



**Natural Heritage  
& Endangered Species  
Program**

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*Massachusetts Division of Fisheries & Wildlife*

**Purple Tiger Beetle  
*Cicindela purpurea***

State Status: **Special Concern**  
Federal Status: **None**

**DESCRIPTION:** Tiger Beetles are so named because of their “tiger-like” behavior of chasing down and capturing prey with their long mandibles. The Purple Tiger Beetle, or “Cow Path Tiger Beetle” (*Cicindela purpurea*), is 12-16 mm in length (Pearson et al. 2006). Its color varies from iridescent, reddish or purplish-brown with iridescent green highlights (as in the individual figured at right), to almost entirely iridescent green with iridescent, reddish or purplish-brown shading. There are distinct white maculations (spots and bands) on the elytra (wing covers). The Claybank Tiger Beetle (*Cicindela limbalis*) is similar; however, the Purple Tiger Beetle has middle maculations (the elongate bars in the middle of the elytra) that do not reach the outer edges of the elytra. The Claybank Tiger Beetle has middle maculations that are complete, extending to the outer edges of the elytra. In addition, the Purple Tiger Beetle very rarely has front maculations at the humeral angle (the “shoulders”), while the Claybank Tiger Beetle almost always does.



*Cicindela purpurea* • MA: Barnstable Co., Falmouth • 10 Sep 2008 • Photo by M.W. Nelson

**HABITAT:** In Massachusetts, the Purple Tiger Beetle inhabits areas of sandplain soils (or less often, sandy clay soils) with sparse or patchy vegetative cover, particularly sandplain grasslands and heathlands, as well as pitch pine-scrub oak barrens. Larval burrows occur in bare patches of

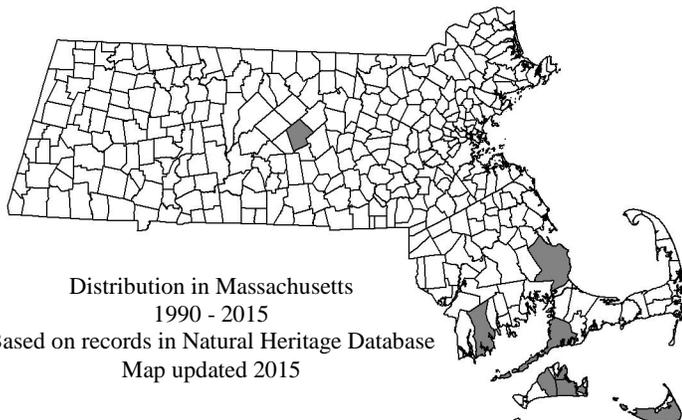
**Adult Activity Period in Massachusetts**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

sandy or sandy clay soils (Pearson et al. 2006).

**LIFE HISTORY:** In Massachusetts, the Purple Tiger Beetle has a two-year life cycle (Leonard & Bell 1999). Adult beetles emerge in late summer and early autumn, overwinter, and are active again in spring and early summer, when mating and egg laying occur. Larvae develop through the first summer and autumn, overwinter, and continue development the second spring and summer. Pupation occurs by late summer, and adults emerge in late summer and early autumn of the second year.

**GEOGRAPHIC RANGE:** The Purple Tiger Beetle ranges from Nova Scotia south to New Jersey, and west to North Dakota and Oklahoma (Pearson et al. 2006). In Massachusetts, the Purple Tiger Beetle occurs primarily in the southeastern part of the state.



Distribution in Massachusetts  
1990 - 2015  
Based on records in Natural Heritage Database  
Map updated 2015

**A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan**

**Massachusetts Division of Fisheries & Wildlife**

1 Rabbit Hill Road, Westborough, MA 01581; tel: 508-389-6300; fax: 508-389-7890; [www.mass.gov/dfw](http://www.mass.gov/dfw)

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**STATUS AND THREATS:** Historically, the Purple Tiger Beetle occurred at more than 50 localities throughout Massachusetts, and the decline of this species during the past 50 years is probably a result of its previous affinity for disappearing agricultural habitats. The Purple Tiger Beetle is threatened by habitat loss and suppression of fire, which is needed to maintain the open vegetation structure of its habitat. Off-road vehicles kill adult beetles and larvae by crushing them, as well as cause extensive habitat damage by rutting consolidated sand, rendering it unsuitable for larval burrows. Aerial insecticide spraying is a potential threat.

### **Literature Cited**

- Leonard, J.G. and R.T. Bell. 1999. *Northeastern Tiger Beetles: A Field Guide to Tiger Beetles of New England and Eastern Canada*. CRC Press, Boca Raton, Florida. 176 pp.
- Pearson, D.L., C.B. Knisley, and C.J. Kazilek. 2006. *A Field Guide to the Tiger Beetles of the United States and Canada*. Oxford University Press, New York, New York. 227 pp.

*Authored by M.W. Nelson, NHESP Invertebrate Zoologist, May 2015*

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