INSECTS – BEETLES

a tiger beetle

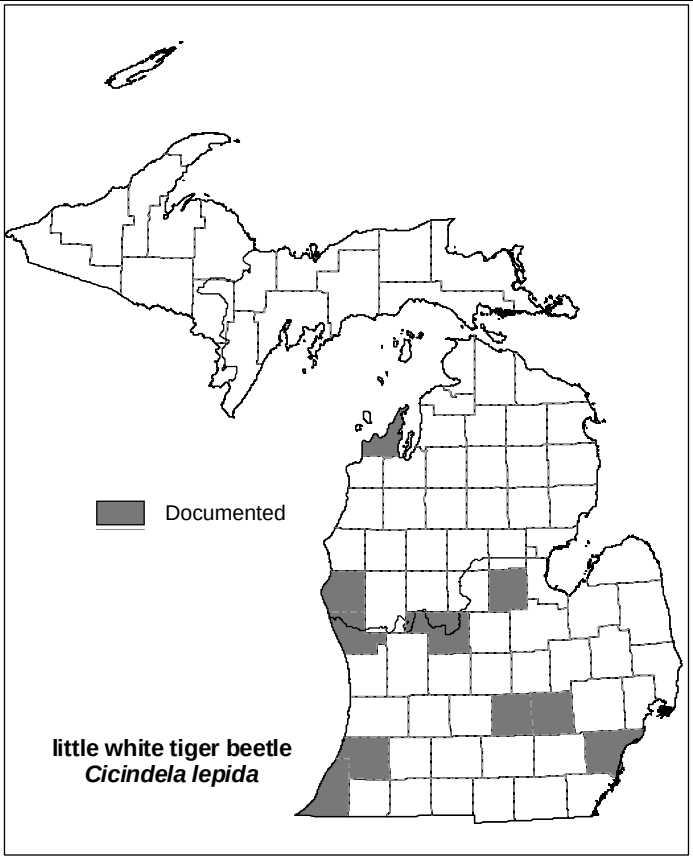
(Cicindela hirticollis rhodensis)

DISTRIBUTION & ABUNDANCE: Occurs on sandy beaches of Great Lakes shoreline across most of the State. This species may be declining throughout the region due to destruction of dune areas; it is State-listed in Minnesota and Wisconsin. Michigan is the "stronghold" for this species.

ASSOCIATED LANDSCAPE FEATURES: inland lake; river/stream/riparian/floodplain corridor; coastal dune/beach; other (interdunal wetland)

ASSOCIATED THREATS: industrial/residential/recreational development; invasive plants & animals; non-consumptive recreation

COMMENTS: Need surveys to assess abundance and distribution; need basic life history information; need to identify threats. ORV and foot traffic should be redirected around occupied areas.



little white tiger beetle

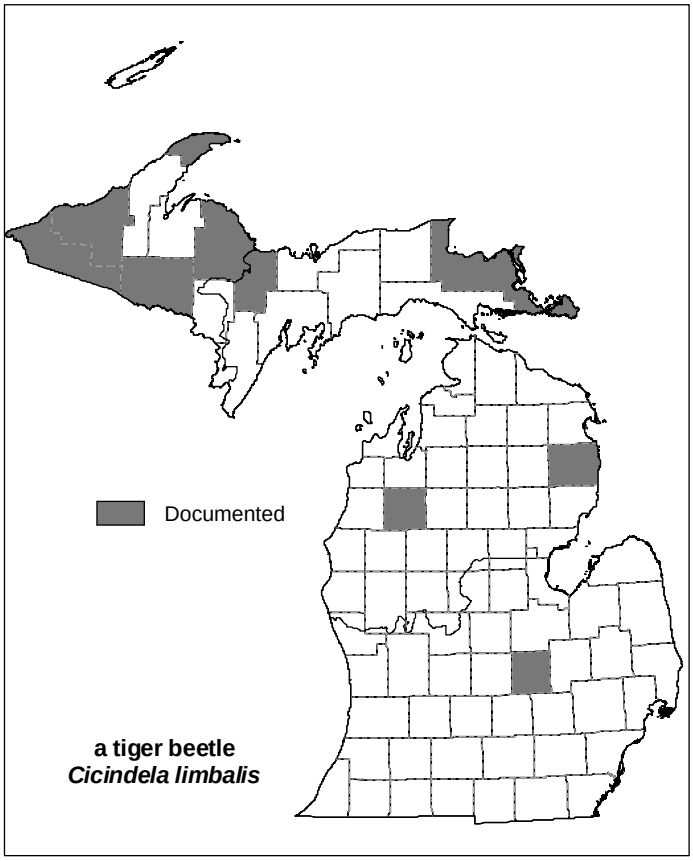
(Cicindela lepida)

DISTRIBUTION & ABUNDANCE: Known from 10 counties in the Lower Peninsula. There are some indications of decline over the last few decades due to loss of dune and sand barren habitat, but more surveys are need.

ASSOCIATED LANDSCAPE FEATURES: coastal dune/beach; other (inland sand flats or sand pits)

ASSOCIATED THREATS: industrial/residential/recreational development; invasive plants & animals; non-consumptive recreation

COMMENTS: Need surveys to assess abundance and distribution; need basic life history information; need to identify threats. ORV traffic should be redirected around occupied areas.



a tiger beetle

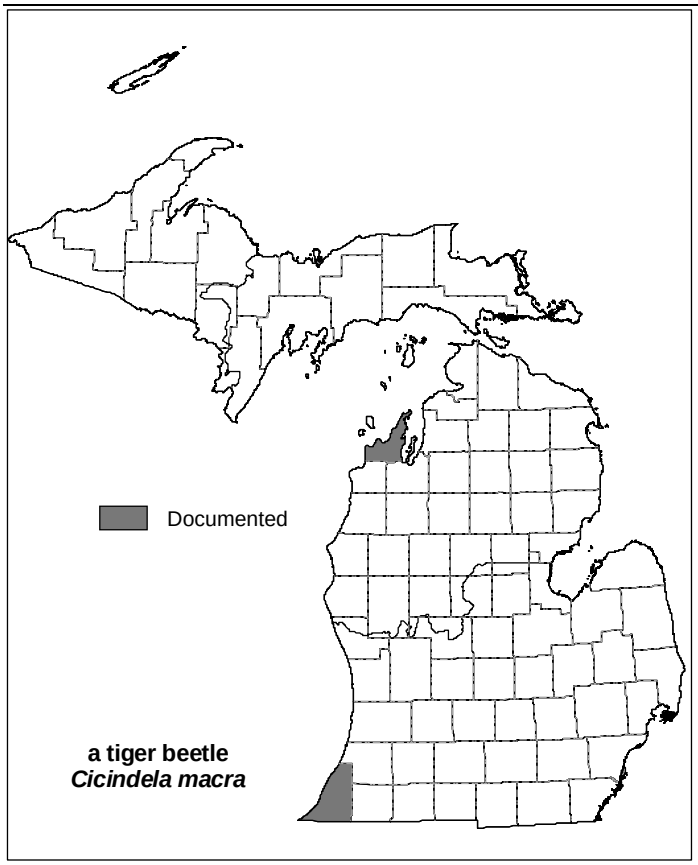
(Cicindela limbalis)

DISTRIBUTION & ABUNDANCE: Known from 6 counties in the Upper Peninsula and 3 dispersed counties in the Lower Peninsula. Abundances for these populations are currently unknown.

ASSOCIATED LANDSCAPE FEATURES: right-of-way; river/stream/riparian/floodplain corridor; Great Lakes island; other (sloping clay banks)

ASSOCIATED THREATS: dredging & channelization; lack of scientific knowledge; unknown

COMMENTS: Need surveys to assess abundance, distribution and population trends; need basic life history information. Relative severity of listed threats is not well known and other currently unknown threats may exist for this species; a threats assessment is needed for this species.



a tiger beetle

(Cicindela macra)

DISTRIBUTION & ABUNDANCE: Known from 2 counties; one in the southwest Lower Peninsula and one in the northwest Lower Peninsula. This species may be threatened by degraded dune conditions, but more surveys are need to determine the status of populations.

ASSOCIATED LANDSCAPE FEATURES: river/stream/ riparian/floodplain corridor; coastal dune/beach; other (interdunal wetlands)

ASSOCIATED THREATS: dams; dredging & channelization; fragmentation; grazing & mowing patterns; altered hydrologic regimes; industrial/residential/recreational development; non-consumptive recreation

COMMENTS: Need surveys to assess abundance, distribution and population trends; surveys are needed along rivers and streams to determine whether this habitat is used in Michigan; need basic life history information; need to identify threats; ORV and foot traffic should be redirected around occupied areas.

Hungerford's crawling water beetle

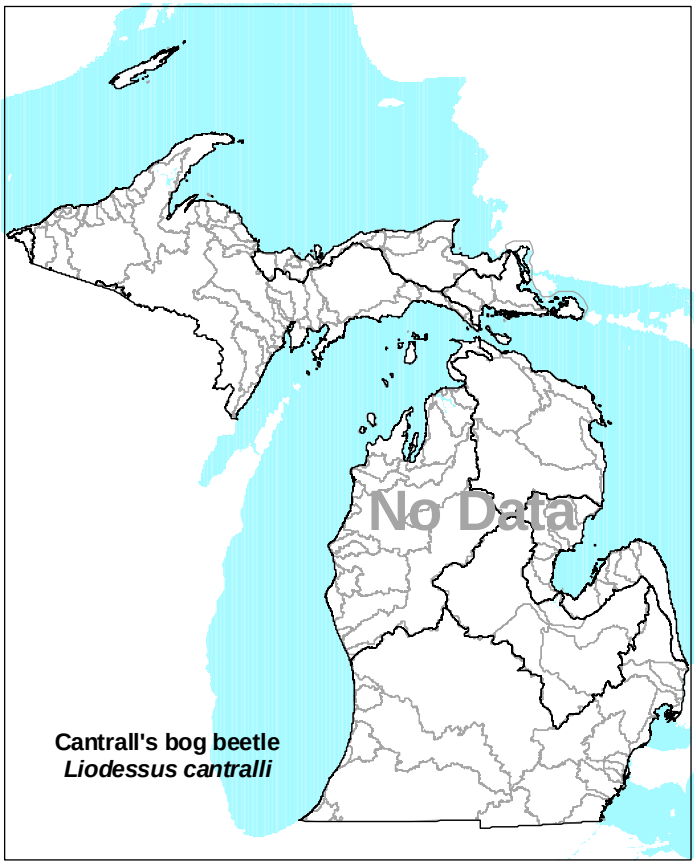
(Brychius hungerfordi)

DISTRIBUTION & ABUNDANCE: State and federally listed as endangered. Known from only four sites in the State. It is abundant at only one of these locations. It is considered critically imperiled in Michigan and globally.

ASSOCIATED LANDSCAPE FEATURES: cool headwaters/small tributaries; headwaters/small tributaries; cool medium rivers; medium rivers; gradient: moderate; gradient: fast; rock substrates; vegetation; woody structure; clear water

ASSOCIATED THREATS: altered nutrient inflows; incompatible natural resources management; other biological interactions (decline in beavers; increase in predators); removal of wildlife

COMMENTS: Need surveys to assess abundance and distribution; need basic life history information; need to identify threats.



Cantrall's bog beetle

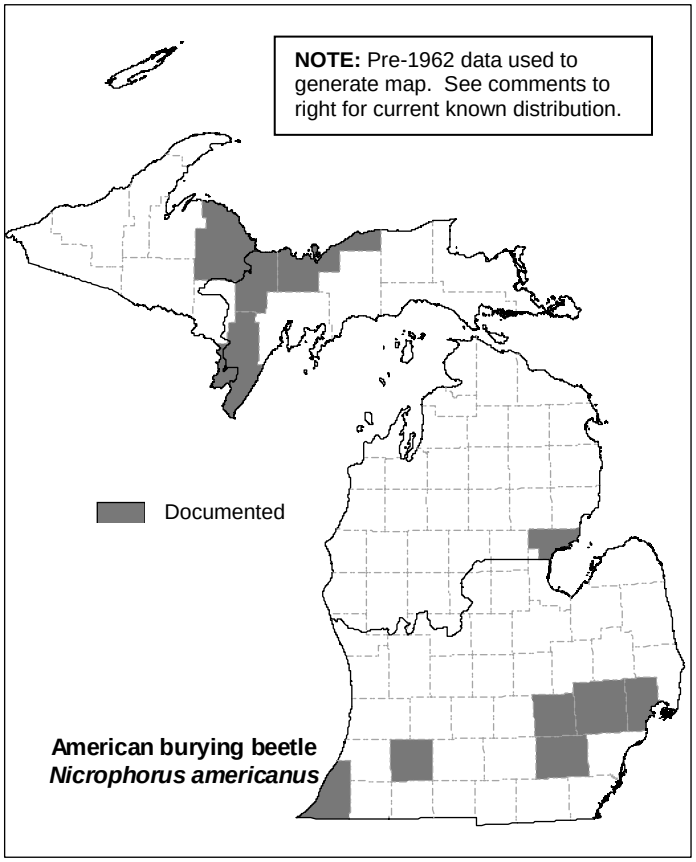
(Liodessus cantralli)

DISTRIBUTION & ABUNDANCE: State listed as special concern. The status of this species is uncertain in Michigan. It is uncommon at best and is probably critically imperiled.

ASSOCIATED LANDSCAPE FEATURES: ponds; banks: clay; bog; fen; inland emergent wetland

ASSOCIATED THREATS: Lack of life history knowledge; unknown

COMMENTS: Need surveys to assess abundance and distribution; need basic life history information; need to identify threats.



American burying beetle

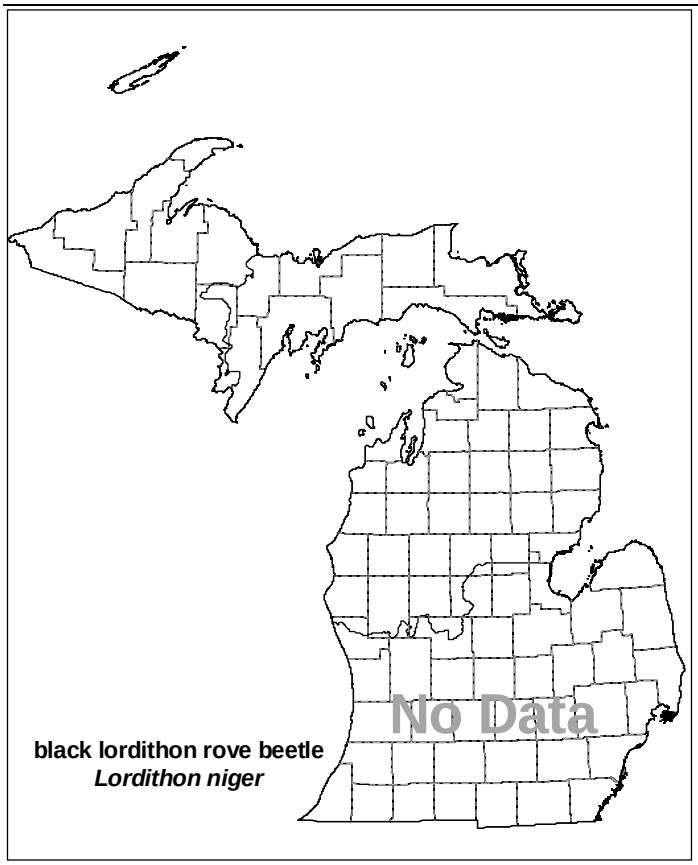
(Nicrophorus americanus)

DISTRIBUTION & ABUNDANCE: State and federally listed as endangered. This species experienced a rapid decline throughout most of its range over the last century. It is probably extirpated from Michigan and from most of its Eastern U.S. range. It is currently known from only a few populations in the central great plains states.

ASSOCIATED LANDSCAPE FEATURES: prairie; pasture; lowland shrub; upland shrub; lowland hardwood; mesic hardwood; dry hardwood; unknown

ASSOCIATED THREATS: conversion to agriculture lands; disease, pathogens, & parasites; industrial/residential/ recreational development; lack of scientific knowledge; other biological interactions (increased vertebrate competition (raccoons, rats, crow, coyotes, cats, fox, etc.); possible congener competition); pesticides & herbicides; removal of wildlife; urban, municipal, and industrial pollution

COMMENTS: Need surveys to determine presence in the State and, if present, assess abundance and distribution. The cause of the massive range contraction for this species is largely unknown. Threats to this species are currently based upon informed speculation. The most common explanations for declines include the extinction of the passenger pigeon, increased competition from vertebrates (e.g. raccoons, rats, coyotes, crows, cats, fox), disease, and large-scale artificial lighting (Sikes and Raithel 2002).



black lordithon rove beetle

(Lordithon niger)

DISTRIBUTION & ABUNDANCE: State listed as special concern. This species is probably extirpated from Michigan. It was once thought to be globally extinct, but was discovered in Rhode Island in 1994. It is considered critically imperiled globally.

ASSOCIATED LANDSCAPE FEATURES: lowland hardwood; mesic hardwood; dry hardwood; other (species in this genus occur on fleshy fungi); late successional forest

ASSOCIATED THREATS: incompatible natural resource mgmt; lack of scientific knowledge; forestry practices; removal of non-timber flora

COMMENTS: Need surveys to determine presence in the State and, if present, assess abundance and distribution. Late successional forest hardwood or mixed conifer/hardwood forests with very old trees appears to be critical to this species.

Douglas stenelmis riffle beetle

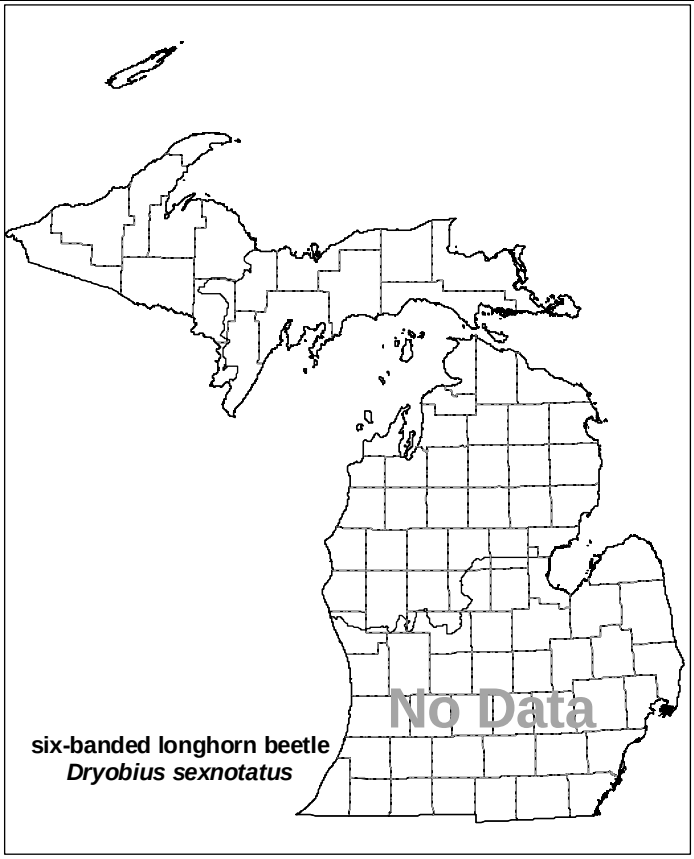
(Stenelmis douglasensis)

DISTRIBUTION & ABUNDANCE: State listed as special concern. The Douglas stenelmis riffle beetle is rare or extremely rare in Michigan and is considered imperiled or critically imperiled. It has been known to occur, in low abundance, at only a handful of locations in the lower peninsula.

ASSOCIATED LANDSCAPE FEATURES: large lakes; wave-washed shore; headwaters/small tributaries; medium rivers; large rivers; soft substrates; woody structure; clear water

ASSOCIATED THREATS: altered nutrient inflows; dams

COMMENTS: Need surveys to assess abundance and distribution; need basic life history information; need to identify threats.



six-banded longhorn beetle

(Dryobius sexnotatus)

DISTRIBUTION & ABUNDANCE: State listed as special concern. The distribution and status of this species in the State is currently undetermined. It is known historically from only one location and it may be extirpated from the State. Its status globally is also undetermined.

ASSOCIATED LANDSCAPE FEATURES: lowland hardwood; mesic conifer; river/stream/riparian/floodplain corridor; snag/cavity; late successional forest

ASSOCIATED THREATS: disease, pathogens, & parasites; incompatible natural resource mgmt; forestry practices; pesticides & herbicides

COMMENTS: Need surveys to determine presence in the State and, if present, assess abundance and distribution. Its requirement for very old sugar maple trees results in this species' association with late successional forests. Spraying for gypsy moths may pose a significant threat to this species.