

sector; and beyond is a crescent of five spots, most of them contiguous, on the upper part of the second gradate series, the posterior four of these are geminate with a minute white point; a larger triangular dark spot near ends of cubitus and anal veins. Hind wings with the costal neuration toward middle and towards apex distinctly brown; between it is very pale. The fore wings are very broad, but acute at tips; the costal area very broad at base. There are four radial sectors, but the first arises nearer base than usual, and at first diverges but little, but curves before origin of second sector; none of the sectors are connected back to the radius. The median is not bent toward cubitus at connecting veinlet.

Expanse, 16 mm.

One specimen from Plummer's Island, Maryland, Sept.

DESCRIPTIONS OF FOUR NEW HORN-TAILS.

BY WILLIAM H. ASHMEAD, M.A., D.SC.

Genus *Sirex*, Linné.

Sirex taxodii, new species.—♀. Length, 11.5 to 13 mm.; ovipositor very nearly the length of the abdomen. Black; a spot back of eyes and the process of the last dorsal segment reddish-yellow; antennal joints from 11 to apex, an annulus at base of middle and hind tarsi, and at base of hind tibiae, yellowish-white. Wings brown-black, with a faint purplish tinge in certain lights.

♂.—Length, 12 mm. Agrees well with the female, except that the metanotum and the abdomen are reddish-yellow, the apex dusky or blackish, the angles of the pronotum faintly reddish, the apices of the front and middle femora and their tibiae and tarsi are yellowish; the hind tibiae have an annulus at base, the hind tarsi have an annulus at base, while the extreme tip of the basal joint and joints 2 to 5 are yellow. The antennae are 20-jointed, the joints 12 to 20 being yellow, the rest black.

Types.—Cat. No. 7681, U. S. N. M.

Tryon, N. C. Described from 2 ♀'s and 1 ♂, labelled No. 1611; bred by Mr. W. F. Fiske from the Cypress (*Taxodium distichum*, L.).

Sirex Fiskei, new species.—♀. Length, 27 mm.; ovipositor about two-thirds the length of the abdomen. Head and thorax black, the thorax above brownish; abdomen reddish-yellow, the basal two-thirds of first dorsal segment, dorsal segments 3 and 4 and the fifth segment laterally black. The antennae are apparently 22-jointed, black, with joints 13 to 22 yellowish or yellowish-white; legs black, an annulus at the base of the middle tarsi, the basal third or more of the hind tibiae, and the base of the hind tarsi, white or yellowish-white. Wings purplish-black.

Type.—Cat. No. 7682, U. S. N. M.

Tryon, N. C. Described from one female taken by Mr. W. F. Fiske on Pine.

Genus *Paururus*, Konow.

Paururus Californicus, new species.—♀. Length, 23 mm.; ovipositor hardly half the length of the abdomen. Uniformly dark blue; the wings hyaline, but with the apices of both wings margined with fuscous, the stigma and veins black or brown-black. Antennæ 20-jointed.

Type.—Cat. No. 7683, U. S. N. M.

Placer Co., California (Albert Koebele); Hoquiam, Wash. Described from 2 specimens. The specimen from Washington State was taken by Mr. H. D. Burke, Aug. 28th, on spruce, and bears the label No. 2202b, Hopkins.

Paururus Hopkinsi, new species.—♀. Length, 20 to 22 mm. ovipositor hardly one-third the length of the abdomen. Uniformly dark blue, with brown-black wings that have a faint purplish tinge in certain lights. Antennæ apparently 23-jointed, the terminal joints being brownish.

♂. Length, 18.5 mm. Dark blue, with abdominal segments 5 and 6, the apices of front and middle femora and their tibiæ and tarsi, an annulus at base of hind tibiæ, and the fourth joint of hind tarsi, yellow. Wings yellowish hyaline, the apical margins fuscous.

Types.—Cat. No. 7684, U. S. N. M.

Tyron, N. C., and Kanawha, W. Va. Described from many specimens taken by Dr. A. D. Hopkins and W. F. Fiske from dying pine trees. The species is allied to *P. pinicola*, Ashm.

Paururus pinicola, Ashmead.—F. W. Konow, without seeing a specimen of this species, has incorrectly made it a synonym of *P. nigricornis*, Fabr., a species known to me in both sexes. The male of *P. pinicola* has never been described, but as Messrs. Hopkins and Fiske have taken it in quantities at Kanawha, W. Va., together with the female, I give below a brief description:

♂.—Length, 11.5 to 19 mm. Dark blue, with the abdomen, except the basal three segments, reddish-yellow; the apices of the front and middle femora and their tibiæ and tarsi except the last joint, a narrow annulus at the base of hind tibiæ, and the fourth joint of hind tarsi, are honey-yellow. Antennæ 17-jointed. Wings usually yellowish-hyaline, rarely wholly hyaline; the apices margined with fuscous, the costal cell and the stigma, except the outer edge, which is dark brown, always distinctly yellowish.