Northern Metalmark  *Calephelis borealis*

At first glance, the scattered locations in which Northern Metalmark colonies exist in our region do not seem exotic, especially when compared with the visually distinct habitats of other, more remote isolates, such as the alpine satyrs or northern bog dwellers. Yet on close inspection the metalmark's needs are equally specialized. In Connecticut, for instance, Northern Metalmarks require southern-facing calcareous outcrops, usually in redcedar glades, not more than 50 meters from suitable nectar plants (David Norris, pers. comm.). Hostplants tend to grow in or near the edge of associated rocky woods. Given these very selective habitat preferences, it is not surprising that this is a local and isolated butterfly.

The metalmarks are a diverse family, closely related to the lycaenids. Most live in the New World. Of about 20 species in the United States, three occur in the East and two in our region. Metalmarks differ from the lycaenids in their longer antennae, distinctive wing venation, and other, specialized anatomical features—incuding, in many species, the distinctive metallic wing markings that give the family its name. Male forelegs are half the length of the remaining four and are non locomotive. Female forelegs are only slightly reduced and are used for walking.

Male Northern Metalmarks perch near outcrops awaiting females. In the Northeast at least, they are distinctly attracted to Black-eyed Susans for nectaring (though other plants are used as well). When disturbed, individuals perch upside-down beneath a leaf with wings spread. We have seen mating in early afternoon in Connecticut.

**Identification**

Medium-small; larger than Little Metalmark. Abdomen above *mostly dark*. Note light areas in wing fringe, especially near FW apex. If seen well, there is little likelihood of misidentifying this butterfly, except in parts of the upper Midwest, where Swamp Metalmark also occurs. The latter is most easily separated by habitat and range.

**Dorsal**

Wings orange with dusky basal scaling on both wings (or in a vague median band). Note *concentric silver “metal marks.”*

**Ventral**

Yellowish-orange, notably brighter than upper surface (more so than in Little). Underside “metal marks” silvery, mirror dorsal pattern.

**Habitat**

As described above, limestone outcrops, including old quarries, near hostplants and nectar. Shale barrens in WV.

**Hostplants**

Roundleaf Ragwort (*Senecio obvatus*) is the main (perhaps exclusive) host. Golden Ragwort (*Senecio aureus*) and Common Fleabane (*Erigeron philadelphicus*) require substantiation. The main host (*obvatus*) is far commoner than the butterfly (Gochfeld & Burger, 1997). Eggs are laid on the underside of hostplant leaves.

**Occurrence**

Seldom found far from a local colony site. Separate population clusters exist in nw CT to w. NJ; central PA through central Appalachians; also uper Midwest and e. KY; MO to e. OK. One brood, mid-Jun in South to early Jul in North (late May in MO). 6th instar caterpillars overwinter in leaf litter; 8th instar pupates in the spring (Allen, 1997).

**Ecology**

Specialist. Careful observations have provided detailed insights into this butterfly's specialized habitat requirements. They are not easily met, and scarce colony sites are being lost due to succession and disturbance.