

***Erynnis persius persius* (Scudder), 1863**  
**Persius Duskywing**  
**(Hesperiidae: Pyrginae)**

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**SUMMARY**

The Persius Duskywing (*Erynnis persius*) is a species that has a coast-to-coast range in North America, with its major population in the western states and a disjunct eastern subspecies, *E. p. persius*, scattered sparsely across the northern states from Wisconsin to the Atlantic coast. This subspecies is locally frequent, at best, and rare in most of its range. It is this subspecies that is the subject of this profile. The pine barrens and oak savannahs that these butterflies rely on have been destroyed and fragmented by urban and agricultural development and the butterflies have suffered from pesticide spraying, especially for gypsy moth control.

**CONSERVATION STATUS**

**Xerces Red List Status: Imperiled**

**Other Rankings:**

Canada – Species at Risk Act:	None
Canada – provincial status:	None
Mexico:	N/A
USA – Endangered Species Act:	None
USA – state status:	CT, MA, MN, NH, NY, OH: Endangered MI: Threatened
NatureServe:	G3T1T2
IUCN Red List:	N/A

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**SPECIES PROFILE**

**DESCRIPTION**

The Persius Duskywing is a small and dark member of the family Hesperiidae (skippers). Its wingspan is 29 to 42 mm (1? to 1? inches).

The upperside is brown-black with dim markings and a few clear dots on the forewings. On males, the forewing has many raised white hairs and yellow scent scales in a costal fold. The female has a patch of scent cells on the seventh abdominal segment.

Persius Duskywing can be easily confused with Columbine Duskywing (*E. baptisiae*) or Indigo Duskywing (*E. lucillius*). Dissection and comparison of genitalia may be necessary to separate these three species in areas where their ranges overlap.

### **TAXONOMIC STATUS**

*Erynnis persius persius* (Scudder), 1863.

### **LIFE HISTORY**

Habitats for the eastern subspecies of Persius Duskywing include pine barrens, oak savanna, and other open, sunny locations (such as powerline rights of way) where its larval hostplants grow. They are also found in marshes. The duskywings will use a wide range of legumes as hostplants, principally wild (sundial) lupine (*Lupinus perennis*) and wild indigo (horseflyweed) (*Baptisia tinctoria*).

There is one flight season from April to June. In hilly areas, males will perch on hilltops, usually sitting on twigs or on the ground, to find females. The eggs are laid singly on the underside of hostplant leaves. Caterpillars may hatch as late as July. They feed on leaves and live in shelters made by rolling or tying leaves together. They hibernate as fully grown caterpillars in leaf shelters.

### **DISTRIBUTION**

*Erynnis persius persius* is a disjunct eastern subspecies of *E. persius*. This subspecies is scattered across a broad band of northern U.S. from Wisconsin to Maine and south into the Appalachians in Virginia. It was also found in Ontario, but is apparently now extirpated.

### **THREATS**

Much of its original savanna or barrens habitat has been destroyed by development or degraded by succession. Fragmentation of the landscape from larger suitable habitats to smaller, sometimes isolated, habitats is also implicated in its decline.

The use of pesticides for gypsy moth suppression is implicated in the decline of Persius Duskywing in New England. Records indicate that the butterfly was significantly less rare from the 1800s to the 1940s than from the 1950s—when massive DDT spraying was done to control the moth—onwards. The use of Btk these days has reduced the overall impact of gypsy moth control but still threatens populations of Persius Duskywing, especially when they occupy forest-edge habitats.

Given the reliance of *Persius Duskywing* on wild lupine for larval survival, it is also worth noting the status of this plant. *Lupinus perennis* is on the endangered and threatened species lists for several states in which *Persius Duskywing* is recorded: Iowa, Maine, New Hampshire, Pennsylvania, and Vermont. New Hampshire includes both the lupine and the butterfly on their state lists.

### **CONSERVATION STATUS**

The *Persius Duskywing* (ssp. *persius*) is in severe decline across its range and apparently extirpated in Ontario. It has Endangered status under state laws in Connecticut, Massachusetts, Minnesota, New Hampshire, New York, and Ohio and is listed as threatened in Michigan, which is probably its global stronghold. West of Pennsylvania, *Persius Duskywing* is found mostly with, but is rarer than, the Karner Blue (*Lycaeides melissa samuelis*), a federally endangered butterfly. (See Red List profile of the Karner Blue for more information on this butterfly.)

### **CONSERVATION NEEDS**

Populations are often small and local and generally need conservation attention. Populations should be monitored and conserved. As with many butterflies, protection and management of their habitat to ensure the presence of hostplant populations is the primary need. The successional nature of the habitat means that appropriate vegetation management is important due to the impact from actions such as overgrazing or badly timed prescribed fire. Habitat should be managed by mechanical disturbance or infrequent burns to maintain populations of the hostplants; poorly managed burns can damage *Duskywing* populations.

Gypsy moth suppression programs must consider the impacts on *Persius Duskywing* populations.

Where the Karner Blue also exists (from New York to Wisconsin), many habitat areas are receiving management or protection. Ironically, the federally listed Karner Blue may now be more abundant than the non-listed *Persius Duskywing* in this region.

### **RESEARCH NEEDS**

Surveys for unidentified populations in all states where it is recorded would be useful and, in particular, surveys in those states and provinces from where it is extirpated should be done. Research into the impacts of habitat management, especially the use of fire, is a priority.

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## **RESOURCES**

### **CONTACTS**

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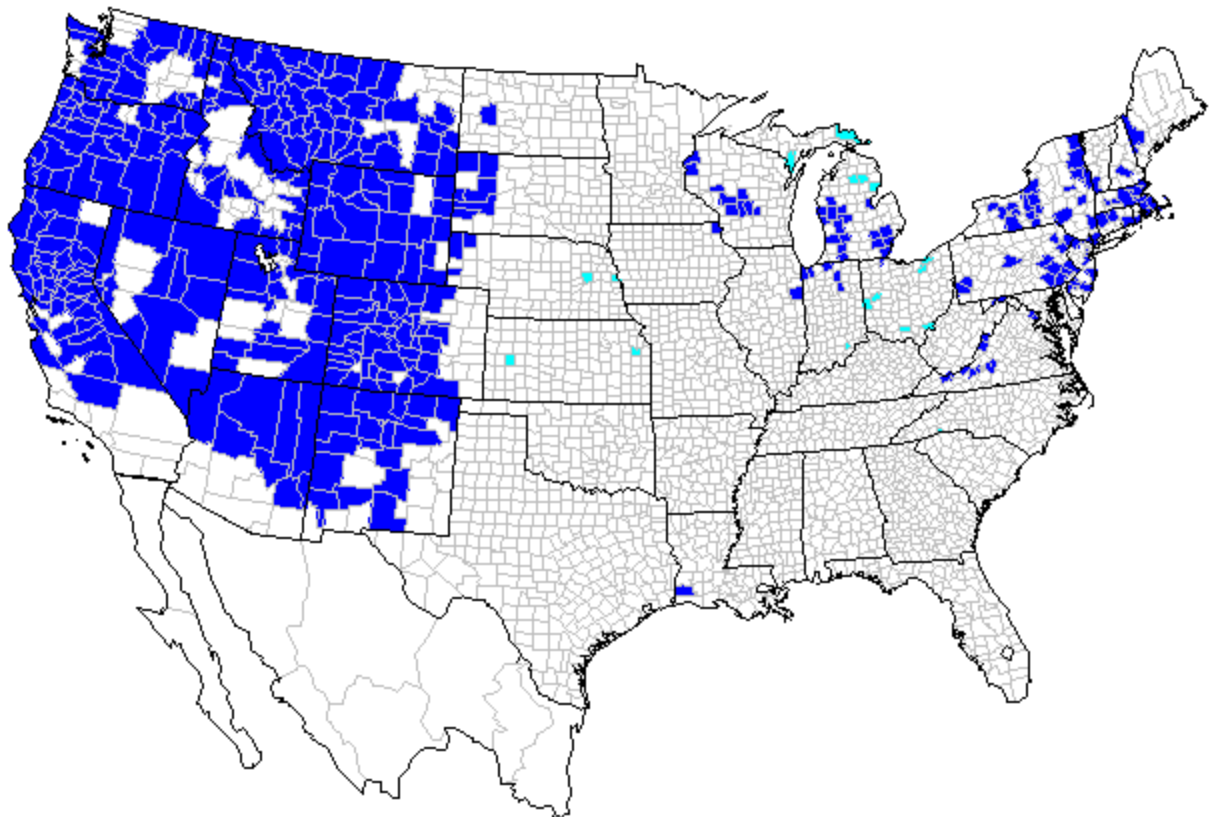
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### DISTRIBUTION MAP

(From: USGS Northern Prairies Wildlife Research Center

<http://www.npwrc.usgs.gov/resource/distr/lepid/bflyusa/usa/622.htm>. Accessed 4/30/05.)

NOTE: This map covers the entire distribution of *Erynnis persius*. Records for the disjunct eastern subspecies *Erynnis persius persius*, covered by this species profile, are from Wisconsin eastward.



■ Confirmed Records    ■ Unconfirmed or Dubious Records    ■ Data Not Yet Available