

## NOTES ON THE NEARCTIC NUSA (DIPTERA, ASILIDÆ).

W. L. McATEE.

During a study of the species of *Laphria* occurring north of Mexico, enough was learned also of the species of *Nusa* inhabiting that region to extend our knowledge of the group—information that has never been summarized. *Nusa* may be recognized as a genus, not on the principal character advanced in the original description,\* closure of first posterior cell, which is sometimes true, sometimes not, but upon the grounds of habitus, and characteristic genitalia. Nearly all the species have well developed pruinose markings on thorax, including three pairs of lateral lunules and one to three longitudinal vittæ. The male forceps are short and one or both pairs of claspers are exposed beyond apex of forceps, seeming a continuation of them. The male hypopygium is thus quite distinct from the types exhibited by the nearctic genus to which *Nusa* is most closely allied, that is *Laphria*, in which the apex of the forceps itself is expanded and variously modified, and nearly or quite conceals the claspers. In some species of *Nusa* the femora are swollen and tibiæ curved; in others these characters are not pronounced.

### KEY TO THE SPECIES.

- a. Only apex of abdomen yellowish to reddish.
- b. Length over 20 mm.; genitalia as in Figure 1. . . . . *cruenta* n. sp.
- bb. Length less than 20 mm.; genitalia as in Figure 2. . . . . *fulvicauda* Say.
- aa. More of abdomen so colored.
- c. Sides of abdomen black, wings distinctly marked, genitalia as in Figure 3. . . . . *sicaria* n. sp.
- cc. Abdomen without black markings, wholly yellowish to reddish; genitalia as in Fig. 4. . . . . *abdominalis* Brown.

### *Nusa cruenta* new species.

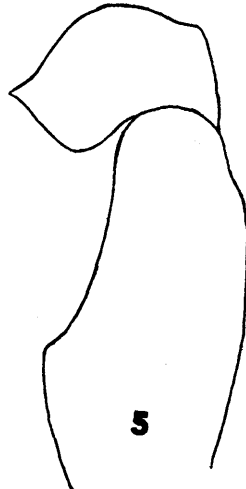
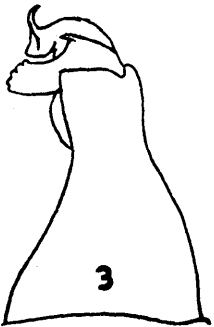
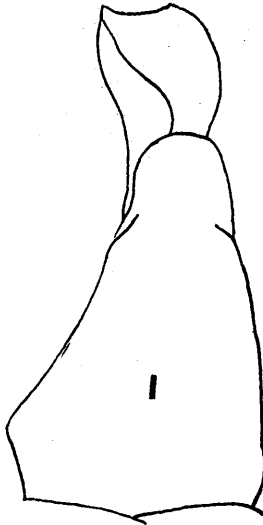
A black species with seventh abdominal segment and hypopygium reddish testaceous; exposed membranes of abdomen same color and halteres somewhat paler. Thorax apparently entirely without pruinose markings; though this may be due to methods of preparing this individual specimen. Bristles on facial prominence black, remaining pubescence of head, coxæ, and lower surfaces of legs, long, copious, grayish.

\* Walker, Francis. *Insecta Saundersiana* or characters of undescribed insects in the collection of William Saunders, Esq., F. R. S., F. L. S., etc. Vol. I, Diptera, 1856, p. 105.

Pubescence of upper surface of legs, and of tarsi black. Upper surface of thorax with sparse short, pale hair; tuft of hair in front of halteres pale, in front of wings black; thoracic and scutellar bristles also black. Pubescence of abdomen chiefly pale on first three, mostly black on remaining segments, longer at sides; each of segments 2-6 with a strong bristle on each side. Wings fumose, pale toward base, first posterior cell open. Male forceps and claspers as shown in Figure 1. Length, 24 mm.

Type, a male from Florida (U. S. N. M.)

This specimen was figured in *The Insect Book*, L. O. Howard, 1901, Pl. XXIX, Fig. 15, as *Nusa fulvicauda*.



#### MALE GENITALIA OF *NUSA*

- Fig. 1. *Nusa cruenta* n. sp. Forceps from side.  
 Fig. 2. *Nusa fulvicauda* Say. Forceps from side.  
 Fig. 3. *Nusa sicaria* n. sp. Forceps from side.  
 Fig. 4. *Nusa abdominalis* Brown. Forceps from side.  
 Fig. 5. *Nusa* n. sp. near *rubida* Williston. Forceps from side. This species, from Mexico, is not described but is figured to show an additional variation of the *Nusa* type of hypopygium.

**Nusa fulvicauda** Say.

*Laphria fulvicauda* Say, Thomas. American Entomology 1, 1824, p. 12, Pl. VI (Cote sans Dessein, Missouri River). The Complete Writings of Thomas Say on the Entomology of North America, 1, 1859, p. 12.

*Laphria pyrrhacra* Wiedemann, C. R. W. Auszer-europaische zweiflugelige Insekten 1, 1828, pp. 517-518. (Brazil, Savannah and Missouri).

A synonym at least so far as United States specimens are concerned.

Black with face, occiput, coxæ and pleuræ more or less silvery pruinose, and following pruinose markings on disk of thorax; a bluish gray median percurrent vitta, and two lateral irregular vittæ expanded externally at 3 points and connected with silvery pruinose patches (the lunules) along sutural areas. Mystax black, face with silvery pile and longer decumbent hair; beard, coxal and pleural hair grayish white. Short sparse hair of upper surface of thorax black; bristles of thorax and scutellum black. Pile of abdomen pale, longer at sides of segments, forming conspicuous tufts on segments 2-6. Segment 2 with two strong black bristles on each side, segments 3-5 with one. A spot involving part of segment 6, all of 7 and part of hypopygium, yellowish to reddish with concolorous hair. Hair of legs gray and black, bristles black; wings fumose, clearer within cells and toward base. First posterior cell closed in both wings of three specimens, in one wing of one specimen and open in both wings of nine specimens. Hypopygium black and red, forceps and claspers as in Figure 2. Length, 15-18 mm.

Specimens examined: Toronto, Ont., Oct. 7, 1887, Wm. Brodie, (U. S. N. M.); Linglestown, Pa., July 16, 1913, W. S. Fisher, (U. S. N. M.) Aug. 4, 1912; Champlain (Walton); Harrisburg, Pa., June 13, 1912, Champlain (Walton); Great Falls, Va., July 12, 19, 1916, J. N. Knull, (U. S. N. M.); Cabin John Bridge, Md., July 25, 1913, R. C. Shannon, (U. S. N. M.); Washington, D. C., Aug. 22, 1912, F. Knab, (U. S. N. M.); Wauseon, Ohio, (K. U.); N. C., Fla., (U. S. N. M.); Brownsville, Texas, June, F. H. Snow, (K. U.); Los Angeles Co., Calif., July, (U. S. N. M.), Locality correct?

A ♂ specimen labelled Col. [orado], Snow, (K. U.) has segments 3-7 involved in the abdominal spot; it is made the type of variety *lutea*, new variety. The Brownsville specimen approaches this form.

**Nusa sicaria** new species.

Ground color reddish brown, appearing lilac-brown where pruinose, with black markings as follows: basal 2 joints of antennæ, beak and region of its insertion, legs except basal two-thirds of tibiæ, 3 large patches on each side of thoracic disk, posterior part of scutellum and thorax beneath it, and more or less of sides of abdominal segments, being most extensive on 5 and 6. Face, except prominence, pleuræ,

lateral vittæ, and lunules of thorax, densely white to silvery pruinose; coxæ, occiput below and median percurrent, thoracic vittæ gray pruinose. Short pile on thoracic vittæ black, as are also thoracic and scutellar bristles. Mystax of short, stubby black bristles, decumbent pile of face white; beard and most of hair of legs grayish; pleural hair and tufts a little tawny. Abdominal pile pale, short on middle segments, longer at sides especially toward the base. Two stout black bristles on each side of segment 2, one each on segments 3-5. Abdomen reddish brown, blackish at sides, especially on segments 4-6, segments 6-7 and hypopygium mostly yellowish red. Forceps and claspers as in Figure 3. Wings clear with distinct fuscous clouds at base, at apex of basal cells and at apex of discal cell, following to some extent the neighboring veins. In one specimen the anterior branch of third vein in each wing has a stump. First posterior cell closed before border of wing. Length 17-20 mm.

Type, a male from Nueces River, Zavalla Co., Texas, April 26, 1910, Hunter and Pratt, (U. S. N. M.).

Other specimens examined: San Diego, Texas, May 7, E. A. Schwarz, (U. S. N. M.); Los Borregos, Brownsville, Texas, June 5, 1904, H. S. Barber, (U. S. N. M.).

#### *Nusa abdominalis* Brown.

*Nusa abdominalis* Brown, Barnum. Two new species of Asilids from New Mexico. Kansas University Quarterly, 6, No. 2, April, 1897, p. 103. (Cuba, Bernalillo County, N. Mex.)

Ground color of head and thorax black; face and occiput densely covered with silvery gray pruinosity, rather copious decumbent pile of face, mystax and beard of same color. Thorax also almost entirely covered with pruinosity, in this case yellowish gray, leaving ground color exposed above in two narrow vittæ anteriorly and two broad, posteriorly arcuated and medianly interrupted transverse fasciæ on posterior part of thorax. Tufts of hair in front of halteres and short pile of pleuræ, coxæ, etc., silvery gray; bristles around edge of thoracic disk, and on scutellum tinged with yellowish. Abdomen honey yellow, with sparse short pale pile and stout pale bristles, 2-3 on each side of second and 1-2 on each side of following abdominal segments. Legs about same color as abdomen, femora black apically; front tibiæ black apically, other tibiæ chiefly and tarsi entirely black; hairs and bristles yellowish. Wings hyaline, slightly yellowish tinged; all posterior cells closed remote from margin. Hypopygium as in Fig. 4. Length 11-13 mm.

Specimens examined: Bill Williams Fork, Ariz., Aug., F. H. Snow. (Hine).

Two specimens, the general coloration of which is obscured by grease suffusion, differ from the foregoing by having the legs black (except base of tibiæ faintly reddish). They may be known as variety *atripes* new variety.

Specimens examined: Mesilla Park, New Mexico, on sand hills, July 12, 1897, Cockerell. (Type, U. S. N. M.); San Bernardino Ranch, Cochise Co., Ariz., 3,750 feet, August, F. H. Snow. (Hine).

Whether *N. similis* Brown (loc. cit.) is a distinct species is doubtful. The original specimens have not been available, hence a decision on this point is not possible. The chief character used for distinguishing the species, namely, number of bristles on sides of abdominal segments, is shown to be variable in *N. abdominalis*, and the variations may cover *N. similis*.