

Article XXXIII.—DESCRIPTIVE CATALOGUE OF THE
NOCTUIDÆ FOUND WITHIN FIFTY MILES OF
NEW YORK CITY. PART II.¹

BY WILLIAM BEUTENMÜLLER.

PLATES LVI-LIX.

Trachea delicata (Gr.).

PLATE LVI, FIG. 1.

Fore wings dark purplish brown-black, with a slight mossy green shading at the base, on the ordinary spots, and along the subterminal line. Transverse lines faint, geminate; posterior line scalloped; anterior line angulate. Orbicular moderate, mossy green, black-ringed, very near the transverse anterior line. Claviform unusually large, prominent, distinctly black-edged, extending across the median field to the transverse posterior line. A paler wide shade extends obliquely beyond these two spots across the median field. Reniform indistinctly outlined, moderate, shaded with black and mossy green, the median shade line visible running obliquely within it over the costal region. Three indistinct white dots on the costa ante-apically. Subterminal line with a rounded inward sinus above the hind angle, and minute projected denticulations opposite the cell, narrowly whitish, preceded by black points and shade marks. Hind wings pale fuscous, with a faint line and discal mark and a much darker subterminal shade. Head and thorax concolorous with the fore wing.

Quite rare in this vicinity. Found during August and September. The markings on the fore wings are not very distinctly marked or contrasting.

Oligia chalconia Hüb.

Fore wings smoky purplish, costal and basal region more reddish and paler than the rest of the wing. Transverse lines geminate; anterior line upright, angulate; posterior line bent over the reniform, then slightly deflected inwardly in the middle. This line is followed by a whitish shade. A pale subtriangular apical patch. Subterminal line pale, wavy, broken. Orbicular pale, contiguous with the anterior line, center somewhat darker. Reniform small, upright, with a black mark before and behind it. Claviform pale, black-ringed. Hind wings white, slightly smoky outwardly, especially at the apex. Head and thorax gray-brown. Collar reddish. Expanse, 22-26 mm.

¹ For Part I, see Vol. XIV, 1901, pp. 229-312. For explanation of terms used see figure on p. 230 of Part I.

A common species in this neighborhood. The moth is on the wing in May, June, July, and August.

***Oligia festivoides* (Guen.).**

PLATE LVI, FIG. 2.

Fore wings reddish brown, the basal and costal region pale grayish white. Transverse anterior line upright, wavy, geminate, more or less obliterated by the gray basal color, but sometimes quite distinct. Transverse posterior line geminate, bent over the reniform on the costa, then straight to the inner margin. Claviform small, pale, dark-ringed, rarely complete, often entirely obscured. Reniform large, oblique, deeply indented outwardly, the upper part usually merged into the pale costal area. Between this mark and the transverse posterior line is a black spot and usually a similar one in front of it. Orbicular small, usually obliterated by the pale shade. A somewhat yellowish apical patch, preceded by a dark patch on the costa. Subterminal line pale, irregularly broken. Hind wings pale, whitish, smoky outwardly. Head and collar dark brown. Thorax gray. Expanse, 22-26 mm.

A small species, readily known by the gray thorax, brown collar, pale costal and basal region of the fore wings, and oblique reniform spot. Rather common in April and May, and again in June and August.

***Oligia versicolor* Gr.**

PLATE LVI, FIG. 3.

Fore wings yellowish brown, clouded with dusky. Costal and basal area not paler as in the two preceding species. Veins marked with black and white. Basal line evident, black, anterior line curved between the veins, black. Posterior line black, marked with white, bent around the reniform. Orbicular concolorous with the ground color. Reniform rather large, not very distinct, preceded by a black mark and followed by a yellowish spot touching the posterior line. Claviform not evident. Hind wings pale fuscous. Head and thorax concolorous with the fore wing. Expanse, 22-25 mm.

Recorded from New York and undoubtedly found in this vicinity.

***Oligia grata* (Hüb.).**

PLATE LVI, FIG. 4.

Fore wings brown, faintly powdered with gray, and with blackish scales on the veins. Basal line scarcely traceable, pale. Transverse

anterior line narrow, whitish, with a few dark scales at each side, evenly oblique outwardly, or slightly curved. Transverse posterior line narrow, white, sinuate, slightly curved over the reniform and slightly curved inward below. Orbicular very small, punctiform, consisting of a dusky dot, narrowly ringed with whitish. Reniform narrow, ringed with white, strongly constricted in the middle, the upper and lower parts dusky. Subterminal line a little paler, indefinite, and irregular. Terminal space somewhat paler than the ground color. Hind wings light fuscous, whitish in the male. Expanse, 20-25 mm.

This species is not common. It is on the wing from May to October. Probably double brooded.

***Perigea xanthioides* Guen.**

PLATE LVI, FIG. 5.

Fore wings yellow, more or less clouded with rusty brown, fringes fuscous. Transverse posterior line almost parallel with the outer margin, geminate, usually composed of two rows of black dots. Subterminal line wavy, ill defined on the usually dark outer part of the wing. Orbicular yellow with a rusty center. Reniform yellow, large, somewhat constricted in the middle, with a few dusky dots. Hind wings fuscous tinged with reddish outwardly. Head and thorax rusty yellow. Underside of wings tinged with reddish. Expanse, 22-25 mm.

Caterpillar. — Head small, black, with narrow white stripes in front, meeting on the crown and then joining a clear white dorsal stripe. Body somewhat flesh-colored, covered with brown or black irroration, and faint flesh-colored lines along the lateral region. Anterior segments with a dark shade produced triangularly behind. Tenth segment raised into a hump. Length, 42 mm.

Food-plants. — Iron-weed (*Vernonia noveboracensis*) and trumpet-weed (*Eupatorium purpureum*).

A common species, but never found in abundance. The moth is on the wing from June to October. It is double brooded. The larva lives on the underside of the leaves on the lower parts of the plant. Enters the ground to pupate.

***Perigea claufacta* (Walk.).**

PLATE LVI, FIG. 6.

Fore wings clay-brown, outer parts somewhat paler. Veins marked with a little black. Markings indistinct, broken, darker, usually in form of dusky points. Transverse lines geminate. Posterior line followed by a row of small black dots. Subterminal line dusky. Orbicular rounded, not distinct, dark-ringed. Reniform with a few whitish

scales. Head and thorax clay-brown. Hind wings smoky outwardly, paler basally with an opalescent luster. Expanse, 28-36 mm.

A rather common species, found from August to October.

***Perigea epopea* (Cram.).**

PLATE LVI, FIG. 7.

Fore wings similar to those of *P. vecors*, but more or less heavily marked with gray on the middle lower part of basal space, and with a patch on the outer part of the wing below the apex, and above the hind angle. Thorax gray, collar, and head brown. Expanse, 30-40 mm.

Not rare in this vicinity, from June until October.

***Perigea vecors* Guen.**

PLATE LVI, FIG. 8.

Fore wings with a silky luster, smoky brown, varying to almost black. Markings rather indistinct in dark specimens. Transverse anterior line geminate, wavy. Transverse posterior line geminate, crenulate, with outwardly a row of minute white points. Subterminal line irregular, yellowish. A series of minute white dots on the costa and outer margin. Claviform black. Orbicular small, round, indistinct, sometimes marked with pale tint. Reniform large, lower part sometimes pale-ringed and with white scales. Hind wings smoky, paler towards the base; fringes whitish or testaceous. Head and thorax concolorous with the fore wings. Expanse, 28-35 mm.

Common all summer from June to October. Possibly a dark form of the preceding species.

***Dipterygia scabriuscula* (Linn.).**

PLATE LVI, FIG. 9.

Fore wings sooty purplish brown-black. Lines single, deep black. Basal line present, reaching the narrow basal streak. Transverse anterior line dentate, forming a long tooth above the inner margin. Claviform long, black-outlined. Transverse posterior line forming a strong curve around the reniform, then strongly bent inwardly, forming a strong blunt tooth below the middle. Orbicular rounded, black-outlined. Reniform large, black-outlined. Veins on outer part of wing above the middle streaked with black. On outer part below the middle, contiguous to the posterior line, a brown bird-gwing-shaped patch streaked with white. This mark sends a pointed dash to the outer margin at the middle of the wing and one to the hind angle.

Fringe dark cut with pale on the veins. Hind wings fuscous; fringes slightly marked with white. Expanse, 30-40 mm.

Caterpillar.—Chestnut brown marked with darker, and with oblique brown dashes. A white line along the dorsum and a dark brown stripe along the sides. Whitish below.

Food-plants.—Sorrel (*Rumex*), plantain, and various other low plants.

The moth is common from May until late in September. The caterpillar enters the earth to pupate.

Hyppa xylinoides (Guen.).

PLATE LVI, FIG. 10.

Fore wings varying from pale to dark gray, marked with ashen gray, and more or less with reddish about the middle. A broad black basal streak at the middle, and one on the inner margin. Transverse anterior line oblique, strongly waved, marked with white on the indentation below the middle. Transverse posterior line curved outwardly, thence almost oblique below the middle to the inner margin, broadly marked with white. Outer part of wing with black streaks. Subterminal line strongly dentate, with several white teeth to the end of the fringes. The lower part of this line almost touches the posterior line. Apical region usually shaded with pale gray. Orbicular transversely oblong, outlined with gray and black. Reniform large, constricted outwardly, black-outlined. A broad black line from the anterior to the posterior line below the middle. Hind wings dusky, usually somewhat paler basally. Fringes tipped with white. Thorax gray, with a black transverse line anteriorly; tegulæ brown and black-lined. Expanse, 35-42 mm.

Caterpillar.—Head rather small, flat in front, shining black-brown, with a few minute hairs, scarcely visible without a lens. Body above black with a brownish tinge. A broken bluish dorsal line. Below the spiracles a brown stripe, dotted with minute bluish specks appearing like a bloom on the surface. On the second and part of the third segments a short whitish lateral stripe and another on the outer edge of the terminal prolegs. Underside brown, of the same shade as the lateral stripe above, with a similar bloom. Thoracic feet brown. Abdominal legs pale shining brown within, marked with black outside. Length, 32 mm.

Food-plants.—Dandelion (*Taraxacum*), *Chenopodium*, and other low plants.

A very common species. The moth is on the wing from May until late in September. The caterpillar, when ready to [October, 1902.]

pupate, draws together a few leaves with silken threads, on the surface of the ground or under logs or stones.

***Homohadena badistriga* (Gr.).**

PLATE LVI, FIG. 11.

Fore wings ashen gray, more or less sprinkled with brown. A broad black basal dash running to the posterior line, and a black line running from the transverse anterior line, above the middle, across the ordinary spots to the subterminal line. Lines black, single. Transverse anterior line curved outwardly. Transverse posterior line strongly outcurved over the cell, then incurved. Orbicular and reniform obscured by the black line. On the outer part of the wing a series of black dashes between the veins. Sometimes the outer parts are much darker than the rest of the wing. Hind wings varying from white to smoky with the base paler. Head and thorax ashen gray to fuscous with a black transverse line behind the collar, extending along the tegulæ. Expanse, 23-32 mm.

Quite rare in this vicinity. The moth is on the wing in June and July. The caterpillar feeds on honeysuckle.

***Adita chionanthi* (A. & S.).**

PLATE LVI, FIG. 12.

Fore wings gray. Lines single, black. Basal line extending across the wing. Transverse anterior line even, slightly curved outwardly. Transverse posterior line squarely bent around the cell, then abruptly inward and almost straight to the inner margin. Subterminal line not distinct. Veins on outer part streaked with black to the outer margin. Orbicular pale, center dusky, black-ringed. Reniform large, whitish, middle dusky. Hind wings white, margin narrowly lined with black. Head and thorax gray. Collar with a black transverse line. Expanse, 35-40 mm.

Very rare in this neighborhood. The caterpillar feeds on the fringe tree (*Chionanthus*).

***Oncocnemis riparia* Morr.**

PLATE LVI, FIG. 13.

Fore wings pale ashen brown streaked with white. A short black basal dash and a series of short black streaks between the veins on the subterminal part of the wing. Orbicular transversely elongate. Reniform upright. These spots are obscured by the ground color and are hardly visible. Hind wings dirty white, dusky outwardly. Fringes

white. Head and thorax concolorous with the fore wings. Collar with two transverse brown lines. Expanse, 30-35 mm.

Quite rare in this vicinity. The moth appears in July and August.

***Macronoctua onusta* Gr.**

Fore wings with costal region to subterminal space and downward to median vein deep black, other parts leather brown. Transverse lines fine. Anterior line thrice waved, geminate. Posterior line geminate, indistinct above, with deep dentations opposite the cell; the inner part more distinct, curved below vein IV. Terminal space and fringes shaded with blackish. Orbicular inconspicuous on the dark ground color, with a fine velvety black ring. Reniform very large, irregular in shape, faintly outlined above, where it is narrower, with a tendency to display the usual form, but extends inferiorly below the median vein, where it is broader and margined with a distinct velvety black line which reaches the teeth of the posterior line. Claviform small, outlined on the brown lower portion of the median space. Hind wings fuscous shaded with blackish, especially on the costa and terminal space, with a narrow median and terminal line. Head and thorax purplish black. Expanse, 60 mm.

Very rare in this vicinity. The caterpillar bores in the roots of the larger blue flag (*Iris versicolor*).

***Dryobota illocata* (Walk.).**

PLATE LIX, FIG. 1.

Fore wings broad, fuscous, shaded with reddish basally and on the median space. A very short black basal streak and a transverse basal line. Transverse anterior line dentate at the costal and inner margin, otherwise even and slightly curved outwardly. Transverse posterior line geminate, finely dentate around the cell with a small tooth above the inner margin. The inner part of the line distinct, black, the outer faint. Subterminal line irregular, wavy, pale. At the lower outer part of the posterior line is a rather large whitish patch. The transverse lines are connected below the middle by a black longitudinal line. Orbicular rather large, round, varying from pale to dark brown. Reniform very large, more or less filled with white. A series of small black lunules along the outer margin. Hind wings fuscous, with a narrow, darker line along the outer margin; fringes sometimes tipped with white. Body fuscous; abdomen with tufts along the back. Expanse, 35-40 mm.

Quite rare in this vicinity, but more common northward. It flies in August and September.

***Polia contacta* (Walk.).**

Fore wings dark gray; median space somewhat darker than the basal and subterminal spaces. Transverse lines blackish, dentate, and denticulate. No basal dash. Orbicular rounded, small, oblique, dark-ringed. Reniform kidney-shaped, dark-ringed, touched outwardly with whitish, moderate, not quite upright. Subterminal line deeply dentate, dividing the more blackish or fuscous terminal space from the remainder of the gray wing. Subterminal space narrow, widening to the costa, where there are four costal dots. Between veins II and IV it widens, and is cut into large gray teeth by the line. A fine terminal black line. Fringes gray, interlined. Hind wings whitish gray, shaded with fuscous. Head and thorax dark gray. Expanse, 50-52 mm.

A northern species, very rarely met with in this vicinity. Flies in July and August.

***Polia medialis* Gr.**

Fore wings vividly marked with white, gray, black, and fuscous. Median space uniform wood-brown or fuscous, shaded with gray on the costa. A black basal dash. Basal and terminal spaces gray, shaded with fuscous. Transverse anterior line black, oblique, dentate. Claviform concolorous with the wood-brown median space, large, reaching to the median shade, narrowly outlined with black. Orbicular large, whitish or gray, oblique, black-ringed. Reniform of the usual shape, large, whitish, nearly straight on the outer side, and connected with the transverse posterior line by black shades along the veins. Transverse posterior line geminate, oblique from its angle on the subcosta; the inner part evident, dentate, black; outer part indistinct. The white fillings of the geminate lines very apparent. Subterminal line white, preceded by black points or streaks at the dentations. Terminal space more shaded with fuscous opposite the cell and at the hind angle. A dentate line cutting the fringes. Hind wings blackish fuscous. Thorax gray; tegulae shaded with fuscous laterally and with a double line on the collar. Expanse, 40-42 mm.

A northern species, very rarely taken in this neighborhood. It flies in August and September.

***Actinotia ramulosa* (Guen.).**

PLATE LIX, FIG. 2.

Fore wings pale ashen gray, streaked with pale brown; dark brown at the middle and outer part. A rather long narrow black basal line. Transverse lines obscured by the ground color. Transverse posterior

line, when present, dentate outwardly on the veins. On the outer part of the wing is a series of dark brown streaks between the veins, and white dentations reaching to the end of the fringes. Orbicular obscured by the pale costal region, broadly elongate, and faintly black-outlined, when present. Reniform large, deeply constricted outwardly, pale gray, more or less filled with brown. The upper part sometimes obscured by the pale ground color. Hind wings pale fuscous, fringes whitish. Expanse, 28–34 mm.

Not uncommon in this vicinity. The moth is on the wing from May to September. Probably double brooded. The caterpillar feeds on *Hypericum perforatum*.

***Laphygma frugiperda* (A. & S.).**

PLATE LVI, FIG. 14.

Fore wings narrow, mouse gray, variegated with smoky brown, fulvous, and pearly white. Apical patch bluish white. Transverse anterior and posterior lines almost obsolete, or rather well defined, geminate. A short black basal line, the wing below it sometimes light colored. Orbicular large, oblique, elongate oval, usually followed by an oblique light shade. Reniform generally dark, not well defined, the lower part occupied by a short white dash. Subterminal line pale, almost even and parallel with the outer margin, sometimes preceded by black dashes and followed by a series of black dots on the outer margin. Hind wings semi-translucent, white, iridescent, with a narrow, smoky gray outer margin. Head and thorax mouse gray. Expanse, 30–37 mm.

Var. fulvosa Riley. — Fore wings greatly suffused with fulvous, especially in the lower median space, which often inclines to ochraceous. Oblique median band distinct to median nervure, and the orbicular with an ocher center.

Var. obscura Riley (Plate LVI, Fig. 15). — Fore wings almost uniform gray with the pale apical patch absent or but faintly indicated. Markings not distinct.

Caterpillar. — Head pale yellowish brown, sometimes tinged with green or pink; the triangular piece yellowish, the inverted V-mark distinct, white, the cheeks with four more or less distinct lateral brown lines and with dark brown reticulations. Body varying from pale brown to dirty green, mixed with more or less pink or yellowish. The markings are produced by fine, more or less intense, brown, crimson and yellow mottling. A narrow line on the back, defined by a darker shade each side of it. A very broad dark line along the subdorsum, the upper edge limited by a yellow line. A buff or flesh-colored line below the spiracles, bordered above by a narrow yellow and wavy line.

Underside pale. Spiracles large, brown, with a pale ring. Legs light or dark. Piliferous tubercles quite large. Length, 28–38 mm.

Food-plants. — Various kinds of grasses and other low plants.

***Prodenia commelinæ* (A. & S.).**

PLATE LVI, FIG. 16.

Fore wings rather rich wood-brown, variegated; costal region and inner margin ashen brown. An apical grayish patch extending obliquely downwards as a purplish gray-brown shade along the transverse posterior line. Transverse anterior line more or less distinct, curved outwardly. Transverse posterior line oblique, very slightly wavy, geminate, black. A very short, black, up-curved basal streak and a small black spot on the costa at the base. Median vein between the anterior and posterior lines pale ochereous, sending two short branches downwards on the veins. Orbicular narrow, oblique, lower part open, upper part black-ringed, filled with ochereous and brown, followed by a pale dash. Reniform obsolete, broken, with a short light streak or dash outwards, directed obliquely upwards. Subterminal line double, pale. Outer margin with a row of black lunules. Fringes cut with pale ochereous. Hind wings semi-transparent, white, iridescent; slightly dusky at outer margin and costa. Thorax concolorous with fore wings; tegulae edged with black and wood-brown inwardly. Collar edged with wood-brown. Expanse, 40–50 mm.

Caterpillar. — Head deep shining brown, with the inverted V-mark white. Cervical shield same color as the back. Caudal plate with black spots, between which is a longitudinal cream-colored dash. Body black with a somewhat brownish line along the back, and a dingy shade each side of it. Subdorsal region very dark, with, at its junction with the dorsum, a pale buff line. On the sides and near the middle it is finely sprinkled with a light color. Piliferous spots black, those on the back usually white at the base. Line along the spiracles light buff. Length, 35–40 mm.

Food-plants. — Grasses and various other kinds of low plants.

Not common. The moth appears in July and is on the wing until October. The caterpillar enters the ground to pupate.

***Prodenia ornithogalli* Guen.**

PLATE LVI, FIG. 17.

Fore wings brown, variegated with ashy brown; veins below the middle, on the median part, lined with whitish to the posterior line, and also at the base. Transverse anterior line geminate, sinuate, not distinct, marked with black. Transverse posterior line irregularly

wavy, geminate, the intervening space more or less whitish as it reaches the inner margin. A bluish white apical patch and another at hind angle, the two connected by a dull bluish white shade, contiguous to the posterior line. Subterminal line whitish, curved outwardly at the middle, and followed by a pale line parallel to outer margin. A terminal row of black lunules and the fringes cut with white. The subterminal line is preceded by black dashes. Orbicular oblong, oblique, lower part open and touching the white line on the vein, ringed with whitish and black, center dusky. Reniform not very distinct, lower part broken by the pale branches of median vein, constricted at the middle outwardly, partly ringed with black and whitish. In the upper part are two white lines, touching the outer pale ring. Hind wings semi-transparent, iridescent, narrowly fuscous in front of the fringes. Head and thorax variegated with white, brown, and black. Expanse, 38-45 mm.

Caterpillar. — Head and cervical shield black. Dorsal line pinkish lilac; the dorsal space contains a series of dark brownish drab spots, the broadest part occupying the centre of each segment, the spots connecting with each other at the junctions of the segments. These spots extend from the dorsal line two thirds of the distance to the subdorsal. On the subdorsum is a series of either triangular or semi-oval velvety black spots, one to each segment on each side of the body; these extend half way to the dorsal line, thus encroaching a little upon the drab spots. Subdorsal line same color as the dorsal, with a narrow bright yellow semi-elliptical spot at the base of each black spot. All the dorsal space not filled with these spots is gray. Substigmatal line white. A line in the middle of the subdorsal space the same color as the dorsal; the space above this intermediate line of about the same color as the line, but irregularly striped finely with black; below the same line the space is black, striped with white. Below stigmatal line, fleshy gray, spotted with white. Length, 32-36 mm.

Food-plants. — Grasses, salsify, wheat, rye, corn, etc.

A common species, but it is not abundant. The moth flies from August until October. The caterpillar enters the ground to pupate.

Prodenia eudiopta Guen.

PLATE LVI, FIG. 18.

Fore wings brown, variegated, bluish white, middle part more or less pale brown sometimes tinged with reddish. A series of white dots on the costa beyond the middle. Otherwise the markings are similar to *P. ornithogalli*. Thorax pale clay-brown, with slightly darker markings. Expanse, 32-38 mm.

Smaller than *P. ornithogalli* with the fore wings more marbled and the median space usually pale brown.

The moth is on the wing from August until October.

***Trigonophora periculosa* (Guen.).**

PLATE LVI, FIG. 19.

Fore wings clay-brown. Transverse lines dark, narrow, and broadly geminate. Basal line reaching to a little below the middle. Anterior line slightly outwardly oblique, inner part wavy, the outer almost even. Posterior line rather sharply angulate opposite the cell, thence slightly wavy and inwardly oblique to the inner margin. Subterminal line broad, dark olive brown. The median space filled with olive brown forming an ill-defined V-mark, not reaching the costa, and with a small olive brown, inverted V-shaped mark from the costa pale-outlined. Terminal part of wings darker with a series of dark lunules. Fringes scoloped, tipped with black. Hind wings tinged reddish, costal region testaceous. Thorax concolorous with fore wings and with a ferruginous tuft in the middle. Expanse, 45-50 mm.

Var. v-brunneum Grote (Plate LVI, Fig. 20). — Like the type form but with a dark velvety brown V-shaped median area.

Sometimes quite common. Found from August until October.

***Brotolomia iris* (Guen.).**

PLATE LVI, FIG. 21.

Fore wings pale clay-brown, with a prominent V-shaped, olive-green median area. An olive mark on the inner margin before the anterior line, and an olive shade line across the outer part of the wing in front of the subterminal line. Transverse anterior line slightly elbowed below the costa, thence outwardly oblique to the inner margin where it meets the inner part of the posterior line. Subterminal line almost even and parallel with outer margin, pale, dark outwardly. Terminal part of wing pinkish with a row of ferruginous lunules. Outer margin sinuate below the middle. Posterior line inwardly oblique, slightly bent opposite the cell. Orbicular and reniform rather large, pale-outlined, more or less connected at the lower parts by a pink shade. Hind wings pale testaceous, outer part pinkish brown with a pale line. Head and thorax testaceous, the latter with a slightly darker tuft in the middle. Expanse, 38-48 mm.

Not common. Flies in June and July. May be known readily by the pale brown fore wings, with olive-green V-like mark.

Euplexia lucipara (Linn.).

PLATE LIX, FIG. 4.

Fore wings varying from light to dark brown, somewhat tinged with purplish; median space usually darkest, sometimes followed by a very pale testaceous shade line; terminal space also dark. Anterior line geminate, outwardly oblique, blackish, not very distinct. Basal line black, with a small black mark at the lower outer side. Transverse posterior line slightly curved around the cell, and inwardly below the middle, geminate, brown. Subterminal line subdentate, blackish. Orbicular almost obscured by the ground color, oblique, dark-outlined. Reniform rather large with a more or less light brown central lunule and ringed with pale testaceous. Hind wings dusky outwardly, pale basally. Fringes with a pale brown line at the base. Head and thorax purplish brown. Expanse, 26–32 mm.

Caterpillar. — Head greenish testaceous. Body emerald green with a faint broken dorsal line and a darker shading over the dorsum; junctions of segments yellowish. Lower lateral space pale bluish green. On the top of the eleventh segment, which is somewhat swollen, are two small spots of clear white. Underside wholly bluish green. Length, 35 mm.

Food-plants. — Birch, *Viburnum*, blackberry, raspberry, etc.

Quite common everywhere in this vicinity, from June until September.

Nephelodes minians Guen.

PLATE LVII, FIG. 1.

Fore wings broad, purplish brown; median space darker rusty brown, with the dark median line running obliquely from the costa, between the spots to the inner margin. Transverse anterior line broadly geminate, curved outwardly, not very distinct, sometimes almost obscured by the ground color. Transverse posterior line curved around the cell, and bent inwardly below the middle. Subterminal line dark, irregularly dentate. Orbicular more or less distinct, usually large, round, sometimes elongate, the upper part touching the costa. Reniform large, kidney-shaped. These spots are paler than the dark median space, but are not contrasting. Hind wings fuscous, fringes roseate. Head and thorax concolorous with fore wings. Expanse, 30–48 mm.

Var. violans Guen. — Like the type form but with the fore wings more uniform, darker purplish brown.

Caterpillar. — Head large, gray, mottled with brown, and with a brown border to the eyes. Cervical shield very dark brown, crossed by the dorsal and subdorsal lines. Body robust with four broad dark

brown stripes on each side, alternating with three narrow grayish yellow ones, the latter in the dorsal and subdorsal regions, and much lighter at the extremities of the body. Underside yellowish gray. Length, 40 mm.

Food-plants. — Corn, grass, smartweed (*Polygonum*), buckwheat, and other low plants.

A rather common species in this vicinity, found during August and September. The caterpillar is sometimes injurious to garden vegetables. It feeds mostly at night, remaining concealed during the day under rubbish, stones, or dirt.

***Tricholita signata* (Walk.).**

Fore wings brown, with ferruginous shades. Transverse lines dark brown, regular and distinct. Anterior line undulate above the median nervure, where it is bent inwardly and thence continues almost straight to the inner margin. Median shade very distinct, broad, not clearly defined along its edges, strongly angulated in the middle and nearly touches the reniform. Transverse posterior lines obliterated on the costa, subparallel, broadly undulating, dentate between the veins in the middle. Orbicular small, ferruginous, ringed with brown. Reniform long and narrow, pure white, crossed by the black veins, its upper half more or less shaded with ferruginous. Veins black, with white specks. Fringes edged with a basal and exterior black line. Hind wings dark fuscous, paler basally, with a black line at base of fringes. Expanse, 34–38 mm.

May be readily known by the white reniform, distinct lines, broad angulated median shade and continuous outer line. It flies during August and September.

***Helotropha reniformis* (Gr.).**

PLATE LVI, FIG. 22.

Fore wings dark brown, slightly purplish with darker brownish black shades; inner part of subterminal space considerably paler than the rest of the wing. Terminal part black, with bluish white spots composed of scales. A black, obscure, basal streak. Transverse anterior line geminate, more or less distinct, somewhat scolloped, black, space between paler. Transverse posterior line geminate, blackish, space between pale brown, somewhat curved around the cell, with a slight tooth below the costa; at the middle slightly curved inwardly, thence slightly curved outwardly to the inner margin. Subterminal

line usually pale brown, irregular, with two small teeth at the middle, pointing outwardly. A series of small black terminal lunules. Fringes dark. Orbicular like the ground color, pale-ringed. Reniform sometimes pale-outlined, with the outer part white-ringed, a white streak in the middle, and the lower part crossed by the median vein, with the two branches white to the posterior line. Beyond the posterior line the veins are black, marked with a few white scales. Hind wings fuscous, somewhat paler basally. Head and thorax concolorous with fore wings. Collar usually with a black line. Abdomen paler. Expanse, 32-40 mm.

Var. atra Grote (Plate LVI, Fig. 23).—Fore wings dark purplish brown, with the marking almost obscured by the ground color, except the white reniform, which is ringed or testaceous.

Very common everywhere in this neighborhood, from July until late in September.

***Gortyna u-album* (Guen.).¹**

Fore wings varying from purplish brown to almost carneau, with a richer reddish brown shade through the middle of the median and terminal spaces. At base, along the inner and costal margin, is a distinct bluish shading which varies in intensity in some specimens, sometimes quite strongly relieving the reddish brown disc. Transverse lines narrow, inconspicuous. Orbicular sometimes wanting. Reniform moderate, normal in shape, lower half defined and partly filled by white scales, somewhat U-shaped. Hind wings dark fuscous; fringes roseate. Head and thorax deep purplish brown. Expanse, 28-32 mm.

Recorded from New York, Massachusetts, and Illinois, and undoubtedly found in this vicinity. The earlier stages are unknown.

***Gortyna velata* (Walk.).**

PLATE LVII, FIG. 2.

Fore wings somewhat purplish red brown, with a slightly darker median shade. Transverse lines not contrasting. Anterior line single, upright, curved between the veins. Posterior line geminate, slightly curved outwardly above the middle, almost even, crenulate, the outer part less distinct. Subterminal line pale, irregular, preceded by a paler shade; terminal space darker. Veins more or less marked with black and white scales. Orbicular oval or round, concolorous, very faintly outlined by white scales. Reniform upright, constricted in the

¹ I am under obligation to Mr. Henry Bird, of Rye, Westchester Co., New York, for the loan of specimens of *Gortyna*, from which the figures on Plate LVIII have been made. For further information regarding the species of *Gortyna*, see Prof. J. B. Smith's revision of the genus (Trans. Am. Ent. Soc., XXVI, pp. 1-48).

middle, lower part dilated, outlined with white scales. Fringes scoloped. Hind wings smoky luteous, fringes paler. Head and thorax concolorous with fore wings. Expanse, 30-37 mm.

Very common everywhere from June until August. The caterpillar is said to feed on anemone.

***Gortyna nictitans* (Linn.).**

PLATE LVII, FIG. 3.

Fore wings rusty yellow brown, somewhat varying in shade. Markings distinct but not contrasting, the lines a little darker than the ground color. Basal line present. Anterior line broadly geminate, upright, curved outwardly between the veins. Median shade line sharply angulate in the middle. Transverse posterior line geminate, the inner part crenulate, slightly outcurved, bent inwardly a little above the inner margin. Subterminal line irregular, broken at the apex which is a little paler than the rest of the wing. Orbicular small, round, somewhat paler than the ground color, rarely white. Reniform rather large, outer part constricted in the middle, whitish or pale yellowish, with a dark lunule on the inner part. Claviform not distinct. Hind wings smoky, somewhat variable. Fringes paler. Expanse, 30-34 mm.

Var. erythrostigma (Haw.), Plate LVII, Fig. 4.—Like the type form, but with the orbicular and reniform same as the ground color.

A common species found in July and August. The caterpillar bores in the roots of grasses.

***Gortyna immanis* (Guen.).**

PLATE LVII, FIG. 5.

Fore wings varying from light to dark yellow brown, with the median space darkest. Transverse lines darker than the ground color, geminate. Transverse anterior line upright, with a slight inward bend near the costa. Transverse posterior line abruptly bent on the costa and then almost evenly oblique inward to the inner margin, the outer part less defined than the inner. Subterminal line geminate, curved outward between the veins, broken near the apex. A terminal narrow line along outer margin at base of the fringes. Median shade fairly well defined, somewhat curved. Orbicular oval, rather large, a little paler than the ground color and faintly outlined. Reniform large, upright, kidney-shaped or constricted in the middle on each side. Claviform indistinctly visible, dark-filled or wanting. Hind wings pale yellowish brown, darker in the female, with a darker median shade line. Expanse, 44-50 mm.

A large species, found during August and September. Not common. The caterpillar bores in the stems of the hop.

***Gortyna inquæsa* G. & R.**

PLATE LVIII, FIG. 3.

Fore wings yellow brick red, powdered with rusty red and deeper brown, with the markings faintly defined and the veins marked with dark brown. Transverse lines geminate. Basal line hardly traceable. Anterior line curved outward above the middle, thence inwardly oblique to a little above the inner margin where it is bent outward. Median shade line distinct, narrow, forming a prominent angle at about the middle of the wing. Posterior line dark, broadly bent or curved outwardly. A dark terminal line at base of fringes. Orbicular somewhat oval, a little paler than the ground color, or white. Reniform upright, more or less defined. Claviform very small, usually yellowish, and divided in the middle by a narrow brown line; it is sometimes marked with white. Hind wings yellowish fuscous, with the veins dusky. Head and thorax concolorous with fore wings, sometimes violet, especially on the collar. Expanse, 27-30 mm.

Quite rare and local. Flies in August and September. The caterpillar bores in the roots of the sensitive fern, *Onoclea sensibilis*.

***Gortyna speciosissima* G. & R.**

PLATE LVIII, FIG. 5.

Fore wings yellowish brick red, with darker markings. Subterminal space purplish brown, contrasting. Terminal space paler. Transverse lines geminate, fairly well defined. Basal line rusty brown, not running across the wing. Anterior line indistinct, brown, the inner portion most distinct, evenly outcurved to the submedian vein, and then bending outward abruptly to the inner margin. Posterior line brown, the outer portion broader and more purplish, outwardly oblique to near the middle, then bent rather abruptly, and inwardly oblique, to the inner margin. Subterminal line defined by the difference between the subterminal and terminal spaces, showing sharp teeth outwardly on the veins. A narrow terminal line. Median shade line distinct, rather narrow, angulated. Orbicular small, upright, narrow and white. Reniform oblique, very slender, narrow, white. Claviform upright, short and broad. Veins purplish brown. Hind wings very pale yellowish or slightly tinged with purplish, veins darker. Expanse, 40-52 mm.

Quite rare in this vicinity. May be known by its large size, pale color and linear white reniform. The moth is on the wing in August. The earlier stages are unknown.

***Gortyna rigida* Gr.**

PLATE LVII, FIG. 7.

Fore wings pale straw yellow, shaded with purplish between the basal and anterior transverse lines to nearly the middle, outer part beyond the posterior line also purplish except at apex straw yellow. Transverse lines brown. Basal line present. Anterior line geminate, rectangular, and bent outwardly from a little above the inner margin. Posterior line almost evenly oblique from a little in front of the apex to the inner margin, leaving a wide median space. Subterminal more or less traceable. Apex yellow. Median shade line with two angles above the middle, lower part oblique to hind margin. Orbicular round or nearly so, like the ground color, brown-ringed. Reniform rather large, constricted on each side in the middle, straw yellow, brown-ringed, sometimes marked with brown. Claviform rounded, brown-ringed. Hind wings pale testaceous, somewhat dusky outwardly. Head and thorax pale straw yellow; collar tinged with purplish. Expanse, 29-32 mm.

Rare in this vicinity. It flies in August and September. Earlier stages not known.

***Gortyna harrisii* Gr.**

PLATE LVII, FIG. 12.

Fore wings with median space yellow, heavily powdered with rusty brown. Basal space purplish, except within the line, yellow. Subterminal space purplish. Terminal space paler, brownish; yellow at the apex. Transverse anterior line geminate, angulate, rusty brown, upright, and bent abruptly outward near the inner margin. Transverse posterior line geminate, the inner portion narrower and paler, the outer line dark, bent abruptly on the costa, then almost evenly oblique to the inner margin. Subterminal line dentate on the veins, defined by the contrast between the purplish subterminal and brown terminal spaces. Median shade line brown, bent on the median vein. Orbicular round, usually white, dark-ringed. Reniform upright, constricted on each side at the middle, yellow, with a central brown linear ring, edges brown with from one to seven white or whitish spots. Sometimes the entire reniform is whitish or blackish. Claviform short and broad, usually white and divided by a narrow central line; sometimes it is reduced to a mere dot or is blackish. Veins rusty brown.

Hind wings more or less smoky, shading to yellowish. Head and collar purplish. Thorax purplish shaded with yellow. Expanse, 32-42 mm.

Rare in this vicinity. The moth flies in September. The caterpillar bores in the stems of *Heracleum lanatum*.

Gortyna purpurifascia G. & R.

PLATE LVIII, FIG. 10.

Fore wings rich orange yellow, overlaid with rusty brown and purplish scales. Spaces between the basal and anterior lines purple. Subterminal space distinctly purple, contrasting. Terminal space paler purplish, with an orange yellow apical patch. Fringes purplish brown. Transverse basal line geminate, extending to the middle of the wing. Transverse anterior line upright, angulate on the median vein and near the inner margin. Transverse posterior line usually single, slightly curved opposite the cell, then evenly oblique to the inner margin, forming a rather broad black band; inner portion, when present, very narrow. Subterminal line indicated by the differences between the color of the subterminal and terminal spaces. A brown line at base of fringes. Fringes purplish brown. Median shade line narrow, somewhat bent at the middle. Orbicular round, white, sometimes tinged with orange, black-ringed. Claviform upright, much broader than long, almost touching the orbicular, white, upper half sometimes filled with orange, usually black-outlined. Reniform upright, somewhat constricted in the middle, rusty orange, with a darker central linear ring, surrounded with one or more white dots. Hind wings ochraceous, somewhat purplish outwardly. Head and thorax purple, the latter orange yellow on the disc. Collar edged with orange yellow. Expanse, 28-36 mm.

Not common. It may be known by the rich orange forewings overlaid heavily with rusty brown scales, and the contrasting purple subterminal space. The moth is on the wing in August and September. The caterpillar bores in the roots of wild columbine (*Aquilegia*) and loosestrife (*Lysimachia quadrifolia*).

Gortyna rutila Guen.

PLATE LVIII, FIG. 4.

Fore wings golden yellow, heavily overlaid with rusty brown scales, giving a rusty appearance. Space between basal and anterior lines purplish brown. Subterminal space purple. Terminal space rusty brown. Apical patch golden yellow. Transverse basal line geminate,

rusty brown. Anterior line upright, angulate, not very distinct. Posterior line geminate, the inner part rusty brown, the outer blackish. This line is curved below the costa, thence almost evenly oblique to the inner margin. Subterminal line yellow, broken. Fringes purplish brown. Orbicular rounded, clear white. Claviform broader than long, divided in the middle by a rusty line, clear white, upper portion partly filled with rusty brown. Reniform golden yellow, with an elongated, central rusty brown ring, surrounded by clear white spots. Median shade line curved at the middle. Hind wings pale purplish brown. Head and thorax purple. Collar edged with yellow. Abdomen purplish. Expanse, about 35 mm.

This species is recorded from New York and is undoubtedly found in this vicinity. The moth flies in September.

***Gortyna circumlucens* (Sm.).**

Fore wings evenly yellowish or red brown, the subterminal space scarcely darker than the rest of the wing. A small white spot at the middle of the base. Transverse lines traceable but not contrasting, geminate. Basal line sometimes marked with white. Anterior line, as a rule, white-marked on the costa. Posterior line broadly bent over the cell, well removed outwardly, and inwardly oblique and a little curved to the inner margin. Subterminal line marked by the contrast between the subterminal and terminal space. Apex yellowish. Veins marked with purple. Median shade line narrow, purplish brown, not contrasting, bent below the reniform. Before the apex on the costa are three small white dots and one over the reniform. Spots white, contrasting. Orbicular triangular, brown-outlined. Reniform a little constricted at the middle, lower portion broadest, with a central yellow lunule surrounded by white spots. Claviform double, the upper one smallest. Hind wings varying from yellowish to purplish. Head and thorax shaded with purple, disc yellowish. A white tuft at base of the antennæ. Expanse, 32-40 mm.

Very rare in this vicinity. The earlier stages are not known.

It is allied to *G. rutila*, but is a narrower winged species with hardly any contrast between the different portions of the fore wings.

***Gortyna appassionata* Harvey.**

PLATE LVIII, FIG. 8.

Fore wings with median space yellow, rather heavily scaled with bright rusty red scales, especially between the spots. Space between basal and anterior lines bright rusty red (burnt sienna) with a small

yellowish spot above the middle. Space at extreme base before the basal line yellow. Outer part of wing rich burnt sienna, the subterminal space a trifle darker. Basal half-line geminate, filled with yellow. Anterior line upright, geminate, partly filled with yellow, obscured costally by the dark ground color. Posterior line geminate, distinctly scoloped, inwardly slightly curved around the reniform, then continued evenly to inner margin, filled with yellow. This line almost touches the reniform. Subterminal line indistinct, marked by a few yellow scales. Median shade line distinct below the middle to the inner margin, scoloped. A yellow spot on the costa at the inception of all the transverse lines. Orbicular large, irregularly rounded, with a rusty brown central dot. Claviform very large, composed of two large spots, the upper almost touching the orbicular; white upper portion marked with yellow. Reniform very large and broad, rounded, with a yellow, linear, central lunule, and surrounded with seven rather large white spots. Hind wings reddish, testaceous basally. Head and thorax rich reddish purple, with a small yellowish tuft at the base of the antennæ. Abdomen reddish. Expanse, 32-37 mm.

Very rare in this vicinity. The moth is found on the wing in September. The caterpillar bores in the roots of the pitcher-plant (*Sarracenia purpurea*).

It is a very brilliantly marked species, readily distinguished from all its congener by the bright, uniform, burnt sienna outer part of the fore wings, and very large white spots.

Gortyna marginidens Guen.

PLATE LVIII, FIG. 2.

Fore wings with median space yellowish brown, paler toward the inner margin. Basal and outer part of wing purplish. Basal line geminate, filled with white, with two yellowish spots between it and the base, and a small one outside the basal line. Anterior line ill-defined, with a little white on the costa and marked with yellow at the inner margin. Posterior line geminate, crenulate, dark, curved around the cell, then bent inwardly at the middle. Subterminal line broken, yellow, with a brown lunule on the inner part, distinctly yellow on the costa. Median shade angulate, dark. Orbicular rather large, white with a brown center. Claviform composed of two rather large white spots, the upper one partly filled with brown. Reniform large, lower part broadest, surrounded with a series of rather large white spots. Before the apex on the costa are four minute white spots and a larger one above the reniform. Hind wings purplish fuscous, tip of fringes whitish. Head and thorax purplish, the latter [November, 1902]

somewhat yellow centrally. Collar edged with white. Expanse, about 40 mm.

Quite rare in this vicinity. The moth is found in September and early in October. The caterpillar bores in the stems of the spotted cowbane (*Cicuta maculata*).

Gortyna furcata (Sm.).

Fore wings straw yellow varying to reddish luteous, with the markings fairly evident. Basal line geminate, brownish, in darker specimens merged into the ground color leaving the intervening space a little paler. A small white dot a little beyond basal line. Anterior line geminate, brownish, irregular, somewhat inwardly oblique to the submedian vein, below which it curves outwardly to the inner margin. This line is sometimes indistinct. Posterior line geminate, crenulate, evenly curved over the cell, then curved slightly inward. Subterminal line irregular, dentate on the veins. Terminal space somewhat paler, with a brown line, beyond which the fringes are brownish. Median shade somewhat diffuse, angulate at the middle. Orbicular white, irregularly oval. Claviform elongate, white, brown-outlined. Reniform very large, constricted in the middle, lower portion much broader than the upper, with a yellowish central lunule, and surrounded with seven white spots of various sizes. Hind wings yellowish. Head and thorax with a rosy or purplish tinge. Expanse, 31-45 mm.

Rare in this vicinity, and nothing is known of its earlier stages.

Gortyna baptisiæ (Bird.).

PLATE LVIII, FIG. 9.

Fore wings with median space rich yellow, densely covered with rusty scales; extreme base of wings golden yellow. Subterminal space purple, with two rather strong dentations at the middle. Subterminal space like the median space. A golden yellow apical patch. Basal half-line distinct, geminate, filled with yellow, with a small yellowish white dot beyond. Anterior line geminate, upright, partly obscured by the ground color, angulate. Posterior line curved around the cell, then almost straight to the inner margin. Median shade line angulate, upper part touching the reniform. Subterminal line rather distinct, broken. Orbicular large, white. Claviform composed of two white spots, the upper one smallest. Reniform with a central yellow linear lunule, and surrounded with white spots, one on the outer side yellow. Hind wings testaceous, roseate outwardly. Head and thorax rusty purple, disc deep yellow. Collar edged with yellowish. A small white tuft at base of antennæ. Expanse, about 35 mm.

Allied to *S. marginidens*, but uniformly smaller. The forewings are more rusty brown, the base of the wings golden yellow, and the reniform is differently shaped. The collar also lacks the white edge.

Although this species has not yet been found in this vicinity, it has been deemed advisable to include it in the list, for comparison. Its habitat is Providence, Rhode Island. The caterpillar bores in the stems of *Baptisia tinctoria*, a common plant in this vicinity. The moth is on the wing from late in August until about the middle of September.

Gortyna limpida Guen.

PLATE LVIII, FIG. 7.

Fore wings with space between the anterior and posterior lines rich seal-brown, shaded with reddish near the inner margin. Basal and outer parts deep silky purplish brown. Basal line obscured by the ground color. Anterior line traceable only near the inner margin, geminate. Posterior line geminate, blackish, not contrasting, curved around the cell to the middle, then curved inwardly. Subterminal line a little darker than ground color, outwardly dentate on the veins, and with a few reddish scales below the costa. On the costa in front of the apex are four minute white dots and a larger one above the reniform. Median shade line visible near the inner margin. Orbicular large, rounded, creamy white. Claviform inwardly oblique, much broader than long, creamy white. Reniform large, outwardly oblique, center yellowish with an elongate brown ring, and surrounded with about seven creamy white spots, those on the inner portion largest. Hind wings smoky brown. Head and thorax deep purplish. Collar edged with white. Abdomen smoky brown, somewhat purplish. Expanse, 30-37 mm.

A beautiful species, easily known by the rich, seal-brown median space, the silky, purplish basal and outer spaces, and the contrasting creamy white spots. The caterpillar bores in roots of speedwell (*Veronica virginica*).

Gortyna cerussata Gr.

PLATE LVII, FIG. 9.

Fore wings broad, rich umber brown in the median space, reddish at the inner margin. Basal and subterminal spaces purplish. Terminal

space purplish umber brown. Transverse lines not well defined. Basal line marked with four whitish spots. A small white spot at extreme base of wing. Anterior line defined by the difference in shade between the basal and median spaces, sometimes slightly filled with yellow. Posterior line geminate, lunate, very dark, curved around the cell, then somewhat incurved. Subterminal line irregular, marked with reddish and yellowish scales. Apical patch not contrasting, reddish. Orbicular rather large, white. Claviform composed of two white spots. Reniform elongate, oblique, with a yellowish narrow linear central lunule and surrounded by about seven white spots. Hind wings dark fuscous. Head and thorax purplish. Collar edged with white. Expanse, 35-50 mm.

A large, showy species, allied to *S. limpida*. It differs from that species by being considerably larger and heavier in build, also by the difference in color of the fore wings, and by having a cluster of small white spots at the basal line and one at the extreme base of the wing. The moth is on the wing in September. The caterpillar bores in the roots of ironweed (*Veronica noveboracensis*).

Gortyna cataphracta Gr.

PLATE LVII, FIG. 6.

Fore wings golden yellow, in the median space, extreme base and at the apex, powdered with purplish. Outer part beyond the posterior line, and basal space between the lines, purplish. Transverse lines geminate, distinct, purplish, spaces between golden yellow. Basal line sometimes obscured by the purplish ground color; when present, angulate, and not extending across the wing. Anterior line with two outward angles below the costa, then bent obliquely inward to a little above the inner margin where it is prominently bent outward. Posterior line curved around the cell, bent a little inward at the middle, then almost oblique to the inner margin. Subterminal line more or less distinct or almost absent. Median shade line purplish, angulate in the middle. Orbicular golden yellow with a purplish dot in the center and narrowly ringed with brown. Reniform a little oblique, rather large, golden yellow, constricted on each side in the middle, dark-ringed and with an elongate brown-ringed lunule in the middle touching the upper and lower parts of the spot. Claviform much broader than long, golden yellow, brown-ringed and crossed in the middle by a brown line on the vein. Hind wings smoky brown, crossed by a darker median shade line. Head and thorax purplish. Expanse, 25-40 mm.

A rather common species, but local, like all the other species of *Gortyna*. The caterpillar bores in the stems of the Turk's-cap lily (*Lilium superbum*), wild lily (*L. canadense*), thistle, sunflower (*Helianthus giganteus*), meadow rue (*Thalictrum*), motherwort (*Leonurus*), *Verbena hastata*, lettuce (*Lactuca*), ironweed (*Vernonia noveboracensis*), rhubarb, dahlia, raspberry shoots, etc.¹

Gortyna duovata (Bird.).

PLATE LVIII, FIG. 1.

Fore wings dull golden yellow, heavily scaled with brown. Space between basal and anterior lines and subterminal space somewhat purplish. Terminal similar to the median space but darker. Apical patch yellow. Basal half-line present, geminate, brown. Anterior line present, but not very distinct, upright, angulate. Posterior line distinct, geminate, bent opposite the cell, then even to the inner margin. Orbicular rounded, white or yellowish, with a brown central dot. Claviform much broader than long, divided in the middle by a brown streak, upper portion partly filled with yellow. Reniform with a yellow, linear central lunule, surrounded by about six or seven white or yellowish spots. Median shade line dark, angulate. Hind wings fuscous. Head and thorax purplish, the latter somewhat yellowish on the disc. Expanse, 34-40 mm.

In general appearance this species resembles *G. cataphracta*, but the spots are white instead of uniform yellow. The moth is on the wing in September. The caterpillar bores in salt-marsh goldenrod (*Solidago sempervirens*).

Gortyna impecuniosa Gr.

PLATE LVIII, FIG. 6.

Fore wings rusty red-brown, finely scaled with golden yellow. Basal space purplish brown, except at the extreme base. Subterminal space purplish, distinctly dentate on the veins outwardly. Terminal space rusty brown. Apical patch indicated by a few yellow scales. Fringes purplish brown. Transverse basal and anterior lines not distinct. Posterior line parallel with outer margin, slightly crenulate, geminate, the outer portion dark, the inner very narrow and faint. Median shade line dark brown, prominently angled at the middle. Orbicular round, a little paler than ground color, with a central rusty dot; claviform similar, but larger. Reniform somewhat constricted in the

¹ This list of food-plants was kindly furnished by Mr Henry Bird.

middle, paler than ground color, with a rusty central lunule. Hind wings fuscous, somewhat paler basally, with a dusky median shade line and discal spot. Head and thorax purplish. Collar edged with white. Expanse, 30-37 mm.

Quite rare in this vicinity. The caterpillar bores in the root and lower part of the stem of *Aster umbellatus*. The moth is on the wing late in September and early in October.

Gortyna necopina Gr.

PLATE LVII, FIG. 8.

Fore wings almost uniform gray brown with fine whitish atoms. Transverse anterior and posterior lines very faintly indicated or wanting. Basal line and ordinary spots wanting. Tips of fringes white. Hind wings paler gray brown, speckled with whitish apically. Head and thorax gray brown heavily sprinkled with white. Expanse, 40-50 mm.

A local species, not rare in this neighborhood. It may be known readily by the evenly colored fore wings. In general appearance it resembles *G. nitela*, but is a larger insect. The caterpillar bores in the stems of wild sunflower (*Helianthus* sp.).

Gortyna nebris Guen.

PLATE LVII, FIG. 10.

Fore wings wood brown, very finely powdered with yellowish scales; basal and subterminal spaces purplish, more or less contrasting. Basal line nearly always obscured by the ground color. Transverse anterior line not very distinct, sometimes yellowish outcurved between the veins, with a deep inward tooth below the middle, then with a broad outcurve to the inner margin. Transverse posterior line yellowish, slightly curved around the cell, then running almost oblique to the inner margin. Subterminal line yellow, irregular, more or less broken, sometimes indistinct. Orbicular white. Claviform composed of two white spots, varying in size. Reniform rather narrow, yellow in the center surrounded by a number of white spots. Hind wings gray brown. Head and thorax concolorous with the fore wings. Collar tipped with white. Expanse, 27-40 mm.

Var. nitela Guen., Plate LVII, Fig. 11. — This form has the orbicular, claviform, and reniform obscured by the ground color, making them indistinctly visible. The transverse line is also in most specimens very indistinct.

One of the most common and generally distributed species of the genus. It is found everywhere in this vicinity. The moth may be taken from September to October. The caterpillar bores in the stems of burdock (*Lappa major*), great ragweed (*Ambrosia trifida*), currant, corn, potato, tomato, aster, and a variety of weeds.

***Achatodes zeæ* (Harr.).**

PLATE LIX, FIG. 5.

Fore wings maroon with the veins marked with gray. Transverse lines geminate, dark, blackish, more or less distinct, sometimes filled with gray. Posterior line indicated by a double row of small black spots. Median line a little darker than ground color. An apical orange mark and one near the hind angle, but paler and less distinct. Orbicular very small, grayish brown. Reniform larger, brown and gray, not conspicuous. A series of gray brown spots along the outer border. Fringes tipped with brown. Hind wings pale fuscous. Head maroon, vertex orange. Thorax similar, disc orange. Abdomen with a row of orange tufts along the back. Expanse, 22-35 mm.

Very common in this vicinity. The moth flies in August. The caterpillar bores in the stems of elder, corn, etc. It is whitish with black tubercles and head.

***Bellura obliqua* (Walk.).**

PLATE LVII, FIG. 13.

Fore wings varying from gray brown to brown, or almost roseate, with the terminal space violet gray. Basal space above the median vein pale, varying from almost white to ashen gray, or pinkish in brown specimens. Transverse anterior line not defined or wanting; when traceable it forms a strong outward tooth below the costa, then runs inwardly oblique to the inner margin. Transverse posterior line single, dark, scolloped. Orbicular small, elongate, not upright. Reniform large, obliquely upright, pale-ringed. Sometimes a dusky median shade line present. Hind wings varying from fuscous to pinkish. Head and thorax concolorous with fore wings. Expanse, 35-52 mm.

Caterpillar. — Head subcordate, rugose, chestnut brown, sometimes jet black, shining. Cervical shield rugose, chestnut brown, sometimes black. Body above shining olive brown, with numerous very fine transverse wrinkles, which are hardly visible to the naked eye; posterior

segment much depressed. Spiracles black. Body beneath dirty brownish white, including the abdominal legs, which have a chestnut brown or jet black patch on the outer side of each, and the extremities black. Thoracic feet chestnut brown or jet black. Length, 55 mm.

Food-plant. — Cat-tail (*Typha latifolia*).

Not rare in this vicinity in swampy places where cat-tail grows. The caterpillar bores in the stem of this plant.

***Bellura gortynides* Walk.**

PLATE LVII, FIG. 14.

Fore wings ocherous, heavily scaled with cinnamon brown, with a dark shade in the middle of the wing. Transverse lines single, darker than the ground color. Basal line with a strong tooth directed outward. Anterior line with a very sharp outward angle, below the costa, then inwardly oblique to the inner margin. Posterior line strongly dentate outwardly on the veins. Subterminal line dark, even, broken by the veins, as is also the blackish terminal line. Orbicular obscured by the dark ground color. Reniform elongate, oblique, filled with brown, incompletely pale-ringed. Hind wings fuscous, fringes paler. Expanse, 35-47 mm.

Rare in this vicinity. The caterpillar feeds in the stems of the cat-tail (*Typha latifolia*).

***Bellura melanopyga* Gr.**

PLATE LVII, FIG. 15.

Fore wings pale yellow with the orbicular and reniform concolorous; transverse darker. Basal line absent. Anterior line angulate, below the costa, then evenly oblique to the inner margin. Median shade line not distinct, oblique. Posterior line strongly dentate on the veins outwardly. Terminal space shaded with dusky. A dusky mark at the end of the median vein. Hind wings stained with very pale reddish. Head and thorax yellow. Expanse, 40 mm.

Very rare in this vicinity. It is probably a variety of *B. gortynides*. The caterpillar bores in the leaf-stalks of the common white pond lily and yellow pond lily.

***Euthisanotia timais* (Cram.).**

PLATE LIX, FIG. 3.

Fore wings bright rose color, costal region at base, and median space to a little below the middle, deep velvety black. Outer part of

wing with some black marks and a terminal row of black and orange spots. Fringes smoky black. At base an orange streak, and on the costa three orange spots. Posterior line indicated by a double row of black spots. Orbicular outlined with orange, as is also the black reniform. Hind wings smoky black. Head and thorax with long, woolly hairs, minutely tipped with white. Expanse, about 45 mm.

Caterpillar. — Head rounded, orange brown with a large black patch on the face of each lobe and one over the ocelli. Body velvety black with a broad yellowish white band in the incisures of the segments reaching to the line of the feet, joined below the line of the spiracles to a short second band which begins on the middle of the sides and extends downward to a little below the line of the feet. A small dot anteriorly situated dorsally on segments 3, 4 and 9-13, and sometimes on 7 and 8. Band on segments 2 and 3 somewhat broken. A small dorsal bar in front of the anal plate. On segments 5, 6 and 12 the pale band runs a little further ventrally and they have a supplementary spot. Feet orange brown. Thoracic feet tipped with black. Claspers black. Cervical shield black. Anal plate orange brown, with a black posterior rim. Tubercles obscure, small.

Food-plant. — Lily (*Pancratium rotatum*).

A southern species, found occasionally as far north as New York. The moth varies in color, being more or less marked with rose color and black. In the south the insect is known as the Spanish moth.

***Nonagria subflava* Gr.**

PLATE LVII, FIG. 16.

Fore wings ochraceous or buff, median vein smeared with black. A single row of distinct black dots on the veins in the place of the transverse posterior line. Veins somewhat paler, with blackish shadings terminally. Hind wings very pale ochraceous. Head and thorax concolorous with the fore wings. Expanse, 34 mm.

Not common. The moth may be known by the plain ochraceous fore wings, dark median vein, and row of black dots. The caterpillar probably bores in the stems of cat-tail (*Typha latifolia*).

***Nonagria oblonga* Gr.**

Fore wings pale reddish or yellowish gray with obsolete markings. The fine, dark, linear denticulate transverse posterior line barely discernible. Stigma very vaguely indicated by paler shades. Hind

wings pale, stained with blackish centrally, and with a faint mesial black shade band. Expanse, 35-40 mm.

Quite rare in this vicinity. The caterpillar bores in the stems of the cat-tail (*Typha latifolia*).

***Senta defecta* Gr.**

Fore wings dusky yellowish, with dusky intervenular shades; veins finely streaked with blackish terminally. Median vein marked with white. Reniform indicated by white scales on the median vein at the extremity of the cell. Transverse posterior line indicated by black dots. Hind wings pale, with concolorous fringes and a faint curved median and broken terminal line. Head and thorax like the fore wings. Expanse, 25-27 mm.

Rare in this vicinity. Earlier stages not known.

***Platysenta videns* (Guen.).**

PLATE LIX, FIG. 6.

Fore wings bright silky brown with the veins finely powdered with black scales. Median vein marked with black. A white spot near the middle of the wing. Transverse posterior line indicated by a row of small black dots. Terminal line and fringes black cut with white. Hind wings sordid white, slightly tinged with dusky. Fringes white. Head and thorax brown, mixed with white. Expanse, 25-34 mm.

Caterpillar.—Head and body varying from green to purplish or brown, the former with a black band on each side; junction of the segments yellow. Subdorsal and lateral lines indistinct. From the head to anal legs, a broad cream-white band on each side, sometimes bordered above with a narrow brown or purplish line. Eleventh segment humped, with an oval yellowish white spot. Length, about 35 mm.

Food-plants.—*Euthamia graminifolia*, *E. caroliniana*, *Aster*, *Linaria*, and *Solidago*.

The moth is on the wing from June to September. The caterpillar is subject to considerable variation. Double brooded.

***Ommatostola lintneri* Gr.**

PLATE LVII, FIG. 17.

Fore wings very pale yellowish testaceous with the veins marked with white scales, interrupted with blackish. A dusky shade along

the median and sub-median veins, and also between the veins terminally. Posterior line indicated by a row of small black dots. Hind wings white, with a faint testaceous tinge. Head and thorax yellowish testaceous. Expanse, 35-40 mm.

This species seems to be rare in this vicinity. It is found late in August and early in September near the sea-coast. It is reported to be very common at Anglesea, New Jersey. The early stages are not known. The caterpillar probably feeds on or in some maritime plant. In general appearance the moth resembles a *Heliophila*.

Heliophila unipuncta (Haw.)¹

PLATE LVII, FIG. 18.

Fore wings reddish fawn varying toward gray, more or less sprinkled with blackish scales and with a white dot at the end of the median vein. Transverse anterior line usually wanting or indicated by small black dots. Posterior line composed of a series of black dots. Orbicular and reniform slightly paler than the ground color, or with a dusky center. A blackish shade from the upper part of the posterior line to the apex. Hind wings smoky brown, shining, somewhat paler basally. Head and thorax like the fore wings. Expanse, 35-47 mm.

Caterpillar. — Dull black, striped longitudinally as follows: a broad line along the back; then a narrow line; then a narrow white line; then a yellowish line; then a narrow subobsolete white line; then a dusky stripe; then a narrow white line; then a yellowish stripe; then a subobsolete white line. Underside obscure green. Length, 35 mm.

Food-plants. — Grasses and all kinds of low plants.

Very common everywhere all summer until frosty weather. It is found from Canada to Florida, west to Texas and the Rocky Mountains, and southward to South America. It is two or three brooded. The caterpillar is known as the army-worm.

Heliophila pseudargyria (Guen.).

PLATE LVII, FIG. 19.

Fore wings luteous gray, sometimes tinged with reddish. Transverse anterior line more or less defined, usually broken, and curved

¹ For further information regarding the species of *Heliophila* (*Leucania*) the reader is referred to Prof. John B. Smith's excellent monograph of the genus (Proc. U. S. Nat. Mus., Vol. XXXV, 1902, pp. 159-209, pls. v-vi).

between the veins. Posterior line slightly curved and composed of two rows of black dots, which are sometimes lunulate. A terminal row of small dots present. Orbicular and reniform more or less distinct, paler than ground color; the former is oval and the latter somewhat kidney-shaped. Hind wings smoky brown, fringes paler. Head and thorax concolorous with the fore wings. Expanse, 30-46 mm.

Caterpillar. — General color fleshy brown sprinkled with dark brown. Dorsal, subdorsal, and stigmatal lines distinguished by not being sprinkled with brown. Dorsal space dark brown, composed of dark brown dots finely sprinkled over the surface. There is a slight massing of these brown dots from the posterior parts of the segments, near the dorsal line, forming outwardly an indistinct V. Subdorsal space much like the dorsal, but paler. Substigmatal space with a few dots; a brown patch at the base of the pro legs. Head same color as the body, mottled with brown. Cervical shield dark brown. Piliferous spots small, brown. Length, 35 mm.

Food-plants. — Grasses and other low plants.

Common everywhere in this vicinity from May to September. Double or triple brooded.

Heliophila pallens (Linn.).

PLATE LVII, FIG. 20.

Fore wings creamy yellow with the veins paler and more or less streaked with luteous between the veins. At the end of the cell is a small black dot. Posterior line reduced to two black dots. Hind wings white or tinged with blackish. Head and thorax creamy yellow. Expanse, 30-35 mm.

Caterpillar. — Shining yellowish or reddish, with a whitish line along the back bordered with dusky, and a yellowish white stripe on the sides bordered with black.

Food-plants. — Grasses and other low plants.

Very common everywhere in this vicinity. The moth is on the wing from April until late in September.

Heliophila albilinea Hüb.

PLATE LVII, FIG. 21.

Fore wings pale luteous, costal area from the base to the apex gray or streaked with brown. Median vein very pale, whitish, contrasting with a brown shade above it to the outer margin where it forms a long triangular mark. Below the median vein extending to the end of the vein is a similar shade. In the latter is a black basal streak which

sometimes forms a loop at the end near the middle of the wing. Terminal part of wing marked with whitish. Hind wings whitish, or somewhat smoky outwardly. Head and thorax dark testaceous. Expanse, 28-32 mm.

Caterpillar. — Head yellow, with a somewhat triangular mark on each side. A white dorsal line, then a dark brown stripe, then a pale yellow line, then a light brown line shading into yellow over the lower edge, then a dark brown line along the spiracles, then a pale yellowish line, then an indistinct light brown line. Underside pale yellow. Length, 35 mm.

Food-plants. — Grass and other low plants.

Very common everywhere from May to September. The caterpillar enters the ground to pupate. Double brooded.

***Heliophila flabilis* Gr.**

Fore wings ocher or straw color shaded with fuscous. The pale longitudinal shades extend along the cell over the interspace between veins 5 and 6 nearly to the margin; a short pale shade on the interspace above and extending nearer to the margin. From the base a wide submesial pale shading extends outwardly to the margin. A black dot marks the reniform at the end of the median vein, and there is a row of dots on the veins, not prominent. Veins distinctly paler. The darkest portion of the wing is along the median vein, and a fine black streak runs along the interspace between veins 4 and 5. Hind wings whitish, vaguely soiled with fuscous outwardly. Thorax concolorous with the fore wings. Collar without lines. Expanse, 33 mm.

Found near the seashore of Long Island in May.

***Heliophila insueta* (Guen.).**

PLATE LVII, FIG. 24.

Fore wings pale ocherous, heavily shaded between the veins with rusty brown. Costal region whitish with fine black atoms. Veins white. A short blackish basal streak and an oblique row of black dots forming the transverse posterior line. Head and thorax varying from ocherous to reddish brown. Hind wings whitish, fuscous outwardly or almost wholly fuscous. Expanse, 31-36 mm.

A well marked species, known readily by the red brown color on the fore wings, pale costal region, and white veins. The moth is on the wing in June and July.

***Heliophila extincta* Guen.**

Fore wings pale creamy yellow, streaked with blackish and silvery gray, tending to faint reddish. Veins narrowly white. A whitish dot marked by black scales at the end of the median vein. A series of black dots forming the transverse posterior line. Hind wings white, semitransparent, with a somewhat yellowish tint. Head with a slight admixture of brown scales in front. Collar with two dark gray transverse lines. Thorax immaculate. Expanse, 33-36 mm.

The moth is on the wing from early in May to late in August. Earlier stages not known.

***Heliophila multilinea* (Walk.).**

Fore wings pale creamy ochreous, lined with brown between the veins. Veins white, the median one margined below with dark blackish or brown. A small black dot in the cell at the end of the median vein. Transverse posterior line reduced to two small black dots. Hind wings white with minute black terminal dots. Head immaculate. Thorax with three gray or blackish transverse lines. Disc of thorax and tegulæ speckled with black. Expanse, 31-36 mm.

Common in this vicinity. The moth flies from May to September.

***Heliophila commoides* (Guen.).**

PLATE LVII, FIG. 23.

Fore wings dull grayish luteous more or less marked with brown or reddish and streaked with black. A prominent black streak below the broadly white median vein, and a black dot at the branching of the median vein. Veins narrowly white. Costal region a little paler. A faint black streak a little above the inner margin near the base, and another in the submedian interspace towards the hind angle. There are other black streaks between the veins on the outer part of the wing. Transverse posterior line composed of a row of small black dots. A terminal row of small black dots. Hind wings fuscous, fringes pale dirty white. Head somewhat rusty brown. Collar with three leaden gray transverse lines. Thorax powdered with black. Expanse, 35-40 mm.

Common but not abundant in this neighborhood. The moth is on the wing from June to September.

***Heliophila phragmatidicola* (Guen.).**

PLATE LVII, FIG. 22.

Fore wings pale luteous, sometimes reddish, more or less indistinctly strigate. Median vein white, bordered above and below with black-

ish. A minute black dot at the end. A vague blackish shade on the outer part of the wing above vein IV, extending to the apex. A series of minute dots in place of the posterior transverse line. Hind wings white with a very narrow blackish outer border. Expanse, 32-40 mm.

Caterpillar.— A narrow dorsal line, then a wide dark stripe on which is a row of black dots, or in place of this stripe, there is a dark, then a light, then a dark line; next to this is a pinkish stripe, lightest in the middle; then a light line, which is sometimes wanting; then a dark or black stripe, lightest in the middle; then a light stigmatal line, then a pinkish stripe, which is sometimes wanting; venter dark colored; head pale brownish, with two black dashes on each side, and two curved black lines on the face. Length, 38 mm.

Food-plants. — Grass and other low plants.

Very common everywhere from May to September. Double brooded.

Scolecocampa liburna (Geyer).

PLATE LIX, FIG. 7.

Fore wings broad, pale grayish brown, sometimes tinged with reddish. Transverse lines reddish, not prominent. Anterior line angulate. Posterior line very broadly geminate, outer portion scalloped, inner portion punctiform. A terminal row of black dots, preceded by a blackish shade above the middle. Fringes broadly cut with black. At base of wing is a small black dot and one outside of the anterior line. Reniform distinct, reddish, black-ringed. Hind wings fuscous, with a terminal row of black dots. Fringes paler. Thorax gray-brown with a black stripe along the middle. Expanse about 40 mm.

Caterpillar. — Head and second segment pitchy black, very lustrous. Body dull grayish white or dull smoky, semitransparent. On each side are ten small brown tubercles, each bearing one or more fuscous hairs. Last segment pitchy black. Length, 45 mm.

Food-plants. — Found in decaying stumps of cherry, hickory, chestnut, oak, etc.

Rather common in woods in June and July. The caterpillar spins a tough cocoon of pieces of wood, intermingled with its own frass.

Ufeus satyricus Gr.

Fore wings wood-brown, unicolorous, with a faint trace of an irregular, diffuse, darker-shaded transverse anterior line. An undefined blackish mark in place of the reniform. Transverse posterior line somewhat more distinct than the anterior, parallel with the outer

margin. A series of blackish terminal streaks. Hind wings pale, dirty testaceous. Expanse, 45 mm.

Very rare in this vicinity. The moth is on the wing in July.

Ufeus plicatus Gr.

Fore wings uniform warm brown, faintly tinged with reddish. Transverse anterior line broken. Along the cell above the median vein is an interrupted black streak. Transverse posterior line black, comparatively distinct, running outwardly and downwardly oblique from the costa; much curved around the cell. A series of intervenular lunules and a series of fainter blackish terminal lunules. Hind wings dull testaceous. Expanse, 40 mm.

Allied to *Ufeus satyricus*, but differs from that species by having the transverse posterior line much rounded opposite the cell. Very rare in this vicinity. Prof. Smith has recorded it from Newark, New Jersey.

Eucalyptera bipuncta Morr.

Fore wings pale testaceous, powdered with blackish scales. Transverse anterior line wanting. Posterior line prominent, blackish, evenly curved around the cell, then evenly oblique to the inner margin. Subterminal line wanting. Orbicular and reniform each replaced by a small black spot. Hind wings pale testaceous. Expanse, 20 mm.

Not common in this vicinity. The moth is found on salt marshes in July.

Doryodes bistrialis (Geyer).

PLATE LIX, FIG. 8.

Fore wings pale testaceous, with all the margins somewhat darker. From the base to near the apex, along the middle of the wing, is a broad brown band, bordered with white above, and below at the outer part. Hind wings pale testaceous. Expanse, 30 mm.

Common on salt marshes from June to September. Probably double brooded.

Phiprosopus callitrichoides Gr.

PLATE LIX, FIG. 9.

Fore wings varying from ochreous to dark brown, more or less covered with whitish atoms. Transverse anterior line very narrow,

inwardly oblique, bent at the costa. Posterior line inwardly oblique, very strongly angulate below the costa, the outer part of this line running to the apex. Subterminal composed of a series of black lunules. Reniform vague, usually composed of two black marks. A very narrow whitish terminal line. Hind wings very pale ochereous, outer part narrowly fuscous, sometimes with a narrow terminal line. Expanse, 25-30 mm.

Not common. Flies in August. The caterpillar feeds on catbriar, and spins a cocoon on the stems of this plant. The cocoon is covered with long pieces of small twigs, giving the appearance of the sac of a caddisfly larva.

***Amolita fessa* Gr.**

PLATE LIX, FIG. 10.

Fore wings pale ochereous more or less suffused with reddish brown. From the middle of the base to the apex is an oblique smoky or reddish band, and another from the outer margin below the apex, extending obliquely to the inner margin near the middle of the wing. Orbicular and reniform each composed of a very minute black dot. A row of terminal black dots. Hind wings whitish. Expanse, 24-27 mm.

Not common in this vicinity. It flies from June to September.

***Balsa malana* (Fitch).**

PLATE LIX, FIG. 11.

Fore wings gray with black transverse lines, all strongly toothed. At the middle of the wing to about the middle of the posterior line is an oblique line, which forms a small V on the costa. Hind wings varying from light to dark gray. Head and thorax gray, the former with a transverse black line in front and the latter with a black Δ in front. Collar edged with black. Expanse, 22-28 mm.

Caterpillar. — Green dotted with yellow. Length, 14 mm.

Food-plant. — Apple.

A common species in this neighborhood. Found from May to August. Double brooded.

***Balsa tristrigella* (Walk.).**

PLATE LIX, FIG. 12.

Fore wings gray, veins marked with black; transverse line very strongly toothed, giving a streaked appearance. Outer part marked
[November, 1902.]

with brown between the veins. Head and thorax gray, the latter with a broad brown black edge. Hind wings dirty white. Expanse, 20-24 mm.

Allied to *B. malana*, but considerably smaller, with the transverse lines less distinct and the veins marked with black. Found from May to August. Double brooded.

***Balsa labecula* (Gr.).**

PLATE LIX, FIG. 13.

Fore wings pale gray. Orbicular yellowish white, and the disc beyond it and the place of the reniform are shaded with this same color. Anterior line rounded and not toothed as in its allies. Median shade, crossing the wing obliquely, over the yellowish white shading. Posterior line curved around the cell, slightly dentate. Head and thorax gray, collar edged with black. Hind wings pale fuscous. Expanse, 22-24 mm.

This species in general appearance looks very much like *Apatela retardata*. Very rare.

***Catabena lineolata* Walk.**

PLATE LIX, FIG. 14.

Fore wings pale fuscous, lines marked with black, scaled with white and with white streaks between the veins. Outer part of wing darkest. Hind wings white, outer part fuscous. Fringes white. Head and thorax whitish, slightly mixed with brown. Collar with two faint brown lines. Expanse, about 28 mm.

Caterpillar. — Head green, striped vertically with brown and white. Body deep green with about ten wavy white lines. Below the spiracles is a whitish stripe. Underside green with four lines, the two in the middle widest. The two anterior pairs of abdominal legs much shorter than the two other pairs. Length, 30 mm.

Food-plant. — *Verbena hastata*.

A rather common species, found from May to August. The caterpillar enters the ground to pupate.

***Crambodes talidiformis* Guen.**

PLATE LIX, FIG. 15.

Fore wings pale testaceous tinged with darker brown and streaked with black. Costal region marked with black. Transverse posterior

line much broken, dentate. Reniform narrow, elongate, not prominent, ringed with black; below this spot is a rather large blackish patch. A terminal row of small black dots. Fringes broadly cut with black. Hind wings whitish, somewhat tinged with yellowish. Expanse, about 25 mm.

Caterpillar. — Head green with a few dark streaks on the top. Body green dotted with white. A white dorsal and two subdorsal lines. A pink stigmatal stripe and a line on the subdorsal space. Length, 30 mm.

Food-plant. — *Verbena hastata*.

Found from May to September. The caterpillar spins a cocoon, mixed with earth, on the ground.

***Caradrina miranda* Gr.**

PLATE LVI, FIG. 24.

Fore wings uniform shining brown. Hind wings shining soiled white. Head and thorax brown, shining. Expanse, 25 mm.

Not common. Found from June to September.

***Caradrina multifera* Walk.**

PLATE LVI, FIG. 25.

Fore wings ashen gray, shining, with blackish transverse lines. Basal half line black, anterior line outwardly oblique, wavy. Median shade angulate at the middle. Posterior line finely dentate. Subterminal line composed of a series of dark lunules. A terminal row of black dots. Orbicular very small, round. Reniform large, partly outlined with black and with a small brown central dot. Hind wings grayish, fringes whitish. Head and thorax uniform gray. Expanse, 30 mm.

Not common. Found during July and August.

***Caradrina meralis* Morr.**

Fore wings gray with all the markings quite faint, except the reniform, which is black. Anterior line oblique. Posterior line rounded. Orbicular reduced to a small black dot. Reniform luniform. Hind wings white, slightly grayish terminally. Head and thorax gray. Expanse, 31 mm.

Recorded by Prof. John B. Smith from the northern and eastern States, and certainly is found in this vicinity.

***Caradrina derosa* Morr.**

Fore wings dark gray, with the marking black and not distinct. Basal half line present. Anterior line geminate, lobate, and interrupted. Median shade line running between the spots, where it is thickened, forming a black spot. A series of light and dark dots on the costa. Subterminal line faint, preceded below the costa by several conspicuous, partially united, black cuneiform markings. A series of black dots at the base of the fringes. Hind wings white with a broad, diffuse blackish border. Head and thorax dark gray; collar with an interrupted black line. Expanse, 33 mm.

Recorded from New Jersey.

***Pyrophila tragopoginis* (Linn.).**

PLATE LIX, FIG. 16.

Fore wings uniform shining brown, with indications of a subterminal, broken, transverse shade. Orbicular small, black. Reniform composed of two black spots more or less connected. Hind wings brownish, slightly paler basally. Head and thorax brown. Expanse, 28-32 mm.

Caterpillar. — Head pale apple green, with a dark spot on each side in front. Dorsal, subdorsal, and spiracular lines narrow, pure white. The spiracular line begins on the second and the others on the third segment. On all the segments except the head and second, there are a few minute white granulations tipped with black, and each with a fine hair. Spiracles white. Feet green. Length, 35-45 mm.

Food-plants. — Spinach, *Rumex*, salsify, and other allied plants.

Not common. Found during July and August.

***Pyrophila pyramidoides* (Guen.).**

PLATE LIX, FIG. 17.

Fore wings shining brown, somewhat purplish. Transverse lines geminate. Basal half line present. Anterior line somewhat oblique, dentate. Median shade line somewhat distinct. Posterior line irregularly bent at the middle, filled with lighter brown. Subterminal line light brown, irregular, sending inwardly a few black dashes. A terminal row of pale brown lunules. Hind wings shining coppery brown, smoky apically. Expanse, 40-50 mm.

Caterpillar. — Head smooth green. Body green, dotted with white or yellow. A white dorsal and subdorsal line, the latter forming an

acute angle on the eleventh segment, which is humped. A yellow stigmatal line. Length, 35 mm.

Food-plants. — Apple, cherry, hickory, oak, lilac, witch-hazel, walnut, willow, poplar, chestnut, etc.

Very common everywhere. The moth may be known readily by the coppery brown hind wings. It flies from May to September. The caterpillar spins a cocoon on the ground.

***Anorthodes prima* Smith.**

Fore wings soft, uniform mouse gray. Transverse lines evident, single, blackish. Basal line nearly straight. Anterior line with a strong inward angle on the cell, irregularly oblique below. Posterior line outcurved over the cell, somewhat incurved below, even or slightly crenulate. Subterminal line irregular, yellowish, closely parallel to the outer margin. Median shade line vague, angulate. Orbicular punctiform, blackish. Reniform indefinite, sometimes indistinct, marked with a few white scales. A faint yellowish terminal line. Hind wings smoky gray, shining. Head and thorax concolorous. Expanse, 28–30 mm.

Not common. Found early in spring and again late in the fall.

***Orthodes cynica* Guen.**

PLATE LIX, FIG. 18.

Fore wings brown tinged with reddish. Transverse lines geminate, distinct, but not contrasting. Anterior line outwardly oblique, slightly wavy, outer portion blackish. Posterior line slightly curved outwardly around the cell, then slightly bent inwardly, inner portion black. Subterminal line pale reddish. Orbicular and reniform like the ground-color, faintly outlined by white scales. Hind wings fuscous. Head and thorax like fore wings. Expanse, 28–30 mm.

A common species, found from May to September.

***Orthodes crenulata* (Butler).**

PLATE LIX, FIG. 19.

Fore wings brown, with fine black atoms. Transverse lines narrow, distinct, pale testaceous, marked with blackish. Basal half line straight. Anterior line oblique, slightly angulate at the costa. Posterior line bent opposite the cell, then straight to the inner margin,

with a few black dots on the outside. Subterminal line straight. Terminal line lunulate. Orbicular and reniform rather large, like the ground color, with testaceous outlines. Median shade line blackish. Hind wings fuscous. Head and thorax like the fore wings. Expanse, about 32 mm.

Rather common. Found from June to September.

Orthodes vecors Guen.

Fore wings silky reddish brown, the male smaller and brighter in color. Transverse lines geminate, more or less distinct. Orbicular not evident. Reniform whitish, small. Hind wings fuscous. Head and thorax concolorous. Anal tuft of male ocherous. Expanse, 28-30 mm.

A rather common and variable species. Found from May to August.

Orthodes calceolaria Sirk.

Fore wings dark smoky shining brown with a somewhat reddish tint. Basal half line composed of hoary scales. Transverse anterior line also grayish white, crossing the wing in a nearly straight line to the inner margin. Transverse posterior line curved outwardly, and not as distinct as the anterior line. Median shade line fuscous slightly darker than the ground color. A dark fuscous subterminal line, the space exterior to this slightly paler than the rest of the wing. Fringes concolorous. The transverse lines are composed of hoary scales, distinct but not sharply defined. Hind wings light fuscous with paler fringes. Head and thorax dark smoky fuscous. Expanse, 30 mm.

Taken on Long Island by Mr. E. Shoemaker, in May and June.

Himella contrahens (Walk.).

Fore wings pale testaceous, thickly overlaid with smoky scales, palest along inner margin. Transverse lines geminate, black, filled with pale testaceous. Basal half line present. Anterior line oblique, dentate. Posterior line curved around the cell, then slightly bent inwardly. Subterminal line obscured by the ground color, except as a pale apical streak. A series of pale dots on costa before the apex. Orbicular not evident. Reniform very indistinct, followed by a pale mark. Hind wings dirty whitish, smoky outwardly, and with a median shade line. Head and thorax concolorous. Expanse, 28-30 mm.

Rare in this vicinity. Flies in June and July.

***Himella intractata* (Morr.).**

Fore wings uniform soft warm grayish fuscous. Basal half line indicated by black dots. Median line pale, even, shaded with blackish below the median vein. Posterior line a little waved or uneven, pale, with a narrow preceding ochre brown shade line. Ordinary spots very large, a little paler than the median space, rounded, very finely pale-ringed; reniform not excavate.¹ A very fine pale terminal line. Hind wings fuscous, whitish at base, fringes whitish. Expanse, 30-32 mm.

Very rare in this vicinity. The moth flies from April to August. Probably two brooded.

***Crocigrapha normani* (Gr.).**

PLATE LIX, FIG. 20.

Fore wings reddish brown suffused with gray and with black atoms. Transverse line narrow, distinct, but not prominent. Basal line curved. Anterior line outwardly oblique, even. Posterior line curved around the cell, where it is dentate, then curved inwardly. Subterminal line ill defined. Terminal region grayish. Orbicular like the ground color. Reniform pale-ringed, lower part filled with black. Hind wings whitish, fuscous outwardly. Expanse, about 40 mm.

Not rare in this vicinity. The moth flies from April to June.

***Tæniocampa furfurata* (Gr.).**

Fore wings ochery fuscous. Transverse lines geminate, not very distinct, blackish. Ordinary spots small, inconspicuous, obsoletely outlined, the reniform darker, stained with blackish inferiorly. Posterior line denticulate, broken up into black points on the veins. Subterminal line pale, preceded by an inconspicuous series of darker points. A series of black terminal dots. Hind wings whitish fuscous. Expanse, 24-26 mm.

Quite rare in this vicinity. Flies from May to August.

***Tæniocampa culea* (Guen.).**

Fore wings gray, overlaid with blackish atoms. Costa distinctly edged with caraneous. Only the anterior and posterior lines are distinct, blackish, accompanied by pale, even, conspicuous shades. The former is oblique, the latter rounded and parallel with the outer margin. Ordinary spots distinct, filled with black, and pale-ringed.

Orbicular small and round. Reniform narrow, upright. Subterminal line light, faint, containing a series of interrupted blackish dots. Fringes concolorous, with a yellow line at the base. Hind wings fuscous with a discal dot; base of fringe with a yellow line, separated from the outer whitish portion by a dark line. Expanse, 35 mm.

Found from May to July.

***Tæniocampa oviduca* Guen**

PLATE LIX, FIG. 21.

Fore wings brown, sometimes reddish, markings distinct but not contrasting, slightly paler than the ground color. Basal line evident. Anterior line geminate, slightly curved inwardly near the costa; the orbicular resting on this incurvation. Posterior line a little curved around the cell, then bent inwardly and again slightly outward near the costa. Subterminal line almost even. A terminal series of black dots. Orbicular very slightly darker than the ground color, pale-ringed. Hind wings fuscous. Expanse, 28-30 mm.

Common everywhere from May to July.

***Tæniocampa alia* Guen.**

Fore wings varying from reddish brown to grayish fuscous or gray, more or less clouded with blackish in paler specimens. Transverse lines very ill defined or wanting. Subterminal line distinct, pale grayish. Median shade, when present, reddish or blackish. Orbicular rather large, oval, gray-ringed. Reniform constricted in the middle lower part, filled with blackish. Hind wings grayish fuscous, fringes paler. Head and thorax concolorous with fore wings. Expanse, 32-40 mm.

A rather common species in this neighborhood. The moth flies in March and April and again late in fall. The species is subject to considerable variation.

***Tæniocampa subterminata* Smith.**

PLATE LIX, FIG. 22.

Fore wings varying from gray to cinnamon-brown. Transverse lines more or less distinct. Basal half line present. Anterior line oblique, wavy. Posterior line almost parallel with the outer margin, outer portion punctiform. Median shade line upright, usually very distinct. Subterminal line always very distinct, pale, outer portion

marked with dark brown or black. Ordinary spots rather large, pale-ringed, usually concolorous or rarely darker than the ground color. Claviform more or less traceable. Hind wings variable in color, from gray to brownish. Head and thorax concolorous with the fore wings. Expanse, 35-40 mm.

Very rare in this vicinity. The moth is on the wing in April and May and possibly again late in fall.

***Calymnia orina* (Guen.).**

PLATE LIX, FIG. 23.

Fore wings light yellow with fawn-colored suffusions, varying to entirely fawn color without yellow. Basal line very oblique running nearly to the middle of the wing on the inner margin. Posterior line bent opposite the cell, then almost evenly oblique to the inner margin. Orbicular very small, round. Reniform larger, upright, yellow-ringed in yellow specimens, and filled with dusky in fawn-colored specimens. Median shade more or less distinct. Hind wings yellowish or tinged with fawn color. Expanse, 26-32 mm.

Caterpillar. — Head rather smooth, pale whitish green, with a few fine yellowish hairs, not visible without a lens. Body above pale green, with a dorsal yellow line, less distinct on the anterior segments, and covered with fine dots and short yellow streaks, less numerous on the second and last segments. A few short yellowish hairs are scattered over the surface similar to those on the head. Spiracles small, oval, whitish, encircled with dull red. Underside slightly darker green with many minute yellowish white dots. Feet pale and shining. Abdominal legs green, tipped with brown. Length, 23 mm.

Foot-plant. — Oak.

Quite rare in this vicinity. The moth flies in July and August.

***Ipimorpha pleonectusa* (Gr.).**

PLATE LIX, FIG. 24.

Fore wings almost uniform light brown. Transverse line very narrow, dull yellow. Ordinary spots a little darker than the ground color, narrowly ringed with yellow. Basal line straight. Anterior line a little oblique. Posterior line parallel with the outer margin. Median shade line upright. Subterminal line wavy. Orbicular round. Reniform large, constricted in the middle on each side. Hind wings brown, a little paler than the fore wings. Head and thorax concolorous with the fore wings. Expanse, 33 mm.

Quite rare in this vicinity. Found in July and August.

***Atethmia rectifascia* (Gr.).**

Fore wings olive gray, fringes golden. Transverse anterior line upright, even, blackish. Transverse posterior line almost straight, slightly curved. Subterminal line straight. Hind wings silky sordid white, fringes golden. Thorax olive-gray. Top of head pale testaceous. Expanse, 26 mm.

A rare species. It may be known readily by the olive-gray fore wings, upright, even transverse lines, and golden fringes.

***Cosmia paleacea* (Esper).**

PLATE LIX, FIG. 25.

Fore wings pale yellow more or less powdered with red or blackish, or almost uniform in color. Transverse lines narrow, single, reddish or blackish. Basal half line slightly oblique. Anterior line broadly angulate at the middle. Posterior line irregularly curved. Median shade line angulate. Ordinary spots like the ground color, narrowly ringed with reddish. Orbicular round. Reniform rather large, a little constricted at the middle. Subterminal line more or less defined, claviform, elongate. Hind wings pale yellowish, tinged with reddish. Expanse, 38-45 mm.

A very variable species. Found in August and September.

***Pyrrhia umbra* (Hufnagel).**

PLATE LIX, FIG. 26.

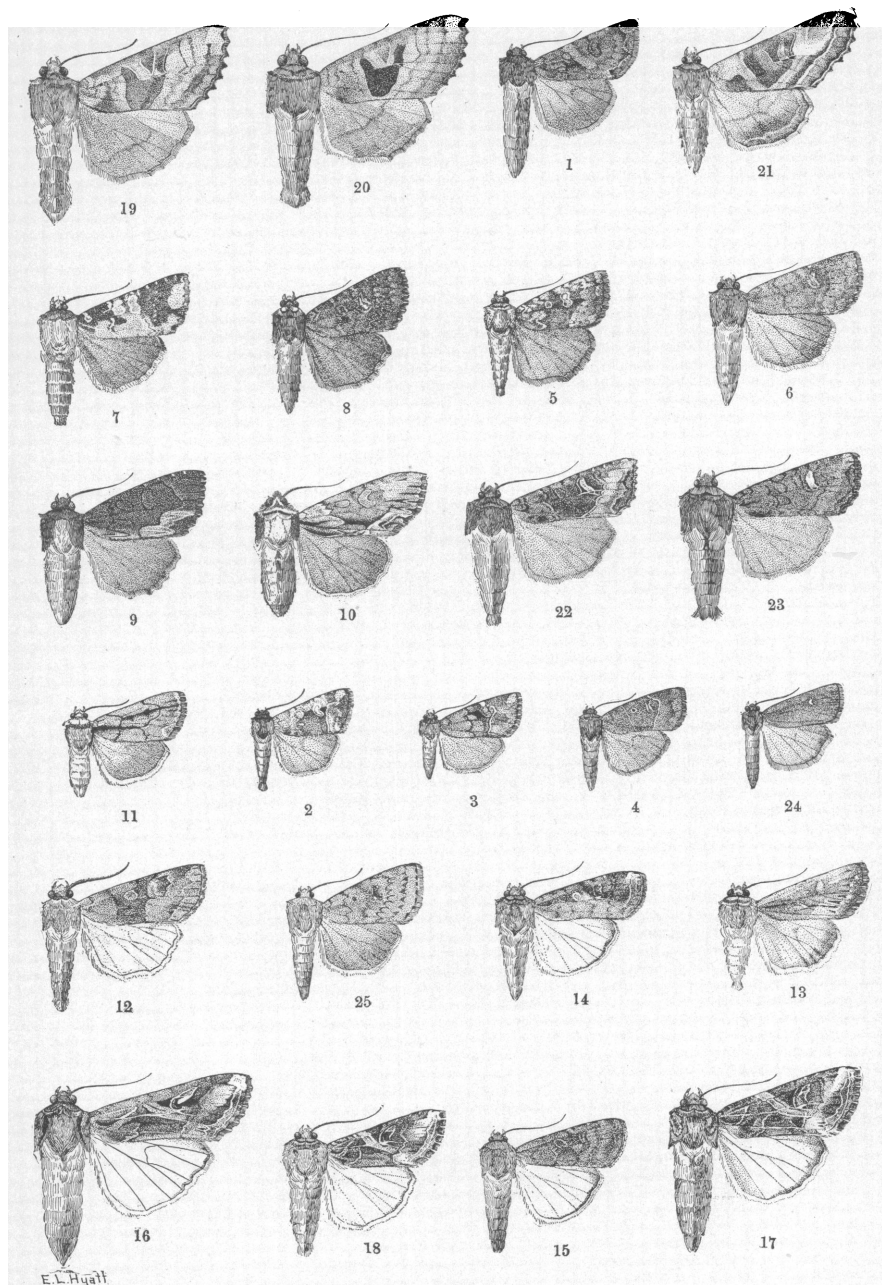
Fore wings bright rusty orange, dusted with rusty scales. Transverse lines rusty brown. Subterminal space rusty purple. Fringes purplish. Basal half line upright. Anterior line with three angles. Posterior line inwardly oblique, almost even, angulate at the costa. Median shade line distinctly angulate. Orbicular variable in size, round. Reniform rather large, inner part touching the median shade line. Subterminal line dentate. Hind wings testaceous, outer half blackish or reddish, fringes pale with a central blackish dot. Head and thorax rusty orange. Expanse, 30-38 mm.

Var. exprimens (Walk.). — Like *umbra* but with the median shade line considerably more angulated.

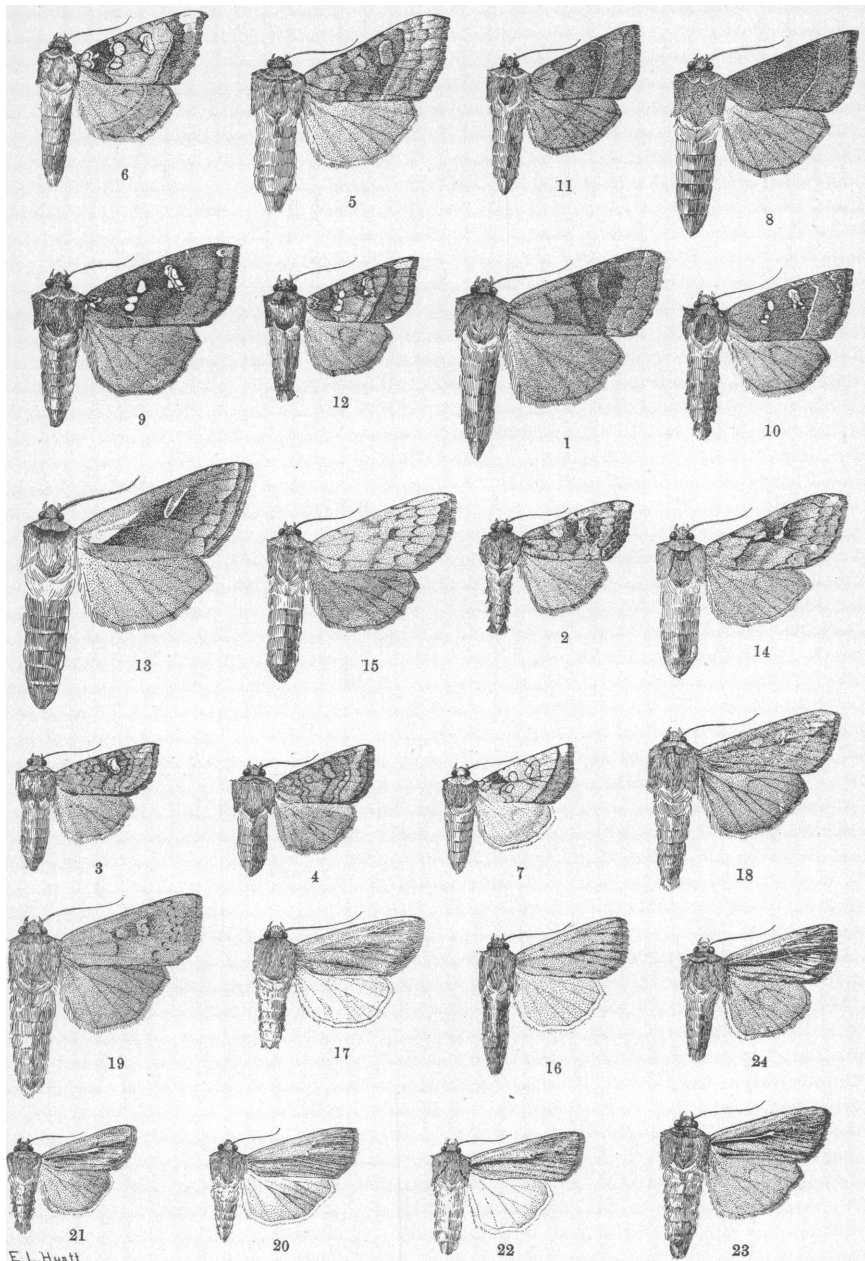
Caterpillar. — Head shining yellow, with a black dot on each side near the jaw. Body bluish white; a yellowish brown stigmatal stripe and about ten transverse black lines. Sometimes a dorsal row of yellowish brown spots. Piliferous spots black. Underside pale greenish. Length, 35 mm.

Food-plants. — Smartweed (*Polygonum*), *Desmodium*, blackberry.

A rather common species found from May to September.



1. *Trachea delicata* GROTE.
2. *Oligia festivoides* GUENÉE.
3. " *versicolor* GROTE.
4. " *grata* HÜBNER.
5. *Perigea xanthioides* GUENÉE.
6. " *clausa* WALKER.
7. " *ephea* CRANER.
8. " *vicors* GUENÉE.
9. *Dipterygia scabriuscula* LINN.
10. *Hyppa xylinoides* GUENÉE.
11. *Homohadena badistriga* GROTE.
12. *Adita chionanthi* A. & S.
13. *Oncocnemis riparia* MORR.
14. *Laphygma frugiperda* A. & S.
15. " *f. var. obscura* RILEY.
16. *Prodenia commelina* A. & S.
17. " *ornithogalli* GUENÉE.
18. " *ludiopta* GUENÉE.
19. *Trigonophora periculosa* GUENÉE.
20. *Trigonophora p. var. v-brunneum* GROTE.
21. *Brotolomia iris* GUENÉE.
22. *Helotropha reniformis* GROTE.
23. " *r. var. atra* GROTE.
24. *Caradrina miranda* GROTE.
25. " *multi-fera* WALKER.

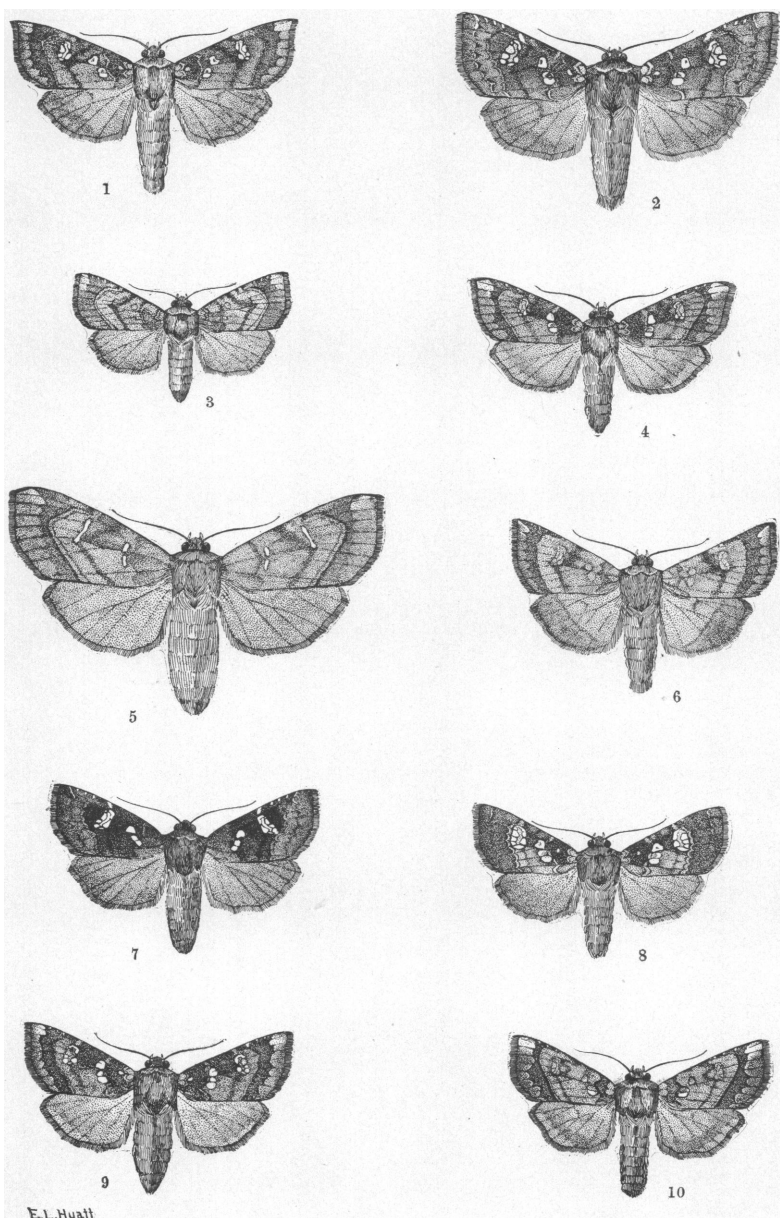


E. L. Huett

1. *Nephelodes minians* GUENÉE.
2. *Gortyna velata* WALKER.
3. " *nititans* LINN.
4. " *n. var. erythrostigma* HAWORTH.
5. " *immanis* GUENÉE.
6. " *cataphracta* GROTE.
7. " *rigida* GROTE.
8. " *necopina* GROTE.

9. *Gortyna cerussata* GROTE.
10. " *nebris* GUENÉE.
11. " *n. var. nitela* GUENÉE.
12. " *harrisii* GROTE.
13. *Bellura obliqua* WALKER.
14. " *gortynides* WALKER.
15. " *melanopyga* GROTE.
16. *Nonagria subflava* GROTE.
17. *Ommatostola lintneri* GROTE.

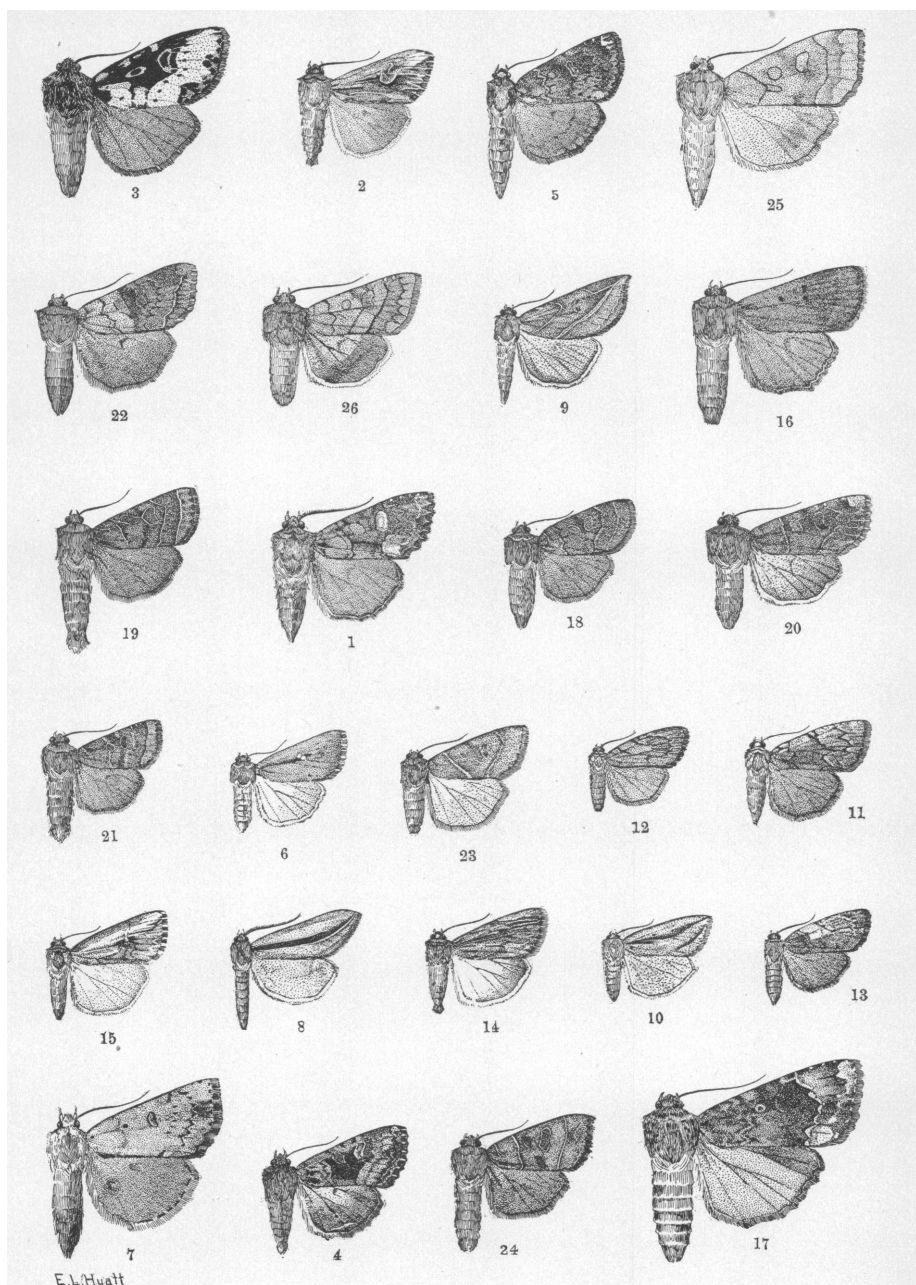
18. *Heliophila unipuncta* HAW.
19. " *pseudargyria* GUENÉE.
20. " *pallens* LINN.
21. " *albilinea* HÜBNER.
22. " *phragmatidicola* GUENÉE.
23. " *commoides* GUENÉE.
24. " *insueta* GUENÉE.



1. *Gortyna duovata* (BIRD).
2. " *marginidens* (GUENÉE).
3. " *inquasita* G. & R.
4. " *rutila* (GUENÉE).

5. *Gortyna speciosissima* G. & R.
6. " *impecuniosa* GROTE.
7. " *limpida* GUENÉE.
8. " *appassionata* HARVEY.

9. *Gortyna baptisiae* (BIRD).
10. " *purpurifascia* G. & R.



- | | | |
|--|---|---|
| 1. <i>Dryobata illocata</i> WALKER. | 10. <i>Amolita fessa</i> GROTE. | 19. <i>Orthodes crenulata</i> BUTLER. |
| 2. <i>Actinotia ramulosa</i> GUENÉE. | 11. <i>Balsa malana</i> (FITCH). | 20. <i>Crocigrapha normani</i> GROTE. |
| 3. <i>Euthisanotia timais</i> CRAMER. | 12. " <i>tristrigella</i> (WALKER). | 21. <i>Teniocampa oviduca</i> GUENÉE. |
| 4. <i>Euplexia lucipura</i> LINN. | 13. " <i>tabecula</i> GROTE. | 22. " <i>subterminata</i> SMITH. |
| 5. <i>Achatodes</i> see HARRIS. | 14. <i>Catabena lineolata</i> WALKER. | 23. <i>Calymnia ortna</i> GUENÉE. |
| 6. <i>Platysenta videns</i> GUENÉE. | 15. <i>Crambodes talidiformis</i> GUENÉE. | 24. <i>Ipimorpha pleonectusa</i> GROTE. |
| 7. <i>Scolecocampa liburna</i> GEYER. | 16. <i>Pyrophila tetrapogonis</i> LINN. | 25. <i>Cosmia paleacea</i> ESPEY. |
| 8. <i>Doryodes bistrialis</i> GEYER. | 17. " <i>pyramidoides</i> GUENÉE. | 26. <i>Pyrrhia umbria</i> (HUFN.) |
| 9. <i>Phitropsopus callitrichoides</i> GUENÉE. | 18. <i>Orthodes cynica</i> GUENÉE. | |

