



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Yellow-banded Bumble Bee
*Bombus terricola***

State Status: **Threatened**
Federal Status: **None**

DESCRIPTION: The Yellow-banded Bumble Bee (*Bombus terricola*) is of medium size, the queen 19-21 mm long, worker 10-15 mm, and male 13-15 mm (Williams et al. 2014). Color pattern is as follows: the face and upperside of the head are black, occasionally gray; the front of the thorax (just behind the head) is always yellow, contrasting with both the head and middle of the thorax, which are black (rarely gray); the rear of the thorax often has some yellow, but is usually mostly black or gray. The front of the abdomen is black, and the middle a wide yellow “band,” contrasting with both the front and the black rear. The rear of the abdomen usually has a small amount of yellow or orange at the tip. The Yellow-banded Bumble Bee may be confused with the American Bumble Bee (*Bombus pensylvanicus*), although the latter is currently very rare in Massachusetts. Upon examination in the hand, the Yellow-banded Bumble Bee has a head that is wider than long (opposite the case in the American Bumble Bee); longer antennae; and typically has yellow at the tip of the abdomen, unlike the queen and worker of the American (Williams et al. 2014).



Bombus terricola, female ▪ NH: Coos Co., Whitefield ▪ 20 Jul 2012 ▪ Photo by M.F. Veit

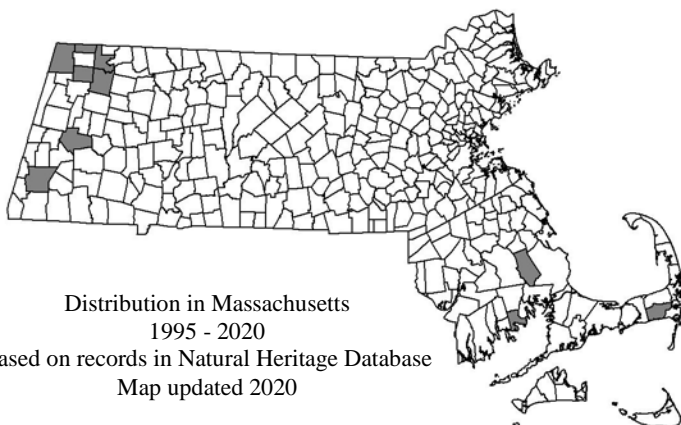
HABITAT: As a group, bumble bees are relatively generalized in habitat requirements and floral resource

Adult Flight Period in Massachusetts

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
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needs as compared to many other bees. The Yellow-banded Bumble Bee is a short-tongued species that can nevertheless “rob” nectar from plants with long, tubular flowers by chewing holes at the base of the flowers. The Yellow-banded Bumble Bee is usually found in open areas within or near woodlands and wetlands, including suburban yards, parks, and gardens. However, habitat must provide a diversity of flowers blooming throughout the growing season, and threats such as introduced pathogens or pesticide use must be absent or sufficiently diffuse. Within such habitat, this species nests underground in preexisting holes and crevices (e.g., deserted rodent burrows), often under rocks or fallen trees or branches.

LIFE HISTORY: Like all bumble bees, the Yellow-banded Bumble Bee is active throughout the growing



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

Massachusetts Division of Fisheries & Wildlife

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season. The queen overwinters, emerging in the spring to start a new colony. Workers become increasingly abundant through late summer, and then begin to decline as males emerge in late summer and early fall.

GEOGRAPHIC RANGE: The Yellow-banded Bumble Bee is a northern species, in the East ranging from Newfoundland south to Pennsylvania, and further south at elevation in the Appalachian Mountains; it ranges “west through North Dakota and the Canadian Great Plains, to the tundra/taiga of Canada and the Mountain West, especially in British Columbia” (Williams et al. 2014). Massachusetts is near the southern edge of this species’ range in the East, except for populations extending south at elevation in the Appalachian Mountains.

STATUS AND THREATS: The Yellow-banded Bumble Bee has declined in parts of its range, including the northeastern U.S. (Grixti et al. 2009, Williams et al. 2009, Cameron et al. 2011, Williams et al. 2014, Colla 2016). In Massachusetts prior to 50 years ago, the Yellow-banded Bumble Bee occurred throughout the state including the offshore islands. It has since declined dramatically, now largely restricted to northern Berkshire County, with a few scattered records in southern Berkshire County and southeastern Massachusetts. Threats potentially affecting the Yellow-banded Bumble Bee in Massachusetts include: (1) pathogens introduced via commercially propagated bumble bees; (2) habitat loss or degradation, including loss of native floral diversity to adverse landscaping practice, agricultural intensification, succession and afforestation, or excessive deer browse; (3) pesticide use where habitat overlaps or interfaces with agricultural or landscaped areas; and (4) climate change.

Literature Cited

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