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The Habropoda and Didasia of California

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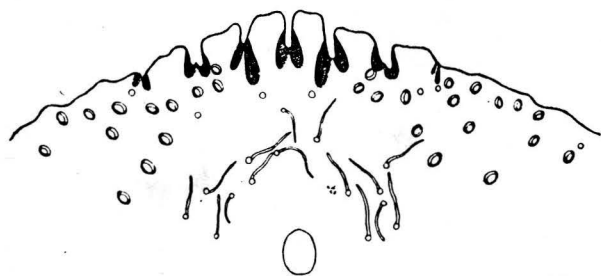
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Idiotus (Targionia) Marlatti, sp. nov.

♀ scale 2 mm. in diameter, flat to slightly convex, dark reddish-brown, resembling walnut, on margin to a lighter shade at centre; exuviae small, large, black, often covered with brownish secretion; ventral pellicle thin, light reddish-brown, not easily separated from scale, and leaves dark mark on host plant when detached.

♀ oval, white, with irregular spots of yellow; ultimate segment brown, with the margin dark brown and strongly chitinous. Boiled in caustic potash, the female becomes transparent, with the exception of the plates, which remain yellow. There are three pairs of lobes (Fig 36), which are short, broad, and quite widely separated, with the sides parallel; first lobe either broadly rounded or truncate, and notched at distal end; second and third lobes similar, broader than mesal lobes, notched on



Aspidisulus Marlatti

FIG. 36.

margin, with that part lateral of the notch generally the larger. There is a small spine at the base of each of the mesal lobes, one larger one at the base of the lateral margin of each of the second and third lobes respectively, and another one on margin as distant from the third spine as the combined width of one mesal and one second lobe. Chitinous processes are of medium size, one pair to each incision; the ones lateral of the mesal lobes are the largest. Plates are short and truncate, and apparently easily shed, as they do not appear in the boiled specimens; in the treated specimens there are from one to two plates to each incision. There are no groups of circumgenital glands. The dorsal glands are large and fairly numerous. On each side and posterior of the anus there are a few tubular glands.

This interesting species was collected by Mr. J. B. Norton, who found it upon the base of the stems of grasses, *Andropogon furcatus* and *scoparius*, on Blue Mont, Manhattan, Kansas, and is named in honor of Mr. C. L. Marlatt, in recognition of his many valuable contributions to the knowledge of the Coccidæ.

THE HABROPODA AND DIDASIA OF CALIFORNIA.

BY CARROLL FOWLER, BERKELEY, CAL.

The following is a list of the species of these two groups occurring in California, with notes on those forms known to me:

HABROPODA, Smith.

A small group of bees, comparatively local in their habits, and in appearance very much like the larger species of Anthophora.

Legs with black pubescence. *floridana*.
Legs with pale pubescence.

Abdomen (except on first segment) with depressed, pale pubescence interspersed with erect, black hairs; ♂ with scape yellow in front. *depressa*.

Abdomen without black hairs, pale pubescence erect; ♂ with scape black. *miserabilis*.

1. *Habropoda floridana*, Smith.—Redonda, Cal. (H. O. Woodworth), May 23. One female.

2. *Habropoda depressa*, n. sp.

♀ 14 mm., ♂ 12–13 mm. Clothed with mixed black and pale pubescence, the latter depressed on the abdomen.

♀.—Head black, clothed with ashy pubescence, mixed with black on vertex, dense and white on cheeks and labrum, thin on clypeus, which is strongly punctured; antennæ black. Thorax clothed with pale pubescence, thin on disc and strongly mixed with black above, dense white beneath; wings subhyaline; legs clothed with pale pubescence more or less tinged with yellow, very dense on posterior femora and tibiæ, brown on metatarsi beneath, a bunch of black pubescence at apex of posterior metatarsi; claws reddish. Abdomen black, narrow apical margins of the segments brown; first segment clothed with erect, white pubescence, except on apical margin, where it is black; the remaining segments with appressed, yellow pubescence interspersed with erect black hairs. Ventral segments shining, fringed with long, pale pubescence.

♂.—Differs from ♀ in having narrow lines on the sides of the face, clypeus except narrow lateral margins, mandibles except tips, and scape in front yellowish-white; legs with white pubescence, which is a little longer on the tibiæ and posterior tarsi behind, and quite long on the anterior and posterior femora; venter thickly clothed with white pubescence.

Habitat: Berkeley, Cal., Feb. 22 to May 1; numerous specimens. Santa Catalina Island (H. O. Woodworth), June 21; one specimen. During the earlier part of the season several specimens were collected upon the white flowers of *Cytisus poliferus* in the botanic garden. About the middle of April quite a number of females were observed collecting pollen from oak blossoms. A few males were collected upon *Ranunculus californicus*. On April 22, 1899, several nests were examined. They are, in general, much like those of many other bees of solitary habits, being grouped together in quite large numbers, and each one consisting of a single burrow extending about a foot into the hard earth. The cell at the end is about 10 millimetres wide by 16 in length, lined with a thin, hard layer of wax and filled with a mixture of pollen and honey. A large number of the bees had taken possession of an old squirrel hole, from the inside of which, at a depth of about a foot, their burrows were found extending off in all directions, while the outside burrows extended nearly straight downward. The traces of a number of old burrows would indicate that the same spot had been visited from year to year. Only a few of the nests at this date were complete, and no larvæ were found.

3. *Habropoda miserabilis*, Cress., ♂.

♀.—Differs from male in being a little larger, having the face black, posterior legs clothed with long dense pubescence slightly tinged with yellowish, that on apical portion of the middle tibiæ above fuscous, at the tips of the posterior metatarsi a bunch of black hair. Both males and females have the pubescence on the under side of the legs more or less fuscous. The males before me have the "large sub-trefoil mark on the clypeus" extending somewhat on the region above.

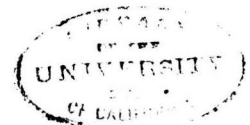
San Francisco, Cal.; April. Twenty specimens, collected chiefly upon *Phacelia californica*.

DIDASIA, Patton.

The bees of this genus fly somewhat later in the season. None of the species are common in Berkeley, but *D. enavata* is very abundant in Southern California during the early part of summer.

Abdomen with black pubescence, except on segments 1-2; not banded *nerea*.
Abdomen with pale pubescence; white bands or fascia on apical margins of the segments.*

**D. alboresta*, Prov., seems to differ from *enavata* and *cinerea* chiefly in size, being only 8 mm. in length. The species is unknown to me.



Tarsi dark brown or black; ♂ with the third antennal joint slender, three times the length of the second..... *cinerea*.

Tarsi pale ferruginous; ♂ with third antennal joint not especially slender; about twice the length of the second..... *enavata*.

1. *Didasia nerea*, n. sp.

10.5 mm. Clothed with black pubescence, ochraceous on thorax and base of abdomen above.

♀.—Head black, finely punctured, clothed with long, dense, black pubescence, thinner on vertex and ochraceous on posterior part of occiput; antennæ entirely black. Thorax black, clothed with dense pubescence, yellowish above, black beneath; tegulæ black; wings hyaline, veins dark brown, second submarginal cell about half the length of the first, narrowed somewhat above; legs clothed with black pubescence, long and dense on posterior tibiæ and metatarsi. Abdomen black, with yellowish pubescence on the first two segments, somewhat mixed with black on the second, the remaining segments with rather short, black pubescence. Venter clothed with black pubescence.

♂.—Differs from female in having the pubescence, throughout, longer and more bushy, that on legs with a somewhat griseous appearance in certain lights; the posterior femora and tibiæ somewhat incrassate, their metatarsi slender and curved, and the apex with a subacute tooth, which is not especially prominent; apical segment of the abdomen bidentate.

Habitat: Tulare, Cal. (H. O. Woodworth); May. 10. Two specimens.

2. *Didasia alboresta*, Prov.—Los Angeles, Cal.

3. *Didasia cinerea*, n. sp.

♂ 13 mm. Clothed with cinereous pubescence, apical margins of the abdominal segments with white fascia.

♂.—Head black, punctured, clothed with griseous pubescence, slightly darker on vertex; apical margin of the clypeus nude; antennæ entirely black, third joint slender, broadening toward apex, three times the length of the second. Thorax black, finely punctured, clothed with rather dense, ashy pubescence, tinged with yellowish above; tegulæ dark brown to black, shining; wings hyaline, veins dark brown to black, second submarginal cell about half the length of the first, narrowed above; legs clothed with rather long, pale pubescence; the four posterior legs robust, the femora and tibiæ incrassate, the basal joint of the posterior tarsi

curved and having at apex beneath a prominent, curved, subacute tooth, which is flattened and dilated at base; tarsi brownish-black. Abdomen black, shining, clothed with erect, pale pubescence, longest at base and more or less mixed with black on segments 4-6; segments 2-6 with distinct, white, marginal fascia; apical segment bilobate. Venter clothed with white pubescence.

Habitat: Berkeley, Cal.; May and June. Three males. This species is closely allied to *D. australis*, which, however, has the second submarginal cell smaller and not narrowed above. It may readily be distinguished from the male of *D. enavata* by the longer third antennal joint, the much more prominent lobes of the apical segment of the abdomen, etc.

4. *Didasia enavata*, Cress. (= *D. tricineta*, Prov.).—Santa Catalina Island, Santa Barbara, and Redlands, Cal. (H. O. Woodworth); June. Numerous specimens.

DESCRIPTION OF THE LARVA OF HADENA MISELOIDES, GUEN.

BY HARRISON G. DYAR, WASHINGTON, D. C.

Egg.—A little less than spherical, the base flat. Twelve sharp ribs run to the vertex, which is large, circular, reticulate, with a central elevation at the micropyle; one-third of the way down these ribs neatly alternate with twelve others, forming twenty-four ribs around the base. Ribs straight; space distinctly, regularly cross striate. Diameter .8, height .7 mm.

Stage I.—Head rounded, mouth pointed; shining yellowish; width .5 mm. Body thickened at thorax and joint 12, robust, sharply tapering at joint 13, which is placed almost under joint 12. Translucent yellowish, shining and sticky like a slug, the food showing by transparency. Setæ minute and pale, not glandular, tubercles obsolete. Rests curled on the back of the leaf; several larvæ on the same leaf, but not gregarious. Hatched when found.

Stage II.—Head whitish, shining; width .7 mm. Body as before, but less yellowish, shining, but not sticky and green from the food. Joint 2 in front is yellowish, and the sides of joint 12 are whitish from the large tracheæ showing through the skin. Setæ nearly imperceptible.

Stage III.—Head small for the body, somewhat retracted, pale luteous; width 1.1 mm. Body robust, thorax and joint 12 enlarged, the latter somewhat angular, shining, translucent green, appearing all dark

green from the food; three white dots on each segment on tubercles i. and ii., and a third not on a tubercle before ii., in line with it; on thorax the dots are on i. a, i. b, and a dot before.

Stage IV.—As in the next stage, but without a dot before the spiracle; width of head 2.0 mm.

Stage V.—Head testaceous green, small; width 2.5 mm. Thorax no longer thickened, but joint 12 sharply humped, descending perpendicularly to the anal feet. Subtranslucent velvety green, frosted whitish subventrally, dorsal vessel darker green. A moderately broad, diffuse, rather faint white stigmatal line, faint at the ends. Tubercles i. and ii. and a dot before ii. distinct, pale yellow, with dark green rims; iv. to vi. and a dot before spiracle white. Tubercle iv. is opposite the upper edge of the spiracle, except on joint 12, where it is below the lower edge. At the end of the stage the larva turned black, all the tubercles and dots yellow, and spun a rather firm cocoon on a piece of bark. Imago in thirty days.

This larva apparently omitted the normal fourth stage. In the last stage, also, the head is smaller than would be expected; but the moth that emerged was a rather small male.

Food plant.—Cat briar (*Smilax rotundifolia*).

CHLORIPPE CELTIS (BOISD.-LEC.) CAPTURED ON MONTREAL ISLAND.

BY CHARLES STEVENSON, MONTREAL.

On the 21st July, Mr. E. Denny, who often accompanies me on my entomological rambles, brought me a cyanide bottle full of butterflies which he had collected for amusement's sake. On looking at it I immediately saw a specimen that was new to me, and was congratulating myself on getting what I thought would be a new addition to the *Satyrinae* of my collection. My pleasure was increased, on consulting Dr. Holland's "Butterfly Book," to find it was a *Chlorippe celtis*, Boisd.-Lec., ♀, or Hackberry butterfly. (Plate XXIII., fig. 4.) A species, he states, as found generally from southern Pennsylvania, Ohio, Indiana, and Illinois, to the Gulf of Mexico. I immediately called my friend's attention to the specimen, and he remembered the particular place he had found it, because he thought at the time it was something he had not seen in my collection. So ever since we have watched the locality, but have not been successful in obtaining another. It was caught in the Outremont