



Ray-finned Fishes

Atlantic Wolffish

Anarhichas lupus

Priority 2 Species of Greatest Conservation Need (SGCN)

Class: Ray-finned Fishes (*Actinopterygii*)

Order: Perch-like Fishes (*Perciformes*)

Family: Wolffishes (*Anarhichadidae*)



General comments:

The Atlantic Wolffish (*Anarhichas lupus*) is a large, bottom-dwelling predator inhabiting cold, rocky areas of Georges Bank and the western Gulf of Maine. It is listed as an ESA Species of Concern in these regions due to population declines linked to bycatch, habitat disturbance, and environmental changes. This species is known for its strong jaws and teeth, used to crush hard-shelled prey such as sea urchins, crabs, and mollusks.

No Species Conservation Range Maps Available

SGCN Priority Ranking - Designation Criteria:

Recent Significant Declines:	Atlantic Wolffish is currently undergoing steep population declines, which has already led to, or if unchecked is likely to lead to, local extinction and/or range contraction. Notes: Recent significant declines: http://www.nmfs.noaa.gov/pr/pdfs/species/atlanticwolffish_detailed.pdf
High Climate Change Vulnerability:	Vulnerability: 3, Confidence: , Reviewers:

Habitat Associations:

Formation: Subtidal

Macrogroup: Subtidal Bedrock Bottom

★ **Primary Habitat** **Habitat System:** Bedrock Bottom Macrogroup - Unknown Habitat System

Macrogroup: Subtidal Coarse Gravel Bottom

★ **Primary Habitat** **Habitat System:** Coarse Gravel Bottom Macrogroup - Unknown Habitat System

Macrogroup: Subtidal Sand Bottom

Habitat System: Unvegetated

Threats

Threat Priority Level based on Severity and Actionability	Moderate Severity		High Severity	
	Highly Actionable		Medium-High	
	Moderately Actionable		Medium	
	Least Actionable		Low	

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Actionable with Difficulty

Low

Low

IUCN Level 1 Threat Biological Resource Use

IUCN Level 2 Threat: Fishing and Harvesting of Aquatic Resources

Severity: High Severity

Actionability: Moderately Actionable

Notes: Commercial fishing for, landing, or take of Atlantic wolffish is not permitted in Maine waters, but some bycatch likely occurs. Wolffish are caught in lobster traps and can be released live if handled properly.

IUCN Level 1 Threat Energy Production and Mining

IUCN Level 2 Threat: Renewable Energy

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: There have been offshore wind lease sites for sale in the Gulf of Maine recently but the impacts of floating offshore wind development is unknown but may impact the species.

IUCN Level 1 Threat Human Intrusions and Disturbance

IUCN Level 2 Threat: Recreational Activities

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: Recreational fishing for, landing, or take of Atlantic wolffish is not permitted in Maine waters, but some bycatch likely occurs. Wolffish are caught in during recreational fishing trips targeting groundfish and can be released live if handled properly.

IUCN Level 1 Threat Climate Change and Severe Weather

IUCN Level 2 Threat: Changes in Temperature Regimes

Severity: High Severity

Actionability: Actionable with Difficulty

Notes: As a coldwater species, changes in habitat associated with climate change and other environmental variables may limit the ability of the population to reach its potential, and may cause shifts in range or range truncation.

Atlantic Wolffish *Anarhichas lupus*

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IUCN Level 1 Threat Climate Change and Severe Weather

IUCN Level 2 Threat: Habitat Shifting or Alteration

Severity: High Severity

Actionability: Actionable with Difficulty

Notes: As a coldwater species, changes in habitat associated with climate change and other environmental variables may limit the ability of the population to reach its potential, and may cause shifts in range or range truncation.

IUCN Level 1 Threat Energy Production and Mining

IUCN Level 2 Threat: Oil and Gas Drilling

Severity: Moderate Severity

Actionability: Actionable with Difficulty

Notes: There is potential for offshore oil spills in the Gulf of Maine from tankers. The use of oil dispersants increases the effect on groundfish and pelagic species by increasing the toxicity of oil globules, though the exact effects are not well documented.

Species Level Conservation Actions:

None. Only species specific conservation actions that address high (red) or medium-high (orange) priority threats are summarized here.

Conservation Actions Associated with the Groundfish Guild:

Conservation Action	Category	Biological Priority	Type
Continue inshore long-term surveys for groundfish species to quantify abundance, biomass, and spatial distribution of these species.	Survey and Monitoring	high	on-going

Threat(s) Addressed By This Conservation Action

- Renewable Energy
- Changes in Temperature Regimes
- Habitat Shifting or Alteration

Conservation Action	Category	Biological Priority	Type
Conduct species distribution modeling to understand how species distributions are changing due to environmental change.	Research	moderate	on-going

Threat(s) Addressed By This Conservation Action

- Changes in Temperature Regimes
- Habitat Shifting or Alteration

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Conservation Action	Category	Biological Priority	Type
Develop marine benthic habitat maps. Data from these maps could then be used to inform species distribution modeling.	Habitat Management	high	new

Threat(s) Addressed By This Conservation Action

- Lack of knowledge

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's Wildlife Action Plan: Element 4.

Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's Wildlife Action Plan: Element 4. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, threats, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work