

Epeorus frisoni (Roaring Brook Mayfly)

Priority 1 Species of Greatest Conservation Need (SGCN)

Class: *Insecta* (Insects)

Order: *Ephemeroptera* (Mayflies)

Family: *Heptageniidae* (Flatheaded Mayflies)

General comments:

new data = 11-14 EOs; only other global EOs in NH, VT - appears to be endemic to Northern Appalachian Mtn range

Species Conservation Range Maps for Roaring Brook Mayfly:

Town Map: [Epeorus frisoni_Towns.pdf](#)

Subwatershed Map: [Epeorus frisoni_HUC12.pdf](#)

SGCN Priority Ranking - Designation Criteria:

Risk of Extirpation:

Maine Status: Threatened

State Special Concern or NMFS Species of Concern: NA

Recent Significant Declines: NA

Regional Endemic:

Epeorus frisoni'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).

Notes: new data = 11-14 EOs; only other global EOs in NH, VT - appears to be endemic to Northern Appalachian Mtn range

High Regional Conservation Priority:

NatureServe:

Global Rank: G1

High Climate Change Vulnerability: NA

Understudied rare taxa: NA

Historical: NA

Culturally Significant: NA

Habitats Assigned to Roaring Brook Mayfly:

Formation Name Boreal Upland Forest

Macrogroup Name Boreal Upland Forest

Habitat System Name: Acadian Low Elevation Spruce-Fir-Hardwood Forest **Notes:** *secondary (riparian only)*

Habitat System Name: Acadian-Appalachian Montane Spr-Fir-Hwd Forest **Notes:** *secondary (riparian only)*

Formation Name Freshwater Aquatic

Macrogroup Name Rivers and Streams

Habitat System Name: Headwaters and Creeks ****Primary Habitat**** **Notes:** *a headwater stream specialist*

Formation Name Northeastern Upland Forest

Macrogroup Name Northern Hardwood & Conifer

Habitat System Name: Laurentian-Acadian Northern Hardwoods Forest **Notes:** *secondary (riparian only); likely the primary terrestrial system for this species, since hardwoods are always dominant in the surrounding uplands of known occurrences*

Stressors Assigned to Roaring Brook Mayfly:

Epeorus frisoni (Roaring Brook Mayfly)

Priority 1 Species of Greatest Conservation Need (SGCN)

Class: *Insecta* (Insects)

Order: *Ephemeroptera* (Mayflies)

Family: *Heptageniidae* (Flatheaded Mayflies)

Stressor 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

Other Options

IUCN Level 2 Threat: Lack of knowledge

Severity: Moderate Severity **Actionability:** Highly actionable

Notes: Lack of comprehensive survey effort and monitoring to identify additional occurrences and status/trends of individual populations

IUCN Level 1 Threat

Biological Resource Use

IUCN Level 2 Threat: Logging and Wood Harvesting

Severity: Moderate Severity **Actionability:** Moderately actionable

Notes: In riparian zone where forest canopy is lost or degraded; in stream corridor where habitat integrity and/or water quality are impacted (e.g., erosion off steep slopes, machinery in stream beds)

IUCN Level 1 Threat

Energy Production and Mining

IUCN Level 2 Threat: Renewable Energy

Severity: Moderate Severity **Actionability:** Moderately actionable

Notes: Riparian zone and stream corridor impacts from industrial wind power development

IUCN Level 1 Threat

Climate Change and Severe Weather

IUCN Level 2 Threat: Habitat Shifting or Alteration

Severity: Moderate Severity **Actionability:** Actionable with difficulty

Notes: Impacts of climate change (e.g., increased water temperature, lack of snow melt at high elevations, etc)

Species Level Conservation Actions Assigned to Roaring Brook Mayfly:

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

Conservation Action	Category: Survey and Monitoring	Biological Priority: high	Type: on-going
----------------------------	----------------------------------------	----------------------------------	-----------------------

Develop and implement a systematic protocol for monitoring population size, demographics, and trends.

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Guild Level Conservation Actions:

This Species is currently not attributed to a guild.

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife

***Epeorus frisoni* (Roaring Brook Mayfly)**
Priority 1 Species of Greatest Conservation Need (SGCN)

Class: *Insecta* (Insects)

Order: *Ephemeroptera* (Mayflies)

Family: *Heptageniidae* (Flatheaded Mayflies)

Action Plan: Element 4, Table 4-15. 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, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.