

GENERAL NOTES

LIBYTHEANA BACHMANNII (NYMPHALIDAE) IN CONNECTICUT

Libytheana bachmannii (Kirtland) is considered a rare vagrant in Connecticut to the local lepidopterists and reaches the northern terminus of its range in this area (Klots, 1951, A Field Guide to the Butterflies, Houghton Mifflin Co., Boston). Those that do occur are suspected to be immigrants from more southern territories and stay till they are lost to winter kill. There being only three Connecticut specimens in collections, it was unusually interesting to make several observations of this species during 1974.

All specimens have taken in Guilford, Connecticut, and it is from this town that all present observations were made. Between 18 and 20 June three individuals were seen. One fed on Mock Orange (*Philadelphus coronarius* L.) and two rested on bark of Apple (*Malus* sp.). In each case there were considerable nearby stands of Hackberry (*Celtis occidentalis* L.), the larval hostplant of *L. bachmannii*, leading to suspicions of a possible summer brood by the immigrants.

On 3 October three additional Snout Butterflies were encountered in an area with a half mile radius. Again *Celtis occidentalis* was quite common. However, in each case the butterflies were seen resting and possibly feeding on the fruits of Wineberry (*Rubus phoenicolasius* Maxim.). This fruit is very viscid to the touch, and its sweet juice would be a logical attractant.

Only future observations will show whether there is indeed a summer brood of *L. bachmannii* in the Guilford area.

NOBLE S. PROCTOR. *Biology Department, Southern Connecticut State College, 501 Crescent St., New Haven, Connecticut 06515.*

A CLAMP FOR MARKING BUTTERFLIES IN
CAPTURE-RECAPTURE STUDIES

I have recently begun a study of adaptive differences in social behavior of several species of butterflies near Whitehall, Washington Co., New York. I initially used techniques described by Ehrlich & Davidson (1960, J. Lepid. Soc. 14: 227-229), in which two people first capture all the butterflies in a given area, then mark and release them en masse in a central location. Although this program was adequate for some species, the observed pattern of local dispersal of sedentary species was greatly affected for a period of several days by the spatial pattern of my collecting and releasing. The affected species showed the least variation in individual behavior when individuals were marked and released quickly at the site of capture. So I designed and built a clamp that allows speedy and efficient marking at the site of capture by a single person (see Fig. 1).

The base is made of $\frac{1}{8}$ " Masonite, as is the anvil, which is glued to the base with its smooth side up. The softwood fulcrum is glued to the base. The "hinge" pins are # 18 brads that are driven through the base, cut short and filed smooth. The clip is made of $\frac{1}{16}$ " clear acrylic plastic with $\frac{1}{16}$ " holes to clear the pins and seven $\frac{3}{16}$ " holes in an H pattern as shown, each chamfered from the top with a countersink. The pieces may be cut roughly, and the assembled clamp shaped on a vertical power-sander. A rubber band holds the jaws of the clamp together. A hole in the upper end of the base allows the clamp to be carried accessibly on a hook or string about the waist or neck.

A butterfly is placed between the jaws of the clamp, and a small number is written on its forewing, using a permanent fiber-tipped pen (e.g., Sanford "Sharpie" at the suggestion of L. E. Gilbert). The several chamfered holes accommodate

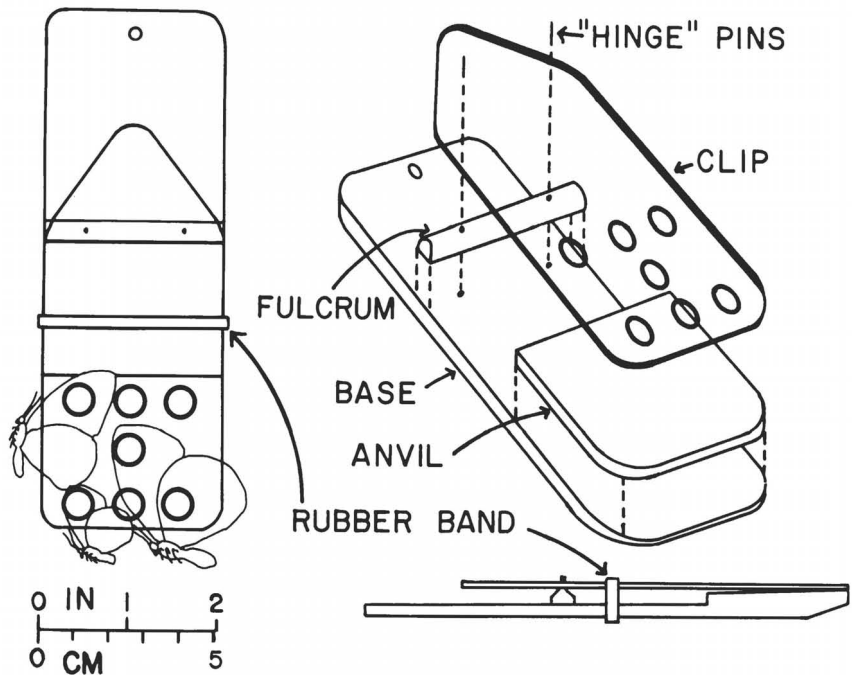


Fig. 1. Top, side and "exploded" views of the clamp.

butterflies of various sizes, and the pressure of the clip is adjustable by moving the rubber band back and forth between the fulcrum and the anvil. Since the clip is transparent, accurate measurements can be made of the wing length, presence and size of spots, etc. The butterfly is turned over and marked on the other side after the number on the first side is thoroughly dry.

During a total of 21 weeks in the summers of 1974 and 1975, I used this clip to mark 1,612 individuals of 28 species, varying in size from tailed blue (*Everes comyntas* Godart) to tiger swallowtail (*Papilio glaucus* Linnaeus). Marked individuals were recovered a total of 950 times. I had little success with blues (Plebejinae), which are simply too tiny and delicate and I had difficulty with freshly eclosed pearl crescents (*Phyciodes tharos* Drury) and bronze coppers (*Lycaena hyllus* Cramer), which combine delicate wings with hefty wing muscles. Painted ladies (*Vanessa cardui* Linnaeus; *V. virginiensis* Drury) and skippers (Hesperiidae) cannot be held firmly because their straight wings, wide bodies and strong muscles give them a mechanical advantage over the clip unless they are clamped close enough to the body to risk damage to their wings. Other species rarely caused trouble. Large species could escape if they could reach something to pull against with their feet. Very rarely, an individual would damage its wing mechanism trying to escape; such individuals appeared superficially unhurt, but were unable to fly and seldom recovered.

The clip can also be used to capture feeding or strutting hairstreaks (Theclinae) directly, with greater success and less damage than netting.

HENRY S. HORN, *Department of Biology, Princeton University, Princeton, New Jersey 08540.*