

USACE Natural Resource Management

Insects



Salt Creek Tiger Beetle & Puritan Tiger Beetle

Salt Creek Tiger Beetle (*Cicindela nevadica lincolniana*): The Salt Creek tiger beetle is predominantly metallic brown to a dark olive green dorsally. The underside of the beetle is metallic dark green. Adults grow to a full length of about half an inch. The elytra, or wing covers, are metallic brown or dark olive green. The head and pronotum, or thorax, are both dark brown. The Salt Creek tiger beetle can be distinguished from other tiger beetles by its distinctive form, reduced markings, and the color pattern on its dorsal and ventral surfaces. (USFWS)

Status: *Endangered, listed 2005*

NatureServe: *Not Ranked*

Puritan Tiger Beetle (*Cicindela puritana*): This is a medium-sized beetle that grows to be around half an inch in length. The primary color of this beetle's body is a dark bronze-brown to bronze-green with cream-colored markings on the elytral, or wing cover, surfaces. The Puritan tiger beetle undergoes a two-year larval period before emergence. Larvae hatch in late July or August as first instars. This stage lasts 2-4 weeks before molting and becoming second instars. They will typically overwinter as second instars and remerge to molt to the third instar in spring. (USFWS)

Status: *Threatened, listed 1990*

NatureServe: *Critically Imperiled*

Not
Ranked

G1
Critically
Imperiled

Family: *Carabidae* is the large family of beetles commonly referred to as ground beetles. There are at least 34,000 species worldwide and these insects are important predators found in most agricultural and garden settings. Some species feed on leaves and plant matter. (University of Wisconsin-Madison)

Photos Left to Right: Salt Creek Tiger Beetle (USFWS), Salt Creek Tiger Beetle (USFWS), Puritan Tiger Beetle (USFWS), & Puritan Tiger Beetle (USFWS)

Management and Protection:

- The Salt Creek tiger beetle requires open, barren saline mud flats and mud banks along streams with saline seeps. (USFWS)
- The primary threat to the Salt Creek tiger beetle is the loss and degradation of saline wetland and stream habitats as a result of commercial, residential, and agricultural development. Additionally, the construction of levees and reservoirs as well as the channelization of Salt Creek has degraded species' habitat. Contamination, artificial lights, invasive plants, floods, and drought can also have a negative impact on this insect. (USFWS)
- The Puritan tiger beetle occurs in shoreline habitat along the Connecticut River in New England and along the Chesapeake Bay in Maryland. The species has disappeared from a large portion of its range in both New England and the Chesapeake Bay area. (USFWS)
 - During 2016, 2017, and 2018, a facility was constructed, upgraded, and used to rear and then reintroduce more than 1,400 Puritan tiger beetles to sites in CT and MA. Additional potential sites for future translocations have been identified along the Connecticut River in Vermont. (USFWS)



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USACE ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended nearly \$50,000 on efforts related to either the Salt Creek Tiger Beetle or Puritan Tiger Beetle. Funds have been expended by multiple business lines including Flood Risk Management, Navigation, Planning and Program Management, Recreation, and Regulatory. Expense types include Site Visits and Inspections, Research, and more.



Salt Creek Tiger Beetle= \$11,956 (2014)



Puritan Tiger Beetle= \$37,830 (2010)

What is USACE NRM Doing: Both species of beetle have small, restricted ranges. Consequently each beetle is listed by only one USACE project within their respective ranges in the FY20 NRM Assessment. The Puritan tiger beetle is listed as having the potential to occur at North Hartland Lake in New England District. The Salt Creek tiger beetle is listed by the Salt Creek and Tributaries project in Omaha District.

At these projects, staff work to ensure that no project operations, current or proposed, have negative impacts to the beetles or their habitat. Across the United States, the USACE stewards lands and waters in an environmentally sustainable fashion. Special efforts are made to coordinate with appropriate resource agencies to ensure that no federally listed species are negatively impacted by USACE operations.

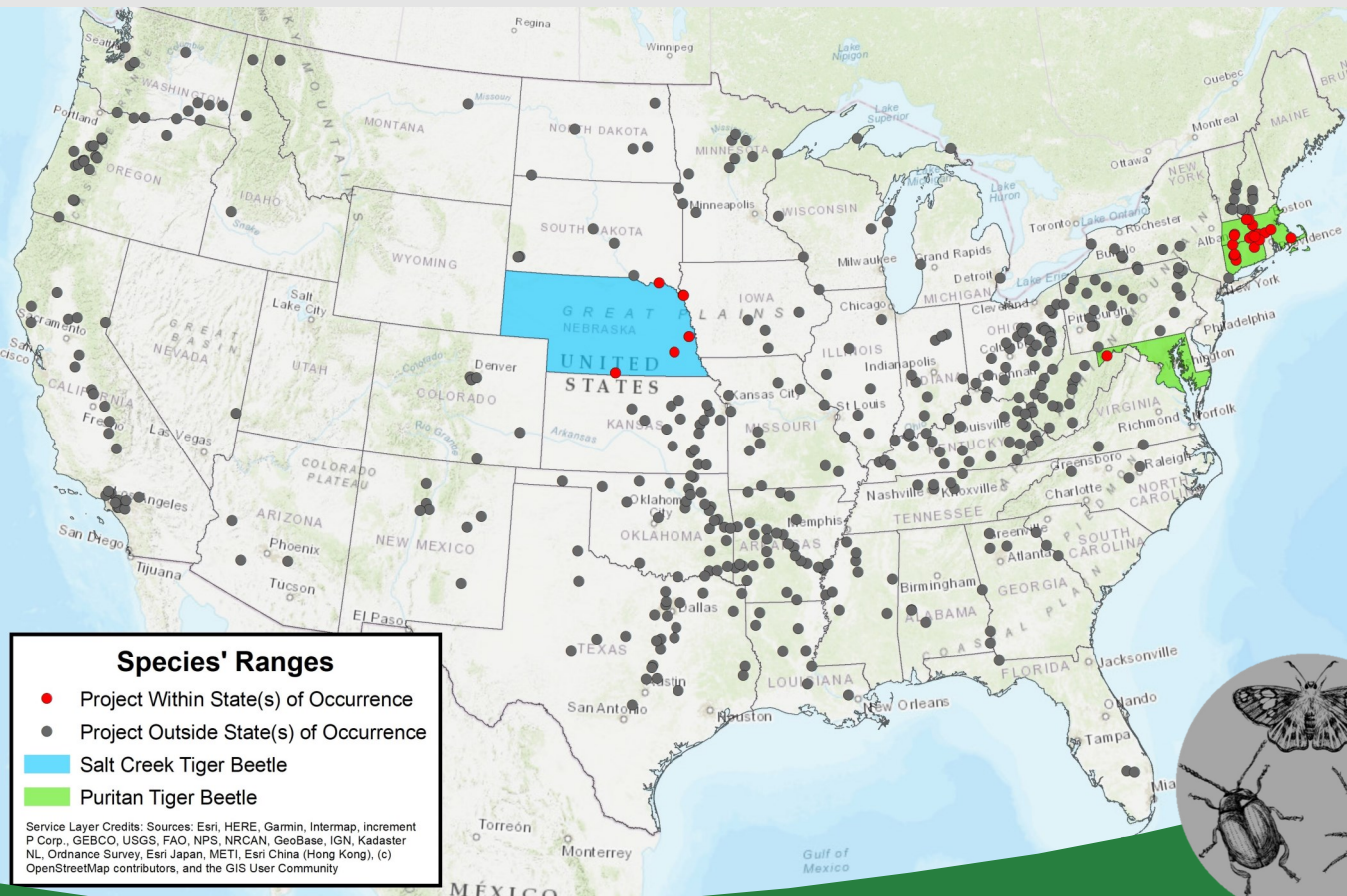


Photo, left: An image of the dam at North Hartland Lake.



Photo, above: Erosion near a USACE operated levee along Salt Creek within the Salt Creek tiger beetle's range.

This fact sheet has been prepared as an unofficial publication of the U.S. Army Corps of Engineers (USACE). This online publication is produced to provide its readers information about best management practices related to special status species. Editorial views and opinions expressed are not necessarily those of the Department of the Army. Mention of specific vendors does not constitute endorsement by the Department of the Army or any element thereof.



Source: Map provided by Ashleigh Boss, ORISE Fellowship, Institute for Water

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