



Ray-finned Fishes

Arctic Charr

Salvelinus alpinus oquassa

Priority 1 Species of Greatest Conservation Need (SGCN)

Class: Ray-finned Fishes (*Actinopterygii*)

Order: Salmon, Trout, And Whitefish (*Salmoniformes*)

Family: Salmonids (*Salmonidae*)



General comments:

Maine is home to 14 populations of Arctic Charr (*Salvelinus alpinus oquassa*), 12 of which are endemic and two of which are a result of range-expansion efforts in the 1990s. These populations are physically and genetically isolated across a wide geographic area and likely have been for thousands of years. There is strong evidence of trophic specialization across populations, representing important variation within the species. Maine is committed to preserving this natural variation.

Species Conservation Range Maps:

Town Map: [Salvelinus alpinus oquassa Towns.pdf](#)

Subwatershed Map: [Salvelinus alpinus oquassa_HUC12.pdf](#)

SGCN Priority Ranking - Designation Criteria:

Regional Endemic:	<i>Salvelinus alpinus oquassa</i> 's global geographic range is at least 90% contained within the area defined by USFWS Region 5, the Canadian Maritime Provinces, and southeastern Quebec (south of the St. Lawrence River).
High Regional Conservation Priority:	Northeast Regional Synthesis (RSGCN): Responsibility: High, Concern: High American Fisheries Society, Endangered Species Committee: Status: Threatened, Trend: same, Listing: 134, Global Rank: G5T2Q, Comment: blueback trout

Habitat Associations:

Formation: Freshwater Aquatic

Macrogroup: Lentic

★ Primary Habitat	Habitat System: Deep Littoral and Mixed Habitat Lakes
★ Primary Habitat	Habitat System: Deep Pelagic Lakes
★ Primary Habitat	Habitat System: High Elevation Lakes and Ponds
	Habitat System: Ponds (<10

Threats

Arctic Charr *Salvelinus alpinus oquassa*

Priority 1 SGCN



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

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Tourism and Recreational Areas

Severity: Moderate Severity **Actionability:** Highly Actionable

Notes: Deboullie populations and Enchanted Pond

IUCN Level 1 Threat Natural Systems Modifications

IUCN Level 2 Threat: Dams and Water Management-Use

Severity: Moderate Severity **Actionability:** Moderately Actionable

Notes: Floods Pond population only - currently adequately mitigated but will always remain a public water supply.

IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Agricultural and Forestry Effluents

Severity: Moderate Severity **Actionability:** Moderately Actionable

Notes: Potential spruce budworm mitigation could pose risks to some charr habitats. Requires cooperation with Forestry and landowners to minimize impacts to charr habitats.

IUCN Level 1 Threat Climate Change and Severe Weather

IUCN Level 2 Threat: Changes in Temperature Regimes

Severity: Moderate Severity **Actionability:** Actionable with Difficulty

Notes: Potential climate change effect - charr are susceptible to increasing temps and stressed at high temps over extended periods.

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Priority 1 SGCN



IUCN Level 1 Threat Invasive and Other Problematic Species, Genes and Diseases

IUCN Level 2 Threat: Invasive Non-native-Alien Species-Diseases

Severity: High Severity

Actionability: Actionable with Difficulty

Notes: Probably the number one threat to char in Maine. Charr compete poorly with certain other fishes and illegal fish introductions is a serious concern.
Arctic Char in Bald Mountain Pond have declined and is currently at very low level due to the unknown introduction of Rainbow Smelt.

IUCN Level 2 Threat: Problematic Species-Diseases of Unknown Origin

Severity: Moderate Severity

Actionability: Actionable with Difficulty

Notes: Currently not an issue but the threat is always there

IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Air-Bourne Pollutants

Severity: Moderate Severity

Actionability: Actionable with Difficulty

Notes: Acid precipitation and atmospheric deposition of pollutants is a concern.

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Housing and Urban Areas

Severity: Moderate Severity

Actionability: Actionable with Difficulty

Notes: Green Lake population only

Species Level Conservation Actions:

Only species specific conservation actions that address high (red) or medium-high (orange) priority threats are summarized here.

Conservation Action	Category	Biological Priority	Type
Investigate and describe all life history and life cycle requirements of each population to provide for maximum protection of each population	Research	high	on-going



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Priority 1 SGCN

Threat(s) Addressed By This Conservation Action

-  Tourism and Recreational Areas
-  Agricultural and Forestry Effluents
-  Air-Bourne Pollutants

Conservation Action	Category	Biological Priority	Type
Identify key aquatic habitats such as spawning sites and coordinate protection with federal, state, or NGOs and willing private landowners	Habitat Management	high	on-going

Threat(s) Addressed By This Conservation Action

-  Tourism and Recreational Areas
-  Agricultural and Forestry Effluents
-  Housing and Urban Areas

Conservation Action	Category	Biological Priority	Type
Identify key terrestrial habitats connected or adjacent to aquatic habitats that are essential to maintaining viability of populations	Habitat Management	high	on-going

Threat(s) Addressed By This Conservation Action

-  Tourism and Recreational Areas
-  Agricultural and Forestry Effluents
-  Housing and Urban Areas

Conservation Action	Category	Biological Priority	Type
Assess the utilization of charr by recreational anglers, including harvest rates and the attitudes of participating anglers	Species Management	high	on-going

Threat(s) Addressed By This Conservation Action

-  Tourism and Recreational Areas

Conservation Action	Category	Biological Priority	Type
Assess population status at each location where the species is present	Species Management	critical	on-going

Threat(s) Addressed By This Conservation Action

-  Tourism and Recreational Areas
-  Agricultural and Forestry Effluents
-  Air-Bourne Pollutants

Conservation Actions Associated with the Lentic Salmonids Guild:

Conservation Action	Category	Biological Priority	Type
Identify key terrestrial habitats connected or adjacent to aquatic habitats that are essential to maintaining viability of populations	Habitat Management	high	on-going

Arctic Charr *Salvelinus alpinus oquassa*

Priority 1 SGCN



Threat(s) Addressed By This Conservation Action

- Logging and Wood Harvesting
- Housing and Urban Areas

Conservation Action	Category	Biological Priority	Type
Identify key aquatic habitats such as spawning sites and coordinate protection with federal, state, or NGOs and willing private landowners	Habitat Management	high	on-going

Threat(s) Addressed By This Conservation Action

- Housing and Urban Areas
- Changes in Temperature Regimes
- Dams and Water Management-Use

Conservation Action	Category	Biological Priority	Type
Monitor the fish assemblage of each lake, in particular the existence of invasive species	Survey and Monitoring	critical	on-going

Threat(s) Addressed By This Conservation Action

- Problematic Native Species-Diseases
- Invasive Non-native-Alien Species-Diseases

Conservation Action	Category	Biological Priority	Type
Develop a statewide, comprehensive lake thermal long-term monitoring effort comparable to the Maine Stream Temperature Monitoring Network.	Survey and Monitoring	critical	new

Threat(s) Addressed By This Conservation Action

- Housing and Urban Areas
- Dams and Water Management-Use
- Habitat Shifting or Alteration
- Changes in Precipitation and Hydrological Regimes
- Lack of knowledge
- Other Ecosystem Modifications
- Changes in Temperature Regimes

Conservation Action	Category	Biological Priority	Type
Address information gaps regarding impacts of sea-run alewife restoration.	Research	moderate	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.

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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