

NEW SPECIES OF NORTH AMERICAN CHRYSOPS.

JAS. S. HINE.

Of the four species described in this paper three were taken in Guatemala. The other one is from eastern United States and is described at this time for the reason that a student of the group desires to mention the species in a paper he is preparing for publication. The Guatemalan material was procured in company with Mr. E. B. Williamson of Bluffton, Indiana.

Chrysops melanopterus, n. sp. Female, black, first two segments of the antenna each longer than the third. Length, 9 millimeters.

Relative length of the antennal segments 2:1.5:1. Basal segment without indication of enlargement as is the case with other species of the genus having the first and second antennal segments elongated. Whole body, including wings, legs and antennae, black.

Type taken at a point about five miles up the railroad from Puerto Barrios, Guatemala, Department of Izabal, March 14, 1905. The locality was along the railroad where it passed through an extensive swamp only a few feet above sea level.

Two other specimens were procured at the same place, one from the back platform of a freight caboose. The specimen followed the moving train for some time before it was captured.

The species is entirely distinct from any species I have seen or have found described. The uniform black wings are peculiar for a member of this genus.

Chrysops pachycnemius, n. sp. Female wing with costal margin and crossband black, apical spot separated from the crossband; abdomen yellow at the base, black apically. Length, 8 millimeters.

Lower part of the front, including the frontal callosity, and the face yellow; palpi a shade darker than the face, proboscis black. Region of the ocelli shining black, otherwise the upper part of the front covered with bright yellow pollen. First segment of the antenna yellow, second yellow on the inner side, brown outside, third black. Thorax shining black with four dorsal stripes formed by yellow pollen, the two inner abbreviated behind, the two outer broken at the transverse suture; side of the thorax with a yellow spot behind the eye, one directly beneath the root of the wing and another just behind it. Wing with the base, costal cell and the crossband black, apical spot separated from the crossband by a wide space, extreme base of each costal cell black, the inner margin of the crossband extends from the branching of the second and third veins nearly straight to the anal vein passing near the inner end of the discal and fifth

posterior cells. The crossband reaches the posterior margin of the wing filling out the apex of the anal cell and all the fourth and fifth posterior cells with the exception of a small patch at the distal end of the latter; the outer margin of the crossband starts from the union of the first vein with the costa and extends in a somewhat irregular curve to the end of the vein which separates the third and fourth posterior cells. The apical spot fills out the apexes of the marginal and first submarginal cells and invades the second submarginal, reaching the posterior border of the wing at the apex of the vein which separates the latter cell from the first posterior. All the femora black at each end, otherwise yellow, tibia black, all of them quite distinctly enlarged, but the anterior pair more than the others; anterior tarsi black, others with the first segment wholly yellow and remaining segments with apexes more or less black. First segment of the abdomen above narrowly yellow on the sides, second segment yellow for its entire width on each side but this color narrows toward the front border until at the mid-dorsum where the two meet it is very narrow; a mid-dorsal yellow marking on the second and third segments, widened and triangular on the second and elongate and narrow on the third; the posterior third of the fourth segment yellow; venter with first two segments yellow, remainder black.

Type taken at Santa Lucia, on the Pacific slope of Guatemala at an altitude of about a thousand feet, February 1, 1905.

***Chrysops calopterus*, n. sp.** Female with black body and variegated wings. Length, 6 millimeters.

Face and palpi yellow, antenna yellow, except the annulated portion of the third segment which is black; region of the ocelli shining black, frontal callosity yellowish on the disk and black above, otherwise front covered with gray pollen. Thorax black with indications of stripes on the anterior part; legs black except a broad ring on the distal part of each femur and basal segments of each tarsus which are yellow. Anterior fourth of each basal cell, entire costal cell and marginal cell to beyond the stigma are infuscated. The black of the crossband and apical spot are much broken up and the hyaline triangle is crossed and encroached upon by dark markings; there is a very dark quadrangular spot at the furcation of the third vein; the discal cell is hyaline with an irregular dark patch at its middle; the posterior margin of the wing is infuscated all the way to the fifth posterior cell and more pronounced at the intersection of the veins; the veins at the inner ends of the discal, first, fourth and fifth posterior cells are widely margined with black. None of the cells of the wing except the costal are entirely infuscated, and none are entirely hyaline except the axillary. Abdomen black

on the dorsal side except segments two, three and four each have a transverse gray marking on the posterior border.

Type taken at Los Amates, Guatemala, 60 miles inland from Puerto Barrios, at an elevation of perhaps 250 feet, February 21, 1905.

Other specimens were procured at Morales and at Puerto Barrios.

Chrysops dimmocki, n. sp. Female, body colored like *callidus*, wing like *montanus*. Length, 8 millimeters.

Frontal tubercle black, front covered with a greenish gray pollen which follows the margins of the eyes to the occiput widening somewhat, below the frontal callosities. Face light yellow, palpi darker, proboscis brown. First and second segments of the antenna and base of the third yellowish and clothed with rather coarse black hairs, remainder of third segment black. Thorax above with four rather wide greenish gray stripes which are slightly less distinct posteriorly. Legs mostly yellow, but apical parts of middle and hind tarsi blackish; front legs with apex of tibia and whole of tarsus black or dark brown. Wings with costal margin and crossband black, first and second basal cells with very slight infuscation at base; the crossband reaches the posterior margin, filling out the fourth posterior cell, outer border curved, fifth posterior cell largely hyaline in the middle but plainly infuscated along the veins at each side; apical spot wide, filling out all the marginal cell, two-thirds of first submarginal and half of second submarginal. The abdomen has a small black spot on the first segment beneath the scutellum, second segment with a black inverted V whose apex reaches the anterior margin, otherwise yellow, remaining segments with the exceptions of the lateral and hind margins black, the hind margin expands into a triangle in the middle on each segment; venter yellow with dark markings toward the apex.

Type taken at Longmeadow, Massachusetts, by Dr. Geo. Dimmock. Eight other specimens taken at Columbus, and Wauseon, Ohio, and Anglesia and Westfield, New Jersey, those from the latter state by V. A. E. Daecke and H. S. Harbeck, of Philadelphia.

This species has been in my collection for a long time and I hesitated to name it for the reason that no male specimen could be procured, but the characters are so constant and so many specimens have been collected and sent in that it seems that it must be distinct.