

NEW NORTH AMERICAN TABANIDAE. XV. ADDITIONS TO RECORDS OF *CHRYSOPS* IN FLORIDA

CORNELIUS B. PHILIP¹ AND CALVIN M. JONES²

Reported here are two remarkable additions to the tabanid fauna of Florida, a state supposedly well surveyed for this family, as documented in the lists of Fairchild (1937), Bargren (1961), and Jones and Anthony (1962). Both species have probably escaped notice heretofore because they are strongly precinctive or have peculiar habits. The new species described below was taken while attacking horses and is named for the collector. The other, the bog-dwelling *Chrysops hyalinus*, has not been reported to show any interest in parasitism, though females, like all others of the genus, almost certainly require some kind of vertebrate blood to mature their eggs.

Chrysops tidwelli, n.sp.

Figure 1

A small, dark species, including scutellum, with abdomen contrasting yellow on 2 basal segments, callosity yellow on disc, brown on upper margin, femora yellow, and wing picture sharply black in 1st basal cell and through discal cell to hind margin in cell M_3 , cubital cell hyaline, apical spot widened to include nearly all of cell R_4 , a spur in R_5 , hyaline triangle sharply acuminate before reaching vein R_{2+3} and widely open behind.

HOLOTYPE: Female, 6 mm. Eye pattern (relaxed) most nearly approaching *C. bistellata* Daecke (1906, fig. 30) with the occipital border contiguous to the margin, the other spots separated vertically from one another and from the anterior eye margin, and the arrowhead unusually vertically extended and isolated. Frons blue-gray pollinose, taller than broad, a large, quadrate black shining spot surrounding the ocelli at vertex, and narrowly connected beneath to the ovoid, yellow and blackish-brown callosity. Face entirely yellow, bare except for narrow incomplete lateral pollinose stripes, tubercles normal. Antennae slender, the 2 basal segments and extreme base of flagellum yellowish, darkening to black beyond. Palpi reddish.

Notum and scutellum blackish with a wide plumbeus stripe anteriorly. Pleura dark with 2 wide yellow stripes. Legs entirely yellow except dark distad of the middle of anterior tibiae.

Abdomen bicolored above and below, yellow on basal 2 segments except for inconspicuous midventral darkening; remainder blackish, the anterior half of tergite 3 notched with 3 dull reddish spots and similar spots laterally on sternite 3.

Escambia County, Florida, 9 Aug., 1960. M. Tidwell. In U. S. National Museum (USNM).

Paratype females, 12 same data or 7 August. Dried blood-meals evident in two. In close agreement with type, though occasionally the callosity

¹ U. S. Department of Health, Education, and Welfare, Public Health Service, National Institutes of Health, National Institute of Allergy and Infectious Diseases, Rocky Mountain Laboratory, Hamilton, Montana.

² Entomology Research Division, Agricultural Research Service, U. S. Department of Agriculture, Lincoln, Nebraska.

and segment 3 of the abdomen may be almost entirely black or the dark spur in cell R_5 is missing. In USNM, Florida State Department of Agriculture, and collections of the authors and L. L. Pechuman.

This interesting little species must be very localized to have remained this long undetected in a well surveyed state. In Philip (1955), it runs to couplet 75 of the key to females, where it quickly separates from *C. hinei* Daecke and *C. beameri* Bren. by nonstriate abdomen, dark scutellum, entirely yellow hind femora, and apex of hyaline triangle not reaching vein R_{2+3} . The wing picture is somewhat like that of *C. obsoletus* Wied. and *C. dacne* Phil. but the bicolored abdomen and peculiar eye pattern again are distinctive in this new species.

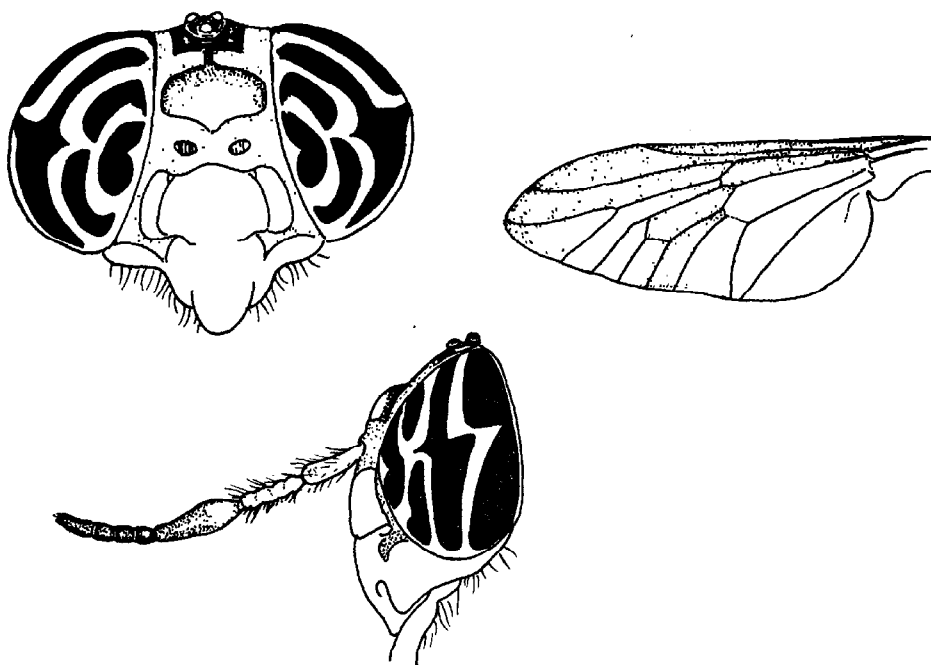


Figure 1. *Chrysops tidwelli* new species. Head (frontal and lateral views showing eye pattern, relaxed, and antenna) and wing pattern.

Notes from the collector describe the circumstances as follows: Taken 7 miles southwest of Cantonment (Escambia County). The terrain was gently rolling. Vegetation consisted of various pines and wire grass on the elevated portions, while the lower portions consisted of predominantly bay trees and other lowland vegetation. A small stream drained the area and was approximately 100 yards from where the specimens were taken. The collections were made from a horse between 3 and 6 p.m. on clear, sunny days.

Chrysops (Liochrysops) hyalinus Shannon

The species has not been reported for many years and there was concern that "civilization" of the only two known bog localities of its occurrence near Beltsville, Md., and Southern Pines, N. C., might have resulted in its disappearance following the "universal urge of human beings to drain

swamps" as Philip Wylie puts it (1961). It was a pleasure, therefore, to receive a nice series of 10 females from Dr. Howard V. Weems, taken by E. W. Holder, Jr., in April, 1960, at Glen St. Mary near the southern border of the great Okefenokee Swamp. This is a new Florida record and affords the opportunity, it is hoped, of capturing the unknown male of this unique little species with such peculiar habits and characteristics that it was assigned by Philip (1955) to a new subgenus.

Tabanus aranti Hays

This is a species of *Tabanus* which is also likely to be added to the Florida list.

A female of this recently described, large, black species (Hays, 1961) from Alabama is in the collection of one of us (CBP) and was taken considerably south of the original Auburn series. The specimen was collected by L. S. Henderson at Florala (Covington County), Alabama, 1 June, 1939, which places it practically on the northern Florida boundary. The species certainly occurs in Florida also.

LITERATURE CITED

- Bargren, William C.* 1961. An annotated list of horse flies of Florida and an illustrated key to the genera (Diptera: Tabanidae). Fla. Ent., 44: 69-84.
- Fairchild, G. B.* 1937. A preliminary list of the Tabanidae (Diptera) of Florida. Fla. Ent. 19: 58-63; 20: 10-11.
- Daecke, E.* 1906. On the eye-coloration of the genus *Chrysops*. Ent. News, 17: 39-42.
- Hays, K. L.* 1961. *Tabanus aranti* sp. nov. (Diptera, Tabanidae) from Alabama. Ent. News, 72: 127-129.
- Jones, C., and D. W. Anthony.* 1962. The Tabanidae (Diptera) of Florida. U. S. Dept. Agric. Tech. Bull. (in press).
- Philip, C. B.* 1955. New North American Tabanidae. IX. Notes on and keys to the genus *Chrysops* Meigen. Rev. Brasil. Ent., 3: 47-128.
- Wylie, Philip.* 1961. Why are they spoiling Florida? Sat. Eve. Post, Dec. 23, 1961, pp. 8, 10.