

Aquatic Species at Risk



Information Summary for Consultations on the Proposed Listing of Atlantic Mud-piddock as “Threatened” Under the *Species at Risk Act*

As part of its strategy for the protection of species at risk, the Government of Canada passed the *Species at Risk Act* (SARA) in 2003. Before listing a species under SARA, the government must undertake consultations with Canadians. As part of the consultation process, the Government of Canada would like to hear your comments on the potential impacts of listing the Atlantic Mud-piddock (*Barnea truncata*) as “threatened” under the *Species at Risk Act* (SARA). Fisheries and Oceans Canada (DFO) has prepared this summary to provide information on the state of the Atlantic Mud-piddock.

What is the *Species at Risk Act*?

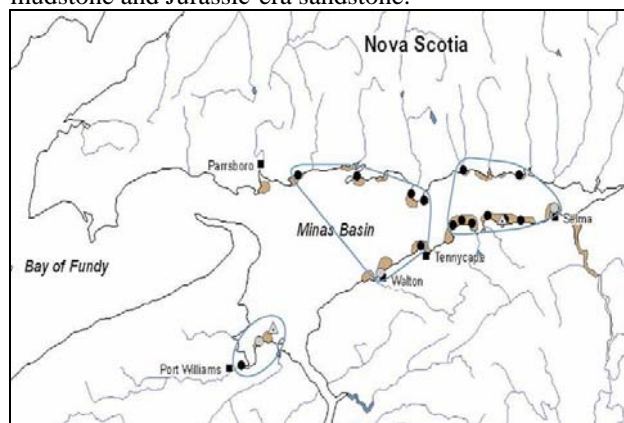
One of the purposes of SARA is to provide for the legal protection of wildlife species and the conservation of biological diversity. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC), an independent body of experts, has the mandate to conduct assessments on the status of wildlife species and categorize them according to their level of risk for extinction (extinct, extirpated, endangered, threatened, or special concern). The Government of Canada considers the scientific evidence, the comments received from Canadians during consultations, and the potential socio-economic impacts before making a decision whether or not to include the species on the List of Wildlife Species at Risk under SARA. Recovery planning is undertaken for all listed species, and prohibitions are put in place protecting species assessed as extinct, extirpated, endangered, or threatened from being harmed.



About the Atlantic Mud-Piddock

The Atlantic Mud-piddock is a small (3-5 cm) grayish-white mollusk with ridges on its shell resembling a feathered wing; hence it is also called “the fallen angel wing”. This species has

free-swimming larvae which settle on the bottom of the inter-tidal zone and burrow into the substrate. As adults they are sedentary and unable to leave their burrows. These burrows create a “Swiss cheese” effect on the ocean floor, and the holes left behind when Atlantic Mud-piddocks die may be used by other intertidal creatures such as small crabs, snails or anemones. The Atlantic Mud-piddock is found from Brazil to Nova Scotia in the western Atlantic Ocean, and from Senegal to South Africa in the eastern Atlantic Ocean. In Canada, the Atlantic Mud-piddock is only known to be found in the inter-tidal zone of the Minas Basin in Nova Scotia, where it is associated with a single type of rock formation which consists of mixed red-mudstone and Jurassic-era sandstone.



Canadian distribution of Atlantic Mud-Piddock. Black dots represent extant sites, grey circles represent recently extirpated sites. Brown areas were surveyed during 2007-2009 field surveys.

Proposed SARA Status: “Threatened”

The Atlantic Mud-piddock has been assessed by COSEWIC as a “threatened” species. This risk level indicates that the species is likely to become endangered unless something is done to address the threats it is facing. It was designated as “threatened” primarily due to the fact that the species only exists in one location in Canada, where its available habitat is less than 0.6 km². In addition, because it is sedentary it is highly vulnerable to habitat alterations, particularly changes in sediment deposition.

Threats to the Species

The primary threat to the Atlantic Mud-piddock is changes in sediment deposition patterns in the Minas





Basin. Increases in sediment can smother the animals and render their limited habitat unusable. These changes may occur as a result of natural processes such as tidal erosion, ice scouring, and major storm events, and there is concern that increased storm activity and sea-level rise due to climate change may negatively impact the species. In addition, the COSEWIC assessment includes dredging, turbine installations, and oil spillage from tankers in the Gulf of Maine and Bay of Fundy as potential threats, but the nature of the impacts of these activities on the Atlantic Mud-piddock and its habitat are not known.

Special Significance of the Species

The Atlantic Mud-piddock is the only species of *Barnea* in Canada and it is the most northern occurrence of this species in the world, with the nearest population being 350 km to the south. The species has significance for indigenous peoples of Brazil, however Atlantic Mud-piddock does not appear to have a similar significance for First Nations in Nova Scotia and it is not known to be a food, social or ceremonial species to the Mi'kmaq. This species is not subject to a commercial fishery. No Aboriginal or community traditional knowledge has been collected at this time.

Protection and Recovery of Species under the SARA

If Atlantic Mud-piddock is added to the List of Wildlife Species at Risk as a “threatened” species, it will be legally protected under SARA and subject to prohibitions. It will be illegal to kill, harm, harass, capture, or take an Atlantic Mud-piddock, or possess, buy, sell, or trade any part of one. It will also be illegal to destroy any habitat deemed critical to the species survival and recovery. DFO will be required to produce, in collaboration with stakeholders and partners, a recovery strategy and action plan for the species in an effort to ensure that it does not become further endangered due to human activity. If the species is not listed under SARA, DFO may still produce a recovery plan for the species, under the jurisdiction of the *Fisheries Act*.

Possible Management Measures

If listed under SARA, management and mitigation measures may include site surveys and research activities,

as well as engaging local residents/groups in stewardship programs. Proposed industrial or other activities with the potential to impact Atlantic Mud-piddock habitat will be reviewed to ensure that any habitat deemed critical for the species survival is not destroyed.

Potential Socio-Economic Impacts of Listing Under SARA

A summary of the socio-economic analysis conducted by DFO on the listing of Atlantic Mud-piddock under SARA is available on request.

The Consultation Process – Your Comments

As part of the consultation process, the Government of Canada would like to hear your opinions on listing Atlantic Mud-piddock as “threatened” under SARA, and any comments on the potential positive and negative impacts this listing would have on you, your industry, and/or the ecosystem. Your answers to the following questions will be used to help inform the decision whether or not to list the species under SARA:

1. How would your activities be affected if Atlantic Mud-piddock was listed as “threatened” under SARA (including environmental, social, cultural, and economic impacts)?
2. Do you support listing Atlantic Mud-piddock as “threatened” on the List of Wildlife Species at Risk under SARA? Why or why not?
3. Do you represent an industry, community, Aboriginal, or other group? If so, which group or sector do you represent?

To submit answers to the above questions, share your comments, or to receive further information about the species, please contact:

Species at Risk Management Division, Maritimes Region
 Fisheries and Oceans Canada
 1 Challenger Drive
 Dartmouth, Nova Scotia B2Y 4A2
 xmarsara@mar.dfo-mpo.gc.ca
 1-866-891-0771

For a copy of the COSEWIC assessment for this species, or for other general inquiries, please visit the SARA Public Registry at www.sararegistry.gc.ca.

Fisheries and Oceans Canada
 1-866-266-6603
info@dfo-mpo.gc.ca

Aquatic Species at Risk Web Site
www.aquaticspeciesatrisk.gc.ca

Environment Canada
 1-800-668-6767
enviroinfo@ec.gc.ca

SARA Public Registry
www.sararegistry.gc.ca

Photo Credit: Christina McCorry

Map Credit : COSEWIC assessment and status report on the Atlantic Mud-piddock *Barnea truncata* in Canada (2009)



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