A NEW DAY-BITING SAND FLY FROM THE SOUTHEASTERN STATES (DIPTERA, CERATOPOGONIDAE)¹

WILLIS W. WIRTH AND FRANKLIN S. BLANTON
Entomology Research Division, ARS, USDA, Washington, D. C., and Department of Entomology, University of Florida, Gainesville

For more than three decades, residents of central and northern Florida have reported annoyance by a diurnal bloodsucking Culicoides. Usually these reports have come from the areas adjacent to the cold, crystal-clear springs and streams for which this resort area of Florida is famous. Description of this Culicoides was postponed while attempts were made to collect males and find the larval habitat. Because of its vicious biting habits, however, and to make the name available for reports on its habits, distribution, and economic importance, we are describing this species at this time from the female sex only.

Culicoides tissoti, new species
(Fig. 1-6)

A dull blackish species of moderate size with unmarked scutum and milky white wings with dark stigma.

FEMALE. Head: Eyes bare, broadly separated, a long seta borne below the interocular bridge (Fig. 2). Antenna (Fig. 6) with lengths of flagellomeres in proportion of 16-10-11-11-11-11-12-17-18-19-24, antennal ratio 1.04 (0.93-1.13, n = 44); distal sensory tufts present on antennomeres III, VII-XIV, sometimes also on V and VI. Palpal segments (Fig. 4) with lengths in proportion of 10-25-34-12-11; third segment moderately swollen, 2.3 (2.1-2.6, n = 47) times as long as greatest breadth, with a broad, shallow, round sensory pit. Proboscis moderately long, about 0.9 as long as distance from toroa to interocular seta-base; mandible with 19 (17-22, n = 45) teeth.

Thorax: Intensely dark brown, appearing blackish, without conspicuous pattern, integument dull to subshining, scutum with moderate vestiture of fine blackish hairs. Legs dark brown, without pale bands; hind tibial comb (Fig. 5) with 4 spines, the second from the spur longest.

Wing (Fig. 1): Length 1.02 (0.94-1.10, n = 49) mm. Milky white, without pattern, with dense vestiture of very fine whitish macrotrichia; costa, radius, and veins bordering radial cells with very strong blackish setae and with the veins strengthened and infuscated giving appearance of a conspicuous dark stigma over radial cells. Costa extending to 0.58 (0.54-0.60, n = 49) of distance to wing tip. Halter with brownish stem, knob yellowish to grayish white.

Abdomen: Blackish. Spermathecae (Fig. 3) two, each intensely sclerotized, oval, and very slightly tapering to very short neck; subequal, measuring 0.066 by 0.047 mm and 0.058 by 0.043 mm.

MALE. Unknown.

¹This investigation was supported in part by U. S. Army Contract No. DA-49-193-MD-2177.
Fig. 1-6. Culicoides tissoti n. sp., female. Fig. 1. Wing. Fig. 2. Front view of head showing eye separation. Fig. 3. Spermathecae. Fig. 4. Palpus. Fig. 5. Hind tibial comb. Fig. 6. Antenna.


This species is named in honor of Dr. Archie N. Tissot, for many years
Entomologist with the University of Florida Experiment Station, in recognition of his important contributions to Florida entomology. *Culicoides tissoti* can be confused in the southeastern United States only with *C. snowi* Wirth and Jones, which belongs to the *pififerus* group, with wings not milky white but grayish with a creamy tint, and sensoria present on antennomeres III, V, VII, IX, and XI-XV.

*Culicoides tissoti* has no close American relatives but belongs to the *heliophilus* group, with the European *heliophilus* Edwards the only previously described species. *C. heliophilus* differs in having sensoria on antennomeres III, XI-XV, the distal antennomeres longer with antennal ratio 1.10 (Campbell and Pelham-Clinton, 1960), the spermathecae subspherical to ovoid, and the third palpal segment stouter with a deeper sensory pit. According to Edwards (1939), *heliophilus* is also a troublesome day-biting species in Britain, very active in the middle of the day and biting freely in the hot sun. In districts where it is abundant, it is very annoying to sheep. Kettle and Lawson (1952) reported that the preferred larval habitat of *heliophilus* in Scotland is very wet bogland breeding sites with *Sphagnum*, *Polytrichum*, and *Juncus* forming the dominant vegetation.

**LITERATURE CITED**


The Florida Entomologist 49(4) December 1966

---

**GAINESVILLE ENTOMOLOGICAL CLUB**

Harold Denmark, Chief Entomologist of the Entomology Section, Division of Plant Industry, Fla. Dept. Agriculture, was recently elected Chairman of the Gainesville Entomological Club. This club, which usually has a luncheon meeting each month, was organized in 1956 and now has about 60 active members.