

# **SUBMISSION TO THE NUNAVUT WILDLIFE MANAGEMENT BOARD**

## **FOR**

**Information: X**

**Decision:**

**Issue:** Information regarding the possible addition of the Thorny Skate (*Amblyraja radiata*) to the List of Wildlife Species at Risk on the *Species at Risk Act* (SARA) as a species of Special Concern.

### **Background:**

As per 3.0 of the Harmonized Listing Process, DFO is informing the NWMB of the COSEWIC assessment results for the Thorny Skate. In Nunavut, the Thorny Skate may occasionally be found in small numbers in Davis Strait and the Labrador Sea in summer. As this species is not fished for subsistence purposes, adding it to the List of Wildlife Species at Risk under the *SARA* would appear to have little direct impact on most Nunavut residents. This species is sometimes taken by the commercial fisheries in Nunavut waters. A designation of Special Concern requires the development of a SARA management plan, but does not include any automatic prohibitions against the killing, harming or harassing of these animals.

### ***Thorny Skate***

Thorny Skate (*Amblyraja radiata*) are native to both sides of the Atlantic, from Iceland south to the English Channel in the eastern Atlantic and from Greenland to South Carolina in the western Atlantic. They have a typical skate or ray body type and are dorsal-ventrally compressed (Figure 1). The feature that most distinguishes this species from other skates in Canadian waters is the row of 11-19 large thorns running down the middle of the back and along the tail.

### **Distribution**

Based on survey data north of 60° 30'N from 1999-2009, Thorny Skate were found in Baffin Bay, Davis Strait and Hudson Strait/Ungava Bay in low densities relative to their abundance in areas further to the south. Records are rare north of 68°N and west of 74°W, likely delineating the northern-most extent of the distribution of this species in Canada. In Nunavut, Thorny Skate are rarely found north of Clyde River (Figure 2).

### **Habitat**

Thorny Skate are found over most shelf waters off Canada in 18-1400 m, of water and occupy a broad array of substrate types including sand, broken shell, gravel, pebbles and soft mud.



**Figure 1:** A Thorny Skate female from the Grand Banks with an 11 cm newly hatched juvenile female.

### **Biology**

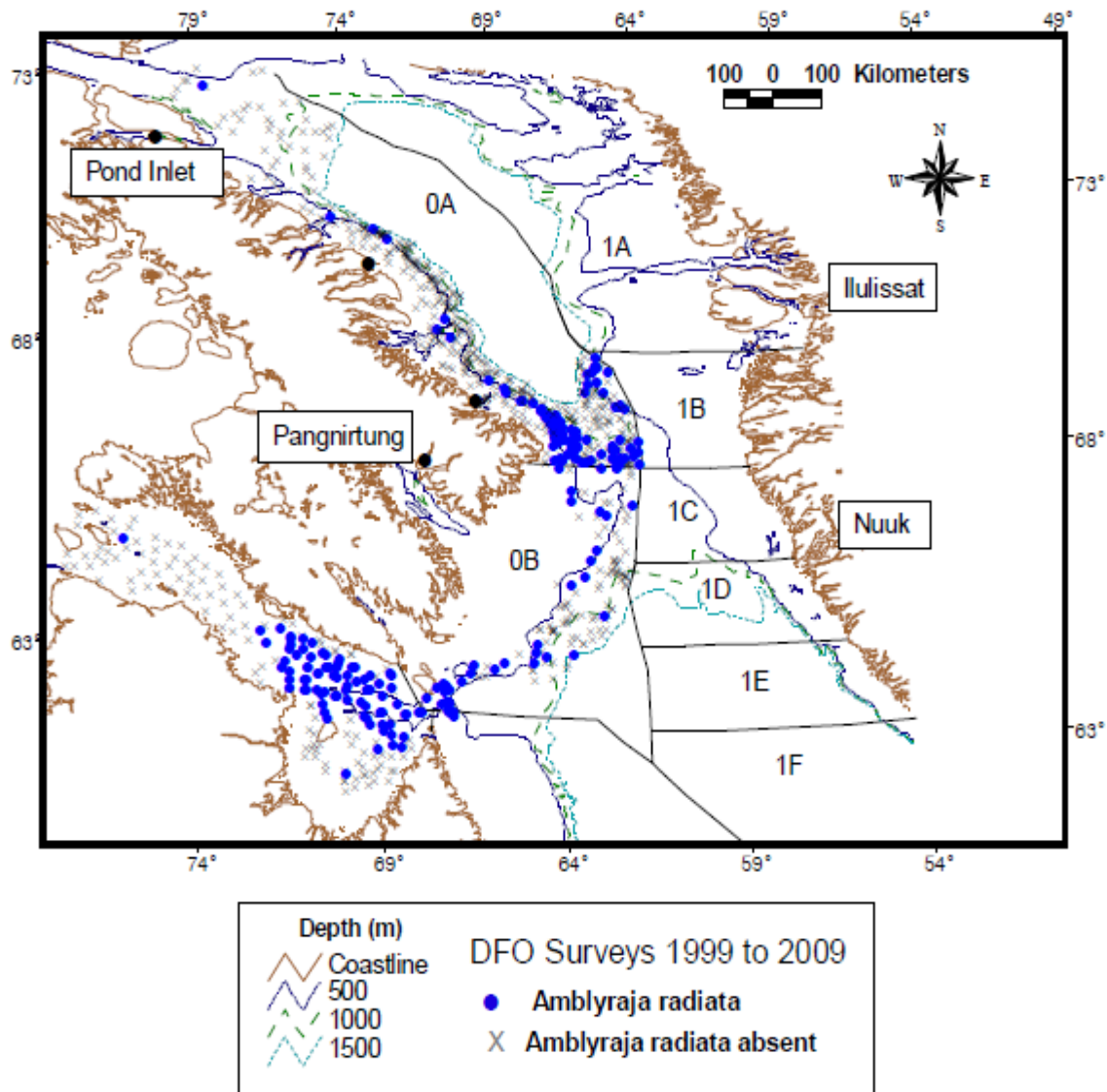
Thorny Skate are a plastic species where maximum size, growth and size at maturity as well as morphology are highly variable and affected by local conditions. Thorny Skate feed on a wide variety of prey including small fish, crabs, shrimp, squid, worms and amphipods. Maturity is reached at approximately 11 years and reproduction is thought to take place year round.

### **Population Sizes and Trends**

Minimum abundance estimates of the Baffin Bay/Davis Strait/Ungava Bay population suggest a population of approximately 1.5 million fish.

### **Threats and Limiting Factors**

Because Thorny Skate are so widespread, they are taken as by-catch in many fisheries off Canada. Fishing mortality is the only threat for which quantitative data are available. Other potential limiting factors include predation by marine mammals and predation on egg cases by gastropods and demersal fish, although empirical data on predation is lacking. Changes in the environment, in particular temperature, may have affected thorny skate distribution and abundance although this also has not been quantified. In Nunavut, this species is sometimes captured as by-catch in the northern shrimp and Greenland Halibut fisheries. Skates have not been reported in the Nunavut Harvest Study.



**Figure 2:** Distribution of Thorny Skate in Canadian waters north of latitude 60° 30'N based on DFO surveys (1999-2009). Blue dots represent where Thorny Skate were caught. "x" symbols indicate where fishing took place, but thorny skate were not caught.

#### **Consultation and Approval:**

The Department of Fisheries & Oceans will be issuing a Response Statement for the Thorny Skate within 90 days after the final assessment report is provided to the Minister by COSEWIC. The Response Statements will outline how the Minister intends to respond to COSEWIC's assessment and, to the extent possible, provide timelines for action.

The possible listing of many species is currently awaiting the completion of a Memorandum of Understanding (MOU) with the Nunavik Marine Region Wildlife

Board which would be similar to the one completed with the Nunavut Wildlife Management Board in 2008. As we expect that the Nunavik MOU could be completed within the next six months, it will likely soon be possible to move forward with carrying out consultations for this species.

DFO is planning to prepare consultation materials to share with Nunavut communities and the fishing industry to ensure that any SARA listing decision is made in full consideration of the views of Inuit. We will contact the Pangnirtung, Qikiqtarjuaq and Clyde River HTOs to determine their level of interest in the species. We will develop an information sheet which will be translated and distributed to these communities. People may provide their comments to us by e-mail or regular letter. Comments received through consultation and by mail will be used by the Minister to decide whether to recommend legal listing of these populations.

We would like an indication from the Board as to whether or not they believe in person community consultation by DFO is warranted for this species in consideration that the species is not recorded in the Nunavut Harvest Study and no restrictions on harvesting will take place if the species is listed.

### **Approval**

After the consultation period has ended, DFO will provide the Board with a summary of the community and industry responses concerning listing of the Thorny Skate and indicate what the Minister plans to recommend to the Governor-in-Council (GIC). Consultations will not occur until the MOU with the Nunavik Marine Region Wildlife Board is completed.

### **Prepared by:**

Sam Stephenson, Species at Risk Biologist, DFO, Central and Arctic Region, Winnipeg

### **Date:**

01 August 2012

**Assessment Summary – May 2012****Common Name**

Thorny Skate

**Scientific Name**

*Amblyraja radiata*

**Status**

Special Concern

**Reason for Designation**

These slow-growing, late-maturing fish have undergone severe population declines over the southern part of their distribution, including range contractions. The southern declines have continued in spite of a reduction in fishing mortality. In contrast, the abundance of mature individuals in the northern part of their range has been increasing, approaching abundance levels observed at the beginning of surveys (mid-1970s). Thus, while the species as a whole does not meet the criteria for a Threatened status, declines and range contractions in the south are causes for concern.

**Range**

Arctic Ocean, Atlantic Ocean

**Status History**

Designated Special Concern in May 2012.