



Insects

Cobblestone Tiger Beetle

Cicindela marginipennis

Priority 1 Species of Greatest Conservation Need (SGCN)

Class: Insects (*Insecta*)

Order: Beetles (*Coleoptera*)

Family: Ground Beetles (*Carabidae*)



General comments:

The Cobblestone Tiger Beetle belongs to the family Carabidae, the ground beetles, and was only recently discovered in Maine during surveys conducted by MDIFW in 2009. This species, with its distinctive markings and orange abdomen, is known from just a handful of rivers throughout its range and is considered globally imperiled. As its name implies, the Cobblestone Tiger Beetle prefers cobble bars on vegetated islands in medium to large rivers. It appears these rivers need seasonal scouring of the cobble beaches without prolonged flooding. Due to an apparently limited range (at present a 10 km stretch of a single river) and specialized habitat, the Cobblestone Tiger Beetle is listed as state Endangered.

No Species Conservation Range Maps Available

SGCN Priority Ranking - Designation Criteria:

Risk of Extirpation:	Maine Status: Endangered	Federal Status: None	IUCN Red List Status: Vulnerable
High Regional Conservation Priority:	Northeast Regional Synthesis (RSGCN): Responsibility: High, Concern: High NatureServe: Global Rank: G3 State Rank: S1		

Habitat Associations:

Formation: Freshwater Aquatic

Macrogroup: Lotic

	Habitat System: Cold Rivers <i>one site only in ME but in other parts of range it is found on cobble in different size rivers</i>
	Habitat System: Transitional Small and Medium Rivers <i>one site only in ME but in other parts of range it is found on cobble in different size rivers</i>
★ Primary Habitat	Habitat System: Unknown Thermal Regime Small and Medium Rivers <i>one site only in ME but in other parts of range it is found on cobble in different size rivers</i>
	Habitat System: Warm Small and Medium Rivers <i>one site only in ME but in other parts of range it is found on cobble in different size rivers</i>

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Formation: Grassland & Shrubland

Macrogroup: North American Freshwater Coastal Beach & Rocky Shore

★ Primary Habitat

Habitat System: North American Freshwater Coastal Beach & Rocky Shore Macrogroup - Unknown Habitat System
found on river/stream island cobble and is not associated with lakes

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: Lack of knowledge

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

Notes: Lack of comprehensive survey and monitoring effort to understand population status & trends and ID additional occurrences

IUCN Level 2 Threat: Resource Needs

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

Notes: lack of funding and staff for implementing conservation actions (e.g., comprehensive surveys, long-term monitoring, research, habitat management, outreach & education)

IUCN Level 1 Threat Biological Resource Use

IUCN Level 2 Threat: Hunting and Collecting Terrestrial Animals

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

Notes: Collection pressure on rare tiger beetles can be a problem, especially when distribution is extremely limited

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IUCN Level 1 Threat Human Intrusions and Disturbance

IUCN Level 2 Threat: Recreational Activities

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: Camping and other activities on cobble bar islands in limited area where this beetle occurs could threaten it

IUCN Level 1 Threat Natural Systems Modifications

IUCN Level 2 Threat: Dams and Water Management-Use

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: Construction of a dams on the single river where this beetle occurs in Maine could have catastrophic results

IUCN Level 1 Threat Residential and Commercial Development

IUCN Level 2 Threat: Housing and Urban Areas

Severity: Moderate Severity

Actionability: Moderately Actionable

Notes: Development and accompanying increase in human activities on river cobble bars can threaten this species

IUCN Level 1 Threat Climate Change and Severe Weather

IUCN Level 2 Threat: Changes in Precipitation and Hydrological Regimes

Severity: Moderate Severity

Actionability: Actionable with Difficulty

Notes: Very severe floods could damage or destroy habitat on the single river where this beetle occurs in ME

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
Develop an improved understanding of habitat and movement ecology to help develop Best Management Practices and other targeted species conservation actions	Research	high	new

Threat(s) Addressed By This Conservation Action

Lack of knowledge

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Conservation Actions Associated with the Riparian Tiger Beetles Guild:

Conservation Action	Category	Biological Priority	Type
MDIFW needs greater staff capacity for survey and conservation of SGCN invertebrates	Policy	high	new

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