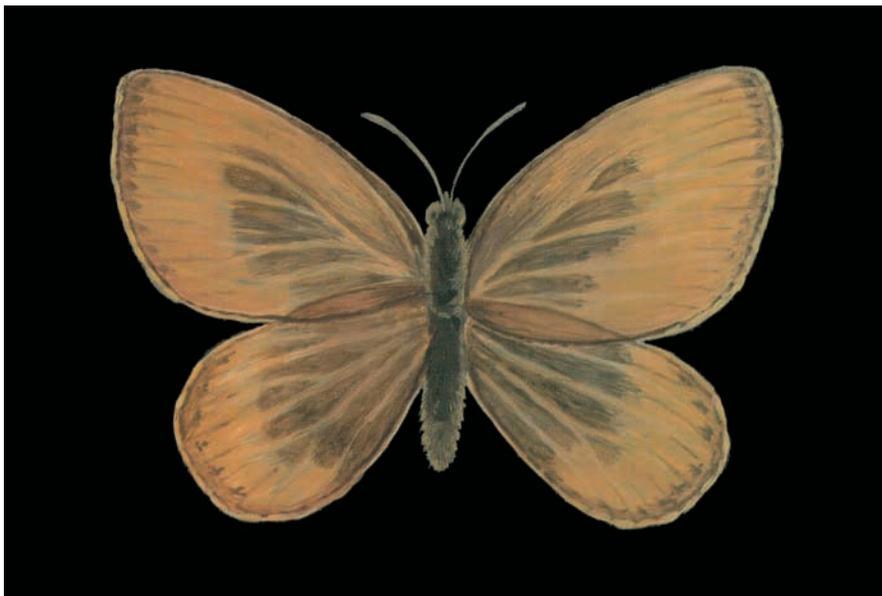


STATE  
ENDANGERED

## Katahdin Arctic

(*Oeneis polixenes katahdin*)



Mark McCollough

### Description

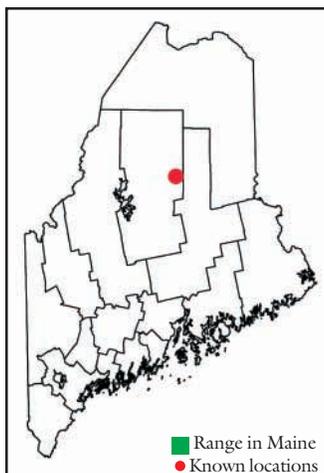
The Katahdin arctic is a medium-sized butterfly (1½ inches) in the family Nymphalidae. Like other arctics, it is a dull yellowish-brown. This species is distinguished by its semi-translucent wings. The upperwing is gray-brown and females may have one tiny spot near the tip (other arctics and satyrs in Maine have more and larger spots). The underside of the hindwing is a mottled gray, brown, and black, and has a pronounced, dark medial band, edged with white. The body is covered with long, dark, hair-like scales. The larvae (caterpillars) are dark colored, thickly covered with short hair, and marked lengthwise with light-colored, broken stripes. The Katahdin arctic is often difficult to observe, flying only during calm days in July. It is inactive during periods of wind or rain.

### Range and Habitat

The Katahdin arctic is a subspecies of the polixenes arctic (*Oeneis polixenes*), which occurs in

the arctic tundra from Alaska through northern Canada to Labrador. The Katahdin subspecies is found nowhere else in the world but the summit of Mt. Katahdin in Baxter State Park in Maine.

The Katahdin arctic is found in alpine tundra-like habitat. It inhabits granite boulder fields interspersed with



sedges and grasses at elevations over 4,000 feet. This encompasses Katahdin's large Tableland area where other alpine species such as the American pipit (endangered) and northern bog lemming (threatened) also reside. The Katahdin arctic rests on lichen-covered rocks, and is restricted to treeless portions of the Tablelands dominated by sedges, alpine plants, sphagnum, and other mosses.

### Life History and Ecology

The life history of the Katahdin arctic is not well documented. Its population size is unknown, but significant annual fluctuations are reported, perhaps related to climatic conditions. Adults emerge in early July and fly for about a month, although this is somewhat weather-dependent and can vary year to year. Females lay eggs on or close to sedges, the host plants for the species. After the eggs hatch, the larvae feed on sedges and grasses and grow slowly. When winter comes the larvae hibernate. Feeding resumes the following spring when warmer temperatures return. During this second year, the larvae grow to their maximum size and transform into pupae late in the summer. The pupae overwinter and adults emerge the following year, completing a two-year life cycle.

### Threats

Collection of Katahdin arctic butterflies has threatened the population in the recent past. Currently, it is illegal to collect or possess this butterfly. However, there is still the potential for illegal collection, and two individuals were apprehended while illegally collecting the butterfly in the 1990s. Because the population fluctuates annually, excessive collecting during a population ebb could

deplete the numbers of butterflies beyond recovery.

Hikers on Mt. Katahdin who walk off the marked trails damage host plants or habitat, and crush eggs, larvae, and possibly adults. Sedge host plants and other fragile alpine vegetation are easily damaged by hikers. Soil erosion and damage to alpine plants is particularly prominent in the spring, when conditions prompt many people to walk around wet areas on the trails.

### Conservation and Management

The Katahdin arctic is listed as endangered in Maine because of its isolated, limited distribution and small population. Butterfly counts are hindered by unfavorable weather and a desire by Park staff not to draw attention to the butterfly. MDIFW has not developed specific management plans for the Katahdin arctic. Because there is virtually no other potential habitat in Maine, management should be directed toward maintaining or enhancing the population on Mt. Katahdin. For now, it is important to protect alpine habitats and prevent illegal collecting. Protection of alpine areas on Mt. Katahdin will also benefit the American pipit, northern bog lemming, and many rare plants.

### Recommendations:

- ✓ Stay on the trails when climbing Mt. Katahdin to avoid damaging the fragile alpine plant community.
- ✓ Collecting butterflies in Baxter Park is illegal. If

you observe someone collecting the Katahdin arctic butterfly or any other plant or animal on Mt. Katahdin, notify Park staff immediately. 🦋

*In the footsteps of Thoreau,  
a MDIFW biologist surveys the  
Tablelands of Mt. Katahdin for  
Katahdin arctic butterflies and  
American pipits.*



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