NOTES ON THE AMERICAN SPECIES OF OLENE HUBNER.

[Lepidoptera; Liparidæ.]
By Harrison G. Dyar.

I have been asked for an exact determination of the pine-feeding species of Olene (Parorgyia) of northern distribution. It appears that the material before me is insufficient for a full comprehension of the subject. Especially material is needed from the Southern States, while a certain well-marked type of larva has never been associated with its proper adult. I have formerly reduced the number of species considerably, admitting but three in Bulletin 52, U.S. National Museum. I think that the number will have to be somewhat increased. I will consider the names in the order of Bulletin 52.

FEEDING ON DECIDUOUS TREES.

Olene achatina Smith and Abbot.

I have no material before me agreeing exactly with Abbot's figure. The form shown is like *obliquata*, with more of white, the brown markings distinct and broken into spots. It may be a southern race of *obliquata*, or distinct. The larva figured may be wrongly associated. It is very unlike the larva of *obliquata* as determined by Seifert and others. A larva agreeing with Abbot's figure has been bred by me, producing the form *basiflava*.

Olene obliquata Grote and Robinson.

This form, with its variety parallela G. & R., has been well worked out by Seifert. The adult is characterized by the subterminal markings of the fore wing, while the larva is very distinct, its long, dense hairs showing no contrast in the tufts of joints 5 to 8, only a single pair of hair pencils in front, none behind, and none accompanying the tuft on joint 12. The distribution of the material before me is from Maine to Maryland. I have placed this form as a synonym to achatma, which can only be maintained if Abbot's larva is wrongly associated. New material from Georgia is needed to settle the point.

Olene tephra Hübner.

I have no material agreeing certainly with Hübner's figure. In the male no white is shown, in the female only a little around the discal mark. The resemblance is toward obliquata, but the inner line is too distinct and its parts too well marked and separate, besides the distinct markings on the hind wing

of the male, which occur in no *obliquata* before me. I have formerly referred the form as a variety of *achatina*, but fresh material from the Southern States is needed to positively identify this name.

Olene cinnamomea Grote and Robinson.

This is possibly only a variety of *obliquata*. It differs in the lines being brown, not black. It was described from a single female. I have males from Racine, Wisconsin; Poughkeepsie, New York, and Weekapaug, Rhode Island; females from Denster, Wisconsin, and Cocoanut Grove, Florida. The form is widely distributed, but rare, and has never been bred from larvæ.

Olene leucophæa Smith and Abbot.

In Bulletin 52 I gave three varieties of this species, but I believe now that they are all wrongly referred here. Basiflava is a form of plagiata; atrivenosa is a distinct species, and manto is referable to the pine-feeding forms more fully treated below. Concerning the true lencophea, Abbot's figures are puzzling. I have some adults similar to them from Florida, though the base of the wing of the female is less invaded by white and the black horizontal bar is absent. The larvæ, however, are entirely dissimilar. Abbot's figure may be very faulty, but it shows a long hair pencil on joint 12 (shown double, which never occurs to my knowledge). In the Florida larvæ, however, there is only a short, square tuft on joint 12, besides other numerous minor differences.

I possess larvæ with a long, single hair pencil on joint 12, from decidnous trees, but they have not been bred. These are the nearest to Abbot's figure of anything known to me, but that is not saying they are very near. They are darkly colored and have plumed lateral hairs and only four dorsal tufts (Abbot's shows seven, another anomaly). These larvæ agree entirely with the pine-feeding ones and it may be that they have only accidentally been taken on deciduous trees.

Olene plagiata Walker.

I have no fresh notes on Walker's types of plagiala and atomaria, so let the synonymy stand as it is. The third synonym, clintonii G. & R., is well known. This is the only form extending its range into the West. I have specimens which I regard from present evidence as belonging to this species from Bellingham, Washington (R. H. Stretch), Seattle, Washington (O. B. Johnson), Winnipeg, Manitoba (A. W. Hanham), Colorado (D. Bruce), Glenwood Springs, Colo-

rado (W. Barnes), besides an eastern distribution from Maine to Texas.

The form basiflava Packard is referable here. It differs by the yellow infusion at the base of fore wings. It is the dominant form in the southern part of the range of the species, my specimens being from New York to Florida and Texas. The larva agrees with Abbot's figure of achatina, and it may be that that name should be associated here rather than where I have attempted to place it. However the base of the wing is distinctly infiltrated with yellow, not white as in Abbot's figure of achatina, so I let the names stand as above until fuller material is forthcoming from Georgia. Also, the subterminal markings forbid this reference.

Olene atrivenosa Palm.

This form is really entirely distinct. Mr. Palm kindly allowed me to examine the male and female specimens in his collection. The published figure does not do justice to the black longitudinal lines, which are very distinct. There is no white on the wings.

FEEDING ON CONIFERS.

These forms are distinguishable in a general way from those feeding on deciduous trees by the more mottled character of the maculation and the predominance of brown in the ground-color. The species are in general smaller and there is less difference in size between the sexes.

Olene manto Strecker.

I have recently examined the unique male type now in the Field Columbian Museum in Chicago. It is closely allied to the following form, but less suffused with brown.

Olene interposita, new variety.

Similar to manto Streck., but more uniformly brown. Fore wing suffused with brown, the lines black, distinct, irregularly crenulate and rather broad. A white cloud in the discal area, defining the brown-filled oblique reniform; subterminal line pale, waved, followed by a grayer terminal area. In the female the median space is largely gray.

One male, one female, Tryon, North Carolina, August 1,

1903 (W. F. Fiske).

Type: No. 13465, U.S. National Museum.

In *manto* the terminal spece is nearly clear gray to the margin and a narrow, wavy white line crosses the basal space.

The discal region, lines, and brown ground are very similar in the two forms.

Olene montana Beutenmüller.

Mr. Beutenmüller has kindly shown me his types of this form. The specimens are entirely suffused with brown, without white, except at the discal area and tornus. The larva has four black pencils, a pencil accompanying the tuft of joint 12, the other tufts black. The specimens were bred from larvæ on balsam.

I am inclined to the view that the above three forms represent local races of one species, in which the tendency to brown suffusion is increased with the altitude. *Manto* was described from Stewart County, Georgia, which is in the western edge of the State at a low altitude; *interposita* comes from Tryon, North Carolina, which is at a considerable altitude in the foothills; *montana* is from the true mountain region of North Carolina.

Olene pini, new species.

Fore wing gray, dusted with black and lightened by white markings, shaded with brown in basal space and between the outer and subterminal lines; a small black line at the base; median lines black, distinct, crenulate, the outer angulated inward on vein 1; discal mark a black reniform, open and more or less broken into two black bars, lightened by white edgings; subterminal line white, waved, with a white spot above tornus; terminal line black, crenulate, somewhat drawn back from the margin; narrow white edgings to both the lines. Hind wings brown-gray, with discal mark and outer narrow line more or less well defined. Expanse: Male 30 mm.; female 35 mm.

Seven males and seven females, North Saugus, Massachusetts, bred from larvæ on pine by Mr. W. F. Fiske, Mr. H. M. Russell, and myself (Gipsy Moth Laboratory No. 1471). Also a male that I take to be the same species labeled "Corning's farm, Gray," that is probably from near Albany, New York. This specimen has a black submedian bar. Also a male and female, labeled "Sharon, August 1, 1873; July 20, 1874," which are brown and faded looking and without the sharp contrasts of the fresh specimens.

Type: No. 13466, U. S. National Museum.

The larva is red-brown or blackish gray, with many plumed white tufts and lateral plumed black hairs; a pair of pencils in front, a pair behind, and a single one accompanying the tuft of joint 12; tufts gray, intermixed with plumed white hairs.

Olene pinicola, new variety.

This form is similar to pini, but all the specimens are larger and darker. The brown shadings are weak or suppressed, being replaced by blackish. The hind wings show this tendency, being distinctly of a less brownish tint than in pini. The white markings are broader and more suffused, being at the same time more restricted, the median space showing white only about the reniform.

Eight males, fifteen females, Douglas County, Wisconsin (Hopkins, U. S. No. 8389; Gipsy Moth Laboratory Nos.

4657 and 4660).

Type: No. 13467, U. S. National Museum.

Olene grisefacta, new species.

Light gray, coarsely dusted with black on a nearly white ground, that is irregularly shaded with luteous; lines broad, black, the inner coarsely waved, the outer crenulate; discal mark broad, black-outlined, reniform, broken above; subterminal line lost in the general diffusion of the markings or indicated by black inner markings; white spot above tornus distinct but not contrasted, resembling the white about the discal mark; terminal line black, crenulated, receding from the margin. Hind wings rather light gray, with faint discal spot and outer line. Expanse: Male 40 mm.; female 45 mm.

Two males, three females, Glenwood Springs, Colorado (W. Barnes), and Colorado (D. Bruce).

Type: No. 13468, U. S. National Museum. This is similar to pinicola, but larger and paler.

TWO NOCTUIDS NEW TO OUR FAUNA.

The peculiar noctuid *Peosina pandrosa* Cramer must be added to our list, as I have before me a specimen labeled "Miami, Florida." The moth has a geometriform appearance and the median vein is trifid on the forewings, although typically quadrifid on the hind wings. The very peculiar palpi with long slender end-joint and the large eyes are also characteristic.

Prodenia latifascia Walker also occurs with us. I have a specimen recently collected by R. A. Vickery at Brownsville, Texas. The moth resembles cudiopta Guenée of our lists (= ornithogalli Guen.) but may be distinguished by the ocherous median space, the color involving the stigmata.

HARRISON G. DYAR.