies to both. It

A. CURRENT STATUS AND DISTRIBUTION

appears that David Lodge (Notre Dame) may currently be researching this species in No. WI lakes, so someone may want to contact him to get further, up-to-date information as it is available.

1. In Wisconsin?	a. YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	b. Abundance: Relatively abundant in many No. WI lakes where established, also documented in the Flambeau River - unable to find number of lakes and rivers impacted.
	c. Geographic Range: Northern WI lakes, rivers, Lake Michigan
	d. Type of Waters Invaded (rivers, ponds, lakes, etc): lakes, river, ponds, ditches
	e. Historical Status and Rate of Spread in Wisconsin: First reached WI approx. 50 years ago, now well established in many No. WI lakes. Found in 42% of lakes sampled by GLIFWC in 2004 - was common to abundant when found.
2. Invasive in Similar Climate Zones	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Where: Lakes Erie and Michigan
3. Similar Habitat Invaded Elsewhere	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Where: Rivers in many NE US states, found in Indiana
4. In Surrounding States	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Where: see above
5. Competitive Ability	High: Appears to have characteristics that could make it highly competitive, though little could be found on impacts to native snails and ecosystems. They give birth to live, crawling young that can disperse, adults grow to a large size, and they have the ability to close their operculum to aid in survival when conditions become unfavorable. Low:
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS	
1. Temperature:	Range: not found
2. Spawning Temperature:	Range: not found
3. Number of Eggs:	Range: Females are livebearers, giving birth to live, crawling young
4. Preferred Spawning Substrate:	
5. Hybridization Potential:	This species could be synonymous with <i>C. japonica</i>
6. Salinity Tolerance	Fresh: <input checked="" type="checkbox"/> Marine: <input type="checkbox"/> Brackish: <input type="checkbox"/>
7. Oxygen Regime	Range:
8. Water Hardness Tolerance	Range:

9. Easily confused for Native Species?	List: may be confused with some other native and non-native snails; this species could be synonymous with <i>C. japonica</i>
C. DAMAGE POTENTIAL	
1. Likelihood of Damage	a. Presence of Natural Enemies: fish and turtles
	b. How well introductory and expansion pathways can be described and quantified: Imported to the west coast into the Asian food market in the late 1800's, spread via aquarium release and other accidental and intentional introductions, could also be spread in bilge/bait water and ballast water
2. Environmental Impacts	a. Alteration of ecosystem composition, structure and function: Eat phytoplankton and zooplankton, can compete with native snails for food and space.
	c. Damage to ecosystem resilience/sustainability:
	d. Loss of biological diversity:
	e. Abiotic modifications (affects on turbidity, H ₂ O chemistry, etc.): Studies show that, when these dominate, they could lead to lower overall nutrient regeneration rates in nutrient limited systems.
	f. Biotic effects on other species (loss of cover, nesting sites, forage, changing competitive relationships:
D. NET SOCIO/ECONOMIC IMPACT	
1. Positive aspects of the species to the economy/society:	Effect: Used in aquaria to eat algae; sold as food (primarily in Asia and Asian markets)
2. Direct and indirect effects of the invasive species:	Effect:
3. Type of damage caused by organism:	Effect: Can serve as vectors for parasites, shells can clog screens of water intake pipes
Industries affected by invasive:	Effect: industries with water intake pipes could be impacted.
4. Loss of aesthetic value affecting recreation and tourism:	Effect:
5. Increased cost to a sector (monitoring, inspection, control, public education, modifying practices, damage repair, lower yield, loss of export markets due to quarantine:	Effect: Could be costs incurred to remove from water intakes
6. Cost of prevention or control relative to cost of allowing invasion to occur	Effect:

(cost of prevention is borne by different groups than cost of control):	
7. Cost at different levels of invasion:	Effect:
E. CONTROL AND PREVENTION POTENTIAL	
1. Costs of Prevention (including Education):	
2. Responsiveness to Prevention Efforts:	
3. Detection Capability:	
4. Control Tactics Effective:	Mechanical: <input type="checkbox"/> Biological: <input type="checkbox"/> Chemical: <input checked="" type="checkbox"/>
5. Efficacy/Feasibility of Control (effort, # of staff):	their ability to close the operculum and open again when conditions improve causes problems when trying to treat with chemicals - treatments may have bigger impact on native species than this non-native one.
6. Cost of Control:	High: <input type="checkbox"/> Medium: <input type="checkbox"/> Low: <input type="checkbox"/>
7. Non-Target Effects of Control:	See number 5. Biological controls were not found that are selective for this species.
8. Threshold at which control would be attempted:	
9 Efficacy of Monitoring:	