**Species Assessments**

We identified 80 freshwater mollusk species we believe are currently sold in the Great Lakes region and conducted a risk assessment for each using the Notre Dame STAIR*mollusk* tool, answering as many of the six questions as possible. Using a fecundity of 158 as the divide between low and high risk (see STAIR*mollusk* tool, question 2), each species was ranked according to the likelihood that it will become invasive.

| Risk | Explanation |
|---|---|
| Low | Species either has no climate match to the Great Lakes OR has a fecundity of less than158, no record of pathogens and no history of invasion elsewhere. |
| High | Species has a climate match to the Great Lakes and at least one of the following characteristics: a fecundity over 158, known pathogens, or a history of invasion elsewhere. |
| Potential | Species has a climate match to the Great Lakes but fecundity is unknown. |
| ? | Data to assess climate match is insufficient and fecundity is unknown. |

**Mollusk Species Risk Assessments for the Great Lakes Using Current Climate Conditions**
**(Great Lakes = Hardiness Zone 7 or below)**

| Species Name | Established in Great Lakes? | Hardiness Zone ≤ 7? | Risk Factor(s) in Evidence?* | Risk |
|---|---|---|---|---|
| *Ancylus fluviatilis* | | Yes | N/A | Low |
| *Anodonta cygnea* | | Yes | No fecundity data | Potential |
| *Bellamya chinensis (=Cipangopaludina chinensis, C. chinensis maleata, and Viviparus malleatus)* | Yes | Yes | Pathogens | High |
| *Bellamya japonica (=Cipangopaludina japonica)* | Yes | Yes | Pathogens | High |
| *Biomphalaria alexandrina* | | No | Fecundity, pathogens | Low |
| *Biomphalaria glabrata* | | No | Fecundity, pathogens, invasion history | Low |
| *Biomphalaria havanensis* | | No | No fecundity data, pathogens, invasion history | Low |
| *Biomphalaria pfeifferi* | | No | Fecundity, pathogens, invasion history | Low |
| *Biomphalaria straminea* | | No | Fecundity, pathogens, invasion history | Low |
| *Bithynia tentaculata* | Yes | Yes | Fecundity, pathogens, invasion history | High |
| *Bulinus abyssinicus* | | No | Fecundity, pathogens | Low |
| *Bulinus globosus* | | No | Fecundity, pathogens | Low |
| *Bulinus tropicus* | | No | Fecundity, pathogens | Low |
| *Bulinus truncatus* | | No | Fecundity, pathogens | Low |
| *Campeloma decisum* | | Yes | N/A | Low |
| *Clea helena* | | No | No fecundity data | Low |
| *Clithon corona* | | No | No fecundity data | Low |
| *Corbicula fluminea* | Yes | Yes | Fecundity, invasion history | High |

| | | | | |
|---|---|---|---|---|
| *Dreissena bugensis* | Yes | Yes | Fecundity, invasion history | High |
| *Dreissena polymorpha* | Yes | Yes | Fecundity, invasion history | High |
| *Drepanotrema aeruginosus* | | ? | No fecundity data | ? |
| *Drepanotrema cimex* | | No | No fecundity data, invasion history | Low |
| *Drepanotrema kermatoides* | | ? | No fecundity data, invasion history | ? |
| *Elimia livescens (formerly Goniobasis)* | | Yes | Fecundity, invasion history | High |
| *Elimia virginica* | Yes | Yes | No fecundity data, invasion history | High |
| *Eupera cubensis (Pisidium singleyi)* | | Yes | Invasion history | High |
| *Fossaria viridis* | | ? | No fecundity data, invasion history | ? |
| *Fusconaia flava* | | Yes | Fecundity, invasion history | High |
| *Gillia altilis* | Yes | Yes | No fecundity data | Potential |
| *Helisoma anceps* | | Yes | Fecundity | High |
| *Helisoma sp.* | | ? | No fecundity data | ? |
| *Helisoma trivolvis (Planorella trivolvis)* | | Yes | Pathogens, invasion history | High |
| *Indoplanorbis exustus* | | No | Fecundity, pathogens, invasion history | Low |
| *Lasmigona subviridis* | Yes | Yes | No fecundity data | Potential |
| *Limnoperna fortunei* | | Yes | No fecundity data, invasion history | High |
| *Lymnaea natalensis (Radix natalensis)* | | No | Fecundity, pathogens | Low |
| *Lymnaea palustris (Stagnicola palustris)* | | Yes | Fecundity, pathogens | High |
| *Lymnaea peregra (= Radix peregra)* | | Yes | Fecundity, pathogens | High |
| *Lymnaea stagnalis* | | Yes | Fecundity, pathogens | High |
| *Marisa cornuarietis* | No | No | Fecundity, invasion history | Low |
| *Melanoides tuberculata* | No | No | Fecundity, pathogens, invasion history | Low |
| *Melanoides turriculus* | No | No | No fecundity data, invasion history | Low |

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|---|---|---|---|---|
| *Musculium lacustre* | | Yes | Invasion history | High |
| *Musculium partumeium* | | ? | N/A | Low |
| *Neothauma tanganyicense* | | No | N/A | Low |
| *Nerita natalensis sp. "Tracked"* | | No | No fecundity data | Low |
| *Nerita sp.* | | No | No fecundity data | Low |
| *Neritina reclivata* | | No | No fecundity data | Low |
| *Physa fontinalis* | | Yes | Fecundity, pathogens | High |
| *Physella acuta* | | Yes | Invasion history | High |
| *Pila conica* | | No | No fecundity data | Low |
| *Pisidium amnicum* | Yes | Yes | Pathogens | High |
| *Pisidium corneum (Sphaerium corneum)* | Yes | Yes | Pathogens | High |
| *Pisidium henslowanum* | Yes | Yes | N/A | Low |
| *Pisidium hibernicum* | | Yes | N/A | Low |
| *Pisidium moitesserianum* | Yes | Yes | N/A | Low |
| *Pisidium punctiferum* | | Yes | No fecundity data, invasion history | High |
| *Pisidium supinuum* | Yes | Yes | Invasion history | High |
| *Planorbella duryi* | | No | No fecundity data, invasion history | Low |
| *Planorbis contortus (Bathyomphalus contortus)* | | Yes | Pathogens | High |
| *Pomacea bridgesi* | | Yes | Fecundity, pathogens, invasion history | High |
| *Pomacea canaliculata* | | No | Fecundity, pathogens, invasion history | Low |
| *Pomacea cumingii* | | No | No fecundity data, invasion history | Low |
| *Pomacea haustrum* | | No | Fecundity, pathogens, invasion history | Low |
| *Pomacea insularum* | | No | Fecundity, pathogens, invasion history | Low |
| *Potamilus alatus* | | Yes | No fecundity data | Potential |
| *Potamopyrgus antipodarum* | Yes | Yes | Fecundity, pathogens, invasion history | High |

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|---|---|---|---|---|
| *Radix auricularia* | Yes | Yes | Fecundity, pathogens, invasion history | High |
| *Sinanodonta woodiana* | | Yes | No fecundity data, pathogens, invasion history | High |
| *Stenophysa marmorata* | | No | No fecundity data, invasion history | Low |
| *Stenophysa maugeriae* | | No | No fecundity data | Low |
| *Tarebia granifera (Thiara granifera)* | | No | Fecundity, pathogens, invasion history | Low |
| *Tylomelania cf. gemmifera* | | No | N/A | Low |
| *Tylomelania gemmifera X zeamais* | | No | N/A | Low |
| *Tylomelania gemmifers* | | No | N/A | Low |
| *Tylomelania kruimeli* | | No | N/A | Low |
| *Tylomelania patrichalis* | | No | N/A | Low |
| *Tylomelania spec* | | No | N/A | Low |
| *Tylomelania towutica* | | No | N/A | Low |
| *Tylomelania zeamais* | | No | N/A | Low |
| *Valvata piscinalis* | Yes | Yes | Fecundity, pathogens | High |
| *Viviparus georgianus* | Yes | Yes | Pathogens, invasion history | High |
| *Viviparus subpurpureus* | | Yes | No fecundity data, invasion history | High |

*N/A = no risk factors found; Fecundity = annual fecundity is >158; Pathogens = pathogens of concern are known to infest this species; Invasion history = species has a prior history of invasion.