



## Natural Heritage & Endangered Species Program

[www.mass.gov/nhesp](http://www.mass.gov/nhesp)

Massachusetts Division of Fisheries & Wildlife

## Barrens Tiger Beetle *Cicindela patruela*

State Status: **Endangered**  
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 Barrens Tiger Beetle (*Cicindela patruela*) is 13-15 mm in length (Pearson et al. 2006), with an iridescent green body, white maculations (markings) on the elytra (wing covers), and long slender legs. The Six-spotted Tiger Beetle (*Cicindela sexguttata*) is similar, but the white maculations on the elytra are reduced to six spots around the outer edge, with no middle band like the Barrens Tiger Beetle.

**HABITAT:** In Massachusetts, the Barrens Tiger Beetle occurs in sparsely vegetated openings in pitch pine-scrub oak barrens. This species requires patches of bare sand, where adult beetles forage and mate, and where larval beetles construct burrows and capture prey.

**LIFE HISTORY:** The Barrens Tiger Beetle has a two-year life cycle. Adult beetles emerge in late August and September, entering diapause by October and overwintering. The adults are active again from late April through early June, when they mate and females lay eggs. Eggs hatch soon after they are laid, and larvae feed until the fall, spending the first winter in larval diapause. Larvae resume feeding in the spring and complete



*Cicindela patruela* ▪ MA: Plymouth Co. ▪ 1 Sep 2005 ▪ Photo by M.W. Nelson

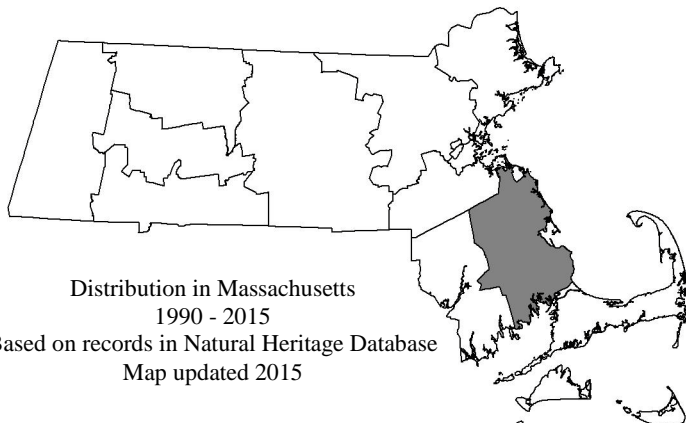
### Adult Activity Period in Massachusetts

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

development by late August or September.

**GEOGRAPHIC RANGE:** The Barrens Tiger Beetle is found from southern New Hampshire south to North Carolina, and west to Minnesota and northern Georgia; populations are rare and localized throughout this range (Pearson et al. 2006). In Massachusetts, this species is only known to occur in Plymouth County.

**STATUS AND THREATS:** The Barrens 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.



**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)

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for ‘endangered wildlife conservation’ on your state income tax form, as these donations comprise a significant portion of our operating budget.

[www.mass.gov/nhesp](http://www.mass.gov/nhesp)

**Literature Cited**

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, April 2015*

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

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

[www.mass.gov/nhesp](http://www.mass.gov/nhesp)