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## DIPTEROLOGICAL CONTRIBUTIONS.

BY C. F. ADAMS.

FOR the pleasure of studying diptera in the University of Kansas, I have to thank Dr. F. H. Snow, whose interest in things scientific is so well known. To Dr. S. W. Williston I am under deep obligations, for the use of his dipterological library and his collection. To Prof. J. M. Aldrich and Mr. D. W. Croquillet thanks are due for looking up references.

The material reported in this paper comes principally from two localities, Rhodesia, Africa, and western North America. The African material was collected by Mr. F. L. Snow, son of Dr. F. H. Snow, while visiting near Salisbury, Rhodesia. This lot is a very important addition to the University collection, and as I get time and literature more at my command I shall report further concerning it. Most of the American species were collected by expeditions under the direction of Doctor Snow. I have Doctor Williston's consent for including his two new species in this paper.

### I. NORTH AMERICAN SPECIES.

#### MYCETOPHILIDÆ.

*Mycetobia marginalis*, n. sp.

Female: Black, shining; head black, subshining, tip of palpi yellow; mesonotum black, shining, humeri, lateral and posterior margins, and scutellum with a reddish cast, pile yellow, pleuræ black, mostly shining, halteres brown; abdomen light yellow, last segment wholly, and the preceding with the basal half, blackish; legs light yellow, tips of tarsi fuscous; wings agree very well with those of *M. palipes* Meig., except the auxiliary vein is a little shorter. Length, 3.5 mm.

One specimen; Atherton, Mo. Collected by the writer, May 3, 1901.

*Neoglaphyoptera lineola*, n. sp.

Female: Differs from *N. stiata* Will., in the following particulars: The brown of occiput is sharply defined, the center and sides being yellow; pleuræ with a brown spot anterior to and above the middle coxæ, metapleuræ above hind coxæ brown; the last two abdominal segments almost wholly yellow; all trochanters, the posterior coxæ and femora black, the latter with a narrow longitudinal line on the inner and outer sides, yellow; the brown cross-band on outer part of wing is much broader. Length, 4 mm.

One specimen; Kern county, California.

*Neoglaphyoptera cuneola*, n. sp.

Female: Yellow, shining; vertex with a transverse black line, occiput with a reddish cast and sparse yellow pile, antennæ, except base, dark brown; mesonotum with three shining black stripes, the two lateral ones nearly as broad as long, the middle one wedge-shaped, scarcely reaching the middle of the dorsum, pile yellow, scutellum yellow, with two long yellow bristles; pleuræ black, yellow above anterior coxæ, metanotum black, halteres yellow; abdomen shining black, except narrow lateral margins, apex, and venter, which are yellowish, pile very short and yellow; legs yellow, a small spot on trochanters, extreme tip of posterior femora, tibiæ, and tarsi in large part, fuscous; wings hyaline, a brownish fascia traversing the wing, starting about midway between tip of first vein and apex of wing. Length, 4 mm.

One specimen; Colorado Springs, Colo., August, 1894. Collected by E. S. Tucker.

## CULICIDÆ.

*Culex affinis*, n. sp.

Female: Head and members dark brown, proboscis lighter in the middle; scales of head light brown; thorax brown, mesonotum uniformly covered with brownish yellow scales, pile black, scales of pleuræ mostly white, abdomen brownish scaled, a narrow band at bases of segments white, pile pale yellow, venter white-scaled; coxæ and base of femora pale yellow, distal end of latter dark brown, tibia dark brown with extreme apex and base white; tarsi concolorous with both ends of joints white, which on the front tarsi is indistinct, and the last joint

of hind tarsi wholly white; claws small, simple; veins of wings thinly clothed with light brown scales, petiole of first submarginal cell one-third length of that cell, cross-veins at ends of first and second basal cells the length of the cross-vein at end of second basal cell distant from each other. Length, 3.5 mm.

One specimen; Arizona. Prof. F. H. Snow.

*Culex apicalis*, n. sp.

Female: Head brown; scales mostly light yellow, some long brown ones; palpi and proboscis wholly brown, antennæ brown, with base lighter, thorax brown with light brown scales, pile black; abdomen dark brown, covered with brownish scales, except those on the posterior margin, which are white, forming on the second and third segments small triangles by projecting forward in the middle, and on the following segments forming narrow bands, venter covered largely with white scales; coxæ and base of femora pale yellow, rest of legs and tarsi wholly brown, tarsal claws small and simple; veins of wings sparsely covered with hairs and scales, petiole of first submarginal cell one-half the length of that cell, the cross-veins at ends of first and second basal cells distant from each other. Length,  $4\frac{1}{2}$  mm.

Two specimens; Arizona. Prof. F. H. Snow.

*Culex particeps*, n. sp.

Male: Head brown, covered with yellowish scales, among which are some pure white ones, few hairs along eyes black; proboscis dark brown, bearing a few yellowish scales; palpi brown, base of each joint white; antennæ brown, lighter at base; thorax brown, bearing yellow and white scales, the latter most prominent on posterior part, pile black; halteres pale with brown knobs; abdomen brown, scales at base of segments white, on remaining part of segments the scales are brown, a few scattering ones yellow, venter almost wholly covered with white scales; fore coxæ brown, others rather pale; femora black, with the posterior side on basal half, and a ring near apex white-scaled; tibiæ black, with a few white scales; tarsi black, with bases white; front and middle tarsal claws toothed, hind ones small and simple; veins of wings

light brown, bearing narrow brown scales, those on the anterior part of wing intermixed with white ones; a spot at the origin of the second vein, the small cross-vein, and a spot beginning at the base of first submarginal and crossing the second submarginal and first posterior cells, clouded with brown; the cross-veins at end of first and second basal cells approximated; petiole of the first submarginal cell one-half the length of the cell.

Female: Agrees with male, except has more long black scales on head, petiole of first submarginal cell one-third the length of that cell; all tarsal claws simple. Length, 8 mm.

One male and six females; Arizona. Prof. F. H. Snow.

#### CHIRONOMIDÆ.

*Ceratopogon dimidiatus*, n. sp.

Female: Head black, occiput and cheeks subopaque, front shining, eyes widely separated, face shining, with a yellowish cast, antennæ dark brown, first two joints yellowish, antennal hairs whitish, palpi brown, tip of last joint yellowish; thorax black, mesonotum subshining, faintly whitish pollinose, pleuræ with a longitudinal silvery white pollinose band, halteres light yellow; abdomen black, subshining, sparse, pile yellowish-white; coxæ black, apices yellow, basal half of femora yellow, apical half black, tibiæ wholly black, tarsi yellow, with apices of first, second, third and the last two joints wholly black, metatarsi twice the length of the following joint, last joint of fore tarsi swollen, empodia of all tarsi wanting, front tarsal claws rather small but of equal length, middle and hind tarsi each with a single long claw which bears a rather long basal tooth, the last tarsal joints being partly padded beneath with short, dense hairs; wings hyaline, larger veins dark brown, third vein connected with the first by a cross-vein, the wing in this region with a brown spot; the third vein ends at about four-fifths of the distance from the tip of the first vein to apex of wing; at this point is a second brown spot; fourth and fifth veins furcate opposite the small cross-vein. Length, 3.5 mm.

Four specimens; Grand Canon, Arizona.