

Bombus affinis* (Rusty-patched Bumble Bee)*Priority 1 Species of Greatest Conservation Need (SGCN)****Class:** *Insecta* (Insects)**Order:** *Hymenoptera* (Ants, Bees, Wasps And Sawflies)**Family:** *Apidae* (Honey Bees, Bumble Bees, And Allies)**General comments:**

recent discovery of at least one, likely two confirmed records from 2005-2009; has not turned up in recent limited surveys; possibly extirpated given status in adjacent states/provinces and throughout range, but comprehensive statewide surveys have not been done; species has been petitioned for federal listing status

Species Conservation Range Maps for Rusty-patched Bumble Bee:Town Map: [Bombus affinis_Towns.pdf](#)Subwatershed Map: [Bombus affinis_HUC12.pdf](#)**SGCN Priority Ranking - Designation Criteria:****Risk of Extirpation: NA****State Special Concern or NMFS Species of Concern: NA****Recent Significant Declines:**

Rusty-patched Bumble Bee 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 discovery of at least one, likely two confirmed records from 2005-2009; has not turned up in recent limited surveys; possibly extirpated given status in adjacent states/provinces and throughout range, but comprehensive statewide surveys have n

Regional Endemic: NA**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 Rusty-patched Bumble Bee:****Formation Name Agricultural****Macrogroup Name Agricultural****Habitat System Name:** Cultivated Crops **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)***Habitat System Name:** Pasture-Hay **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)***Formation Name Boreal Upland Forest****Macrogroup Name Boreal Upland Forest****Habitat System Name:** Boreal Upland Forest Macrogroup - Unknown Habitat System **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)***Formation Name Developed****Macrogroup Name Urban-Suburban Built****Habitat System Name:** Residential - Low Intensity **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)***Habitat System Name:** Residential - Rural-Sparse **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)*

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Formation Name **Grassland & Shrubland**

Macrogroup Name **Ruderal Shrubland & Grassland**

Habitat System Name: Ruderal Upland - Old Field **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)*

Formation Name **Northeastern Upland Forest**

Macrogroup Name **Central Oak-Pine**

Habitat System Name: Central Oak-Pine Macrogroup - Unknown Habitat System **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)*

Macrogroup Name **Northern Hardwood & Conifer**

Habitat System Name: Northern Hardwood & Conifer Macrogroup - Unknown Habitat System **Notes:** *habitat generalist (woodlands, urban parks, gardens, etc)*

Stressors Assigned to Rusty-patched Bumble Bee:

Stressor Priority Level based on Severity and Actionability	Moderate Severity	High Severity
	Highly Actionable	Medium-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 statewide survey effort and monitoring to identify occurrences and species status/trends

IUCN Level 1 Threat **Pollution**

IUCN Level 2 Threat: Agricultural and Forestry Effluents

Severity: Severe **Actionability:** Moderately actionable

Notes: Pesticides (e.g., seed/nursery stock inoculation, agricultural applications); past impacts (i.e., severe declines) actionable with difficulty, but future impacts moderately actionable (e.g., changes in pesticide type and use)

IUCN Level 1 Threat **Agriculture and Aquaculture**

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

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

Notes: Habitat loss and fragmentation via intensive land management practices; can also create foraging and nesting habitat

IUCN Level 1 Threat **Energy Production and Mining**

IUCN Level 2 Threat: Mining and Quarrying

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

Notes: Habitat loss and fragmentation

IUCN Level 1 Threat **Residential and Commercial Development**

IUCN Level 2 Threat: Commercial and Industrial Areas

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

Notes: Habitat loss and fragmentation

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IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Housing and Urban Areas

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

Notes: Habitat loss and fragmentation; can also create foraging habitat

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: Species thought to be adapted to a fairly narrow range of climate conditions, so may be more vulnerable to climate change than other *Bombus* spp.

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

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

Severity: Severe **Actionability:** Actionable with difficulty

Notes: Introduced pathogens, parasites/diseases from imported commercial *Bombus* colonies; past impacts are likely irreversible, but future impacts potentially could be minimized/prevented; impacts from invasive plants?

IUCN Level 1 Threat Transportation and Service Corridors

IUCN Level 2 Threat: Roads and Railroads

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

Notes: Collisions with vehicles

Species Level Conservation Actions Assigned to Rusty-patched Bumble Bee:

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

Conservation Actions Associated with the Bumble Bees Guild:

Conservation Action	Category: Survey and Monitoring	Biological Priority: high	Type: on-going
Conduct statewide surveys to document species diversity, distribution and relative abundance.			

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action	Category: Research	Biological Priority: high	Type: new
Produce a statewide atlas and conservation assessment			

Stressor(s) Addressed By This Conservation Action

Lack of knowledge

Conservation Action	Category: Public Outreach	Biological Priority: moderate	Type: new
Develop and implement outreach materials to raise public awareness of native pollinator ecology, threats and conservation needs, and to encourage use of Integrated Pest Management practices.			

Stressor(s) Addressed By This Conservation Action

Agricultural and Forestry Effluents

Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife

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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 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.