



**Natural Heritage
& Endangered Species
Program**

www.mass.gov/nhesp

Massachusetts Division of Fisheries & Wildlife

**Frosted Elfin
*Callophrys irus***

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

DESCRIPTION: The Frosted Elfin (*Callophrys irus*) is a lycaenid butterfly with a wingspan of 26-32 mm (Opler 1998). Like most gossamer-wings, the Frosted Elfin rests with wings folded above its back. The upper side of the wings, hidden in this position, are uniform dark brown in color. The wings are also brown on the underside, the forewing with a dashed postmedial line outlined with white. The underside of the hind wing is dark brown in the basal area, brown frosted with whitish-gray toward the outer margin. The hind wing has an obscure postmedial line outlined with white, typically most prominently outlined at the costa with a short white dash, sometimes also toward the inner margin. There is a prominent black submarginal spot above the tail. The Frosted Elfin is similar to Henry's Elfin (*Callophrys henrici*); however, the forewing postmedial line of Henry's Elfin is continuous (not dashed). The basal area of the hind wing of Henry's Elfin is darker brown than that of the Frosted Elfin, and the postmedial line is typically more completely outlined with white; there is usually no black submarginal spot, and when a spot is present it is smaller than that of the Frosted Elfin. The Frosted Elfin may also be confused with the Hoary Elfin (*Callophrys polios*); however, the underside of the forewing of the Hoary Elfin has whitish-gray shading along the outer margin, which is absent in



Callophrys irus • MA: Plymouth Co., Plymouth • 27 Apr 2013 • Photo by M.W. Nelson

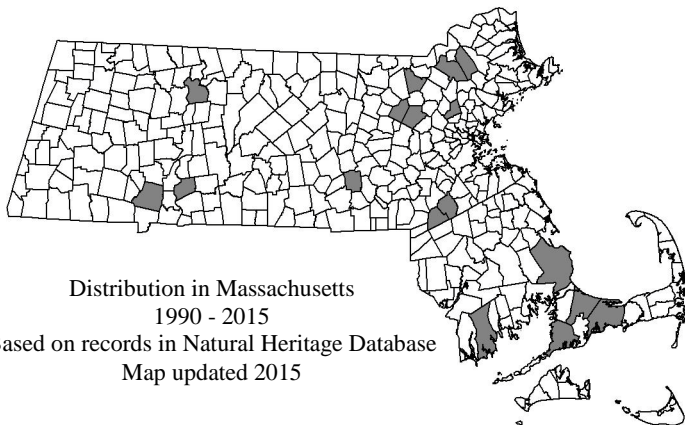
Adult Flight Period in Massachusetts

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

the Frosted Elfin.

HABITAT: The Frosted Elfin inhabits xeric and open, disturbance-dependent habitats on sandy (occasionally rocky) soil, especially heath/grassy openings in pitch pine-scrub oak barrens, but also similar anthropogenic habitats such as utility line rights-of-way, railways, old sand/gravel pits, and airports.

LIFE HISTORY: In Massachusetts, adult Frosted Elfin butterflies fly from mid-April through mid-June. Larvae



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

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

feed on either wild indigo (*Baptisia tinctoria*) or lupine (*Lupinus perennis*) in May and June, with all individuals pupating by early July. Pupae overwinter.

GEOGRAPHIC RANGE: The Frosted Elfin occurs from southern New Hampshire south to northern Florida and west to Wisconsin and eastern Texas, but colonies are rare and localized throughout this range (Schweitzer et al. 2011). In Massachusetts, this species is found in sandplain habitats in the Connecticut River Valley and the eastern part of the state.

STATUS AND THREATS: The Frosted Elfin is threatened by habitat loss and fire suppression. Fire promotes growth of wild indigo and lupine, and maintains the open habitat structure needed by both the Frosted Elfin and its host plants. Other potential threats include introduced generalist parasitoids, aerial insecticide spraying, non-target herbiciding, excessive deer browse of larval host plants, and off-road vehicles.

Literature Cited

- Opler, P.A. 1998. *A Field Guide to Eastern Butterflies*. Peterson Field Guide Series. Houghton Mifflin, Boston, Massachusetts. 486 pp.
- Schweitzer, D.F., M.C. Minno, and D.L. Wagner. 2011. *Rare, Declining, and Poorly Known Butterflies and Moths (Lepidoptera) of Forests and Woodlands in the Eastern United States*. Forest Service, U.S. Dept. of Agriculture, Washington, DC. 517 pp.

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