



Insects

Spatterdock Darner

Rhionaeschna mutata

Priority 2 Species of Greatest Conservation Need (SGCN)

Class: Insects (*Insecta*)

Order: Dragonflies And Damselflies (*Odonata*)

Family: Darners (*Aeshnidae*)



General comments:

The Spatterdock Darner is a large brown and sky-blue dragonfly in the Darner family (Aeshnidae). It inhabits small, often fishless ponds with abundant floating vegetation, especially Spatterdock Water Lilies. This species has only been documented at 8-10 sites, primarily in York and southern Oxford counties. It is listed as state Special Concern and considered at risk because of its limited distribution and number of occurrences, and the vulnerability of its habitat to development, intensive land use practices, pollution, and illegal or accidental introductions of fish.

Species Conservation Range Maps:

Town Map: [Rhionaeschna mutata_Towns.pdf](#)

Subwatershed Map: [Rhionaeschna mutata_HUC12.pdf](#)

SGCN Priority Ranking - Designation Criteria:

State Special Concern:	Spatterdock Darner is listed as a species of Special Concern in Maine.
Understudied Rare Taxa:	Recently documented or poorly surveyed rare species for which risk of extirpation is potentially high (e.g. few known occurrences) but insufficient data exist to conclusively assess distribution and status. *criteria only qualifies for Priority 3 level SGCN*
	Notes:

Professional Discretion:

Current criteria ranked *Rhionaeschna mutata* as SGCN priority 3, however, species should be SGCN priority 2 based on professional discretion.

Justification: limited distribution, rare, specialized habitat

Habitat Associations:

Formation: Freshwater Aquatic

Macrogroup: Lentic

★ Primary Habitat

Habitat System: Ponds (<10 acres)>

primary; small ponds, usually fishless, with abundant floating vegetation - including spatterdock water lilies

Formation: Freshwater Marsh

Macrogroup: Eastern North American Marsh, Wet Meadow & Shrubland

★ Primary Habitat

Habitat System: Laurentian-Acadian Freshwater Marsh

primary; small ponds, usually fishless, with abundant floating vegetation - including spatterdock water lilies

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Formation: Northeastern Upland Forest

Macrogroup: Acadian-Northern Appalachian Forest

Macrogroup: Appalachian Oak - Pine Forest & Woodland

Habitat System: Appalachian Oak - Pine Forest & Woodland Macrogroup - Unknown Habitat System
secondary (riparian only)

Macrogroup: North Atlantic Coastal Forest & Woodland

Habitat System: North Atlantic Coastal Forest & Woodland Macrogroup - Unknown Habitat System
secondary (riparian only)

Threats

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 Other Options

IUCN Level 2 Threat: Resource Needs

Severity: High Severity**Actionability:** Moderately Actionable

Notes: MDIFW lacks funding and staff to implement conservation actions for SGCN invertebrates (e.g., surveys and monitoring, research, habitat protection, outreach and education).

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Housing and Urban Areas

Severity: High Severity**Actionability:** Moderately Actionable

Notes: direct impacts of development (e.g., filling or draining of small wetlands or vernal pools) destroys habitat and causes mortality of aquatic larvae; land use and loss of intact forest canopy in riparian habitat can degrade aquatic habitat integrity and water quality; the small pond habitat this species inhabits is not well protected and vulnerable to development, especially in southern Maine

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IUCN Level 1 Threat Agriculture and Aquaculture

IUCN Level 2 Threat: Annual and Perennial Non-timber crops

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: in riparian habitat where land use and loss of intact forest canopy can degrade aquatic habitat integrity and water quality

IUCN Level 1 Threat Biological Resource Use

IUCN Level 2 Threat: Logging and Wood Harvesting

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: in riparian buffer where loss of intact forest canopy can degrade aquatic habitat integrity and water quality

IUCN Level 1 Threat Other Options

IUCN Level 2 Threat: Education & Outreach

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: some threats and challenges can be minimized through enhanced public outreach and advocacy (e.g., pesticide use, illegal fish introduction, habitat management, improved stream crossings, awareness and appreciation)

IUCN Level 2 Threat: Lack of knowledge

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: lack of comprehensive knowledge about distribution, status, habitat, life history

IUCN Level 2 Threat: Other Threat

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: accidental or deliberate introduction of fish into fishless ponds where this species is breeding; pesticides (e.g., homeowner, agricultural, forest and water quality management applications of insecticides and herbicides; herbicide spraying along roadsides and shorelines) can directly and indirectly affect nymphs and adults (e.g., decrease aquatic vegetation for egg-laying and emergence, decrease insect prey, direct and indirect toxicity)

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IUCN Level 1 Threat Pollution

IUCN Level 2 Threat: Agricultural and Forestry Effluents

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: in riparian buffer or aquatic system where run off/application of pesticides, fertilizers, and other chemicals can degrade water quality and impact nymphs

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Commercial and Industrial Areas

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: direct impacts of development (e.g., filling or draining of small wetlands or vernal pools) destroys habitat and causes mortality of aquatic larvae; land use and loss of intact forest canopy in riparian habitat can degrade aquatic habitat integrity and water quality; the small pond habitat this species inhabits is not well protected and vulnerable to development

IUCN Level 1 Threat Transportation and Service Corridors

IUCN Level 2 Threat: Roads and Railroads

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: in riparian buffer where loss of intact forest canopy can degrade aquatic habitat integrity and water quality (e.g., run-off, road salt); impacts from poorly designed stream crossings; the small pond habitat this species inhabits is not well protected and vulnerable to habitat impacts

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 Palustrine Odonates Guild:

Conservation Action	Category	Biological Priority	Type
Conduct a statewide dragonfly/damselfly atlas project.	Survey and Monitoring	high	completed

Threat(s) Addressed By This Conservation Action

- Education & Outreach
- Lack of knowledge

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Conservation Action	Category	Biological Priority	Type
Increase MDIFW staff capacity for survey, research, and conservation of SGCN invertebrates.	Policy	critical	new

Threat(s) Addressed By This Conservation Action

- Education & Outreach
- Lack of knowledge
- Resource Needs

Conservation Action	Category	Biological Priority	Type
Develop/distribute outreach materials to raise public awareness and appreciation of freshwater aquatic insect ecology, threats and conservation needs.	Public Outreach	moderate	on-going

Threat(s) Addressed By This Conservation Action

- Education & Outreach

Conservation Action	Category	Biological Priority	Type
Conduct comprehensive statewide surveys to inform status, distribution, threats, and habitat use.	Survey and Monitoring	high	on-going

Threat(s) Addressed By This Conservation Action

- Lack of knowledge

Conservation Action	Category	Biological Priority	Type
Develop/distribute Best Management Practices for landowners, land managers and conservation partners to avoid and minimize impacts of intensive land use activities (e.g., forestry, stream crossings, agriculture, development, hydro facilities)	Habitat Management	high	on-going

Threat(s) Addressed By This Conservation Action

- Roads and Railroads
- Housing and Urban Areas
- Commercial and Industrial Areas
- Domestic and Urban Waste Water
- Agricultural and Forestry Effluents
- Education & Outreach
- Logging and Wood Harvesting
- Annual and Perennial Non-timber crops

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Conservation Action	Category	Biological Priority	Type
Develop/distribute guidelines and outreach materials to inform conservation partners, land use managers, and the general public about the impacts of pesticides on native insects and to promote the alternative use of Integrated Pest Management practices.	Public Outreach	moderate	on-going

Threat(s) Addressed By This Conservation Action

- Education & Outreach
- Other Threat

Conservation Action	Category	Biological Priority	Type
Analyze results of the Maine Dragonfly & Damselfly Survey, research and incorporate external Maine records (historical and modern), and produce a summary document and conservation assessment.	Research	high	on-going

Threat(s) Addressed By This Conservation Action

- Lack of knowledge

Conservation Action	Category	Biological Priority	Type
Update NatureServe S-ranks for all Maine Odonata based on results of the Maine Damselfly and Dragonfly Survey.	Research	high	completed

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