

## ESPECIALLY FOR FIELD COLLECTORS

(Under the supervision of FRED T. THORNE, 1360 Merritt Dr., El Cajon, Calif., U.S.A.)

### COLLECTING ON MOUNT KATAHDIN, MAINE

by A. E. BROWER

Mount Katahdin is an entrancing word to Maine collectors. The first spot in the United States touched by the morning sun, it is a beacon for the naturalist or the climber. From a base elevation of about 600 feet, it rises to Baxter Peak at 5267 feet, and the difficulty of the ascent is said to compare with many western mountains. A car can reach an altitude of about 1100 feet on the southwest and 1400 feet on the east. From the camp grounds at these elevations, the Chimney Pond Trail from the east is by magnificent glacial cirques, dividing at Chimney Pond into five trails from the Great Basin; while the Hunt Trail (a part of the Appalachian Trail) from the west follows a stream and then a bold ridge. From the road on the southwest, the Abol Trail ascends a ridge and a slide to the Plateau.

The rigors of Katahdin's alpine climate are to be compared with a sister peak, Mt. Washington, where more men have died than on any other American mountain. Guarded by the mighty god Pomola, Katahdin was feared and shunned by the Indian. Katahdin is a bold granitic mass of over twelve named peaks which surround the great elevated Klondike Basin, largely a black spruce-sphagnum bog at over 2800 feet. Half encircling the head of the Klondike is the high, irregular, roughly U-shaped Plateau, several miles from tip to tip. This is the chief collecting ground at 4300 to over 5000 feet, with fine collecting at times at the still higher peaks and along radiating ridges; therefore, the terrain varies from level stretches to steep slopes, some rocky, some tundra covered. Most of the snow is wind-driven over the edges of the Plateau, and in dry periods, the few surface springs become dry and the vegetation may become dry and parched. Moisture for the vegetation is supplied by the almost daily cloud blanket, for at least part of the day, and by rain during the growing season. The timber-line is roughly 4200-4400 feet, varying greatly with exposure. Somewhat protected portions of the Plateau support large areas of impenetrable *krumholz* (of fir and spruce) which extend toward the Klondike Basin or down slopes. Local areas of half-prostrate Glandular Birch, *Betula glandulosa*, occur. Some rock fields (*felsenfeld*) support little more than encrusting lichens. Much of the Plateau is covered with a tundra ranging from a low dense interwoven growth a few inches deep to a much shorter dense mossy mat. This Arctic-alpine Zone tundra is the chief collecting ground. It is formed by many species of prostrate woody plants and some herbaceous plants, with several abundant lichens (reindeer moss), and mosses. The shorter tundra supports many tufts of sedges, while the deeper contains more grasses. Here a herd of Woodland Caribou formerly assembled in winter to feed on this mat of vegetation.



Fig. 1. Pomola and the Knife Edge above Chimney Pond and the Bunkhouse.  
(Photo by F. W. CLAUS.)

The vegetation on the Plateau is of numerous species. Many of these may be of outstanding interest to the botanist, but of little interest to the lepidopterist, except as larval food. Examples are: Alpine Azalea, *Loiseleuria procumbens*; Lapland Rosebay, *Rhododendron lapponicum*; Moss Plant, *Cassiope hypnoides*; *Phyllodoce caerulea*; Alpine Bearberry, *Arctostaphylos alpina*; Black Crowberry; several willows; and others. Labrador Tea is perhaps the most attractive flower to insects and it blossoms profusely. Bog Laurel is another favorite. The abundant Alpine Bilberry, *Vaccinium uliginosum alpinum*, attracts many insects. Attractive goldenrods and Gall-of-the-Earth, *Prenanthes*, are found both on the Plateau and in depressions along ridges. Mountain-Sandwort attracts butterflies and it carpets areas of soil covered with the coarse particles of disintegrated granite. Three-leaved Cinquefoil is everywhere. Protected depressions along the crests and exposed ridges have goldenrods, Labrador Tea and, at lower elevations, Mountain Ash, *Pyrus decora*. In the edge of the *krumholz*, Twisted Stalk and *Clintonia* grow. At lower elevations one finds other flowers and from about 3000 feet down rein-orchids appear locally.



Fig. 2. Short tundra on the Tableland, with *Juncus* in the foreground and Klondike Basin beyond. (Photo CLAUSS.)

The Klondike Basin is so inaccessible that it has been crossed by few men. Rimmed by formidable mountains with great areas where a trail needs to be cut to permit passage, its fog-draped, *Usnea*-clad spruce, fir and birch live and die unmolested by man. Here on small open bog areas *Boloria*

*aphirape (eunomia)* occurs the last half of June along with multitudes of voracious black flies. Some good Microlepidoptera are there, and doubtless other species occur, if one can find weather which permits collecting them. Plants seem very limited in species.

Collecting insects on the Plateau, or anywhere else, is largely dependent upon being there at the right time and having favorable weather. The collector with widely varied interests is fortunate, because unfavorable conditions for butterflies are common — not the exception. When Pomola blows his blasts over the mountain neither man nor beast cares to face them. Clouds blanket the top for days at a time, and a warm night is the rare exception, therefore most species fly wholly or largely by day. The Katahdin Butterfly, *Œneis katahdin* is certainly the species most often sought. It usually appears during the first days of July and flies until the end of July, the males flying a week before the females. It frequents the grassy areas and when approached, frequently pops up into the wind to be whirled away. It may be common or it may appear to be absent. In 1955 it was not even seen July 21-23 under favorable conditions during three days; in 1956 it was common at the same time; and in 1957 it was not seen July 1-6. One year I got a number of *Apantesis quenseli*, but I have not recognized it in recent years. One of the most striking species is *Byrdia rossi*, whose larva feeds on *Potentilla tridentata*. It is heavy bodied and flies swiftly with rapidly beating wings. Catching it is a challenge to the collector. At times numbers of *Colias interior*, *Aglaia milberti*, and *Papilio glaucus canadensis* frequent the flowers. In many years of collecting, I have seen but one *Thecla* on the mountain, and rarely a skipper. I have seen *Telea polyphemus* flying on a hazy day. One poignant recollection concerns an early trip to Katahdin when, on a sunny, though hazy day, I saw a large and striking moth swinging over the boulder-strewn Plateau at a terrific rate. Efforts to catch the first ones seen were in vain; with a better opportunity, I finally caught one, though my tongue was literally hanging out — a female Forest Tent Caterpillar, *Malacosoma disstria*. Then I realized that the hundreds of this forest pest I had seen fluttering at light were never in natural flight. One of the common denizens of the Plateau is *Euxoa dissona* and its handsome variety "opipara", though probably few collectors ever see it, as it does an able job of hiding in the tundra and is evidently able to fly during some of the nights. Probably the female crawls about for most of her egg-laying. Some nice *Autographa* are about at times. On a recent trip, a handsome noctuid came down to flowers in front of me and escaped — I feel sure an unrecorded species. Another fine species is *Lasionycta subdita*. On Mt. Bigelow, near Stratton, Maine, I have taken *Sympistis melaleuca*, but have never seen it on Mt. Katahdin, just as I have found both insects and plants on Mt. Albert and Table-Top mountain in the Gaspé and in the Presidential Range, which are not found on the other mountains. Such geometrids as *Xanthorhoe munitata* and *algidata* and *Entephria aurata* are to be had below the timber line, perhaps rarely. *Olethreutes intermistana*, *Tortrix moeschleriana* and a number of other tortricids are found. Most times these must be laboriously beaten from the edge of the

*krumholz* or flushed from the tundra. During the last half of July a common sight in the grassy areas is *Crambus browerellus katahdini* flying low over the vegetation. This and species like *Oreomyza broweri* (a tipulid fly) are proof that Katahdin still yields new species. In the smaller micros some interesting species are to be found. Part of those collected are yet undetermined.

The Plateau yields rarely such choice beetles as *Carabus chamissonis grænländicus*, and other insects, such as the desirable cicada, *Okanagana canadensis*, many syrphid and other flies, bumble bees, bees, sawflies, and other orders. Here have been found air-borne flights of both *Archips fumiiferana*, the Spruce Budworm, and *Gilpinia hercyniæ*, a destructive spruce sawfly; flights of the latter have been seen riding the air currents thousands of feet above the lowland forests. I have watched thousands of Ichneumonidæ being whirled up over the rim of the Plateau by gusty winds. On those rare still days when the warm up-welling air currents bring their loads of insects to the highest or most exposed points, the more favorable of these may swarm with insect life of many orders. The rocks may crawl with beetles, sawflies and other Hymenoptera, flies, and other orders of insects. Dragonflies dart about the feast. On exposed crests, like the dangerous, jagged Knife-Edge, may be seen the darting take-off of the nasal bot fly of deer, *Cephenomyia (abdominalis?)*, whose flight is said to exceed the speed of sound. Collectors! running these down would be rare sport. Strange insects these; known only from such places where their host is never seen, their larvæ ravage deer in low-lying areas such as Mount Desert Island where many experienced collectors have worked without ever taking or even seeing an adult.

The collecting season is from the latter part of June into August. Many times the Canadian Zone at the base of Katahdin offers favorable collecting when cold winds drive blankets of fog and cloud over the high elevations. Pomola may offer fierce storms and blankets of clouds, but then Katahdin may offer glorious skies and an insect bonanza for harvest.

8 Hospital St., Augusta, Me., U. S. A.