

COLLECTION RECORDS OF *MANSONIA TITILLANS* (WALKER) AND *MANSONIA INDUBITANS* DYAR AND SHANNON IN FLORIDA WITH KEYS TO THE SPECIES OF *MANSONIA* IN THE UNITED STATES. (DIPTERA, CULICIDAE)

ROY W. CHAMBERLAIN¹ AND THOMAS E. DUFFEY²

Fourth Service Command Medical Laboratory
Fort McPherson, Georgia

Many Florida records of *Mansonia titillans* (Walker) are found in the literature, but recent work by Harry D. Pratt (in press) shows that the identification of many of the specimens comprising these records is doubtful. A number of Florida specimens examined by Pratt, including a reared series from Boca Raton, were all *Mansonia indubitans* Dyar and Shannon, representing the first United States records of this West Indian and northern South American species. *Mansonia indubitans* is very similar to *M. titillans*, with which it may be easily confused; therefore Pratt's observations questioned the validity of the past United States records, which probably were in many cases based upon specimens of *M. indubitans* whose identity had gone unnoticed.

Large numbers of adults of *M. titillans-indubitans*, together with occasional collections of larvae, have been submitted to the Fourth Service Command Medical Laboratory from Florida Army installations during the past three years. Since there is now a need for definite locality data on both *M. titillans* and *indubitans*, these collections, together with others made by Edwin L. Seabrook at West Palm Beach and a few specimens gleaned from private collections, have been reidentified (Table 1) according to the following pertinent key characters for the species of *Mansonia* occurring in the United States:

LARVAE

1. Lateral spine of maxilla smooth; anal segment about twice as long as wide; antenna with a pair of short setae arising near middle of shaft, extending less than half-way to tip *perturbans*
Lateral spine of maxilla strongly serrated on one side; anal segment about three times as long as wide; antenna with a pair of long setae arising near middle of shaft, extending to tip 2
2. Comb scales (at least the larger ones on dorsal half of comb) long, slender, thorn-like, with a few minute spinules basally.....
..... *titillans*
Comb scales rather short, broad, fringed apically with stout subequal spines.....*indubitans*

ADULT FEMALES

1. Postspiracular bristles absent; segment 1 of hind tarsus with a pale ring near middle; 8th abdominal tergite unspined..... *perturbans*
Postspiracular bristles present; segment 1 of hind tarsus without a pale ring near middle; 8th abdominal tergite bearing two irregular transverse rows of short stout peg-like spines
(Since the 8th abdominal segment is retracted within the 7th, these spines are not visible unless the tip of the abdomen is clipped off, softened in KOH and dissected)..... 2
2. Palpus a little more than $\frac{1}{3}$ as long as proboscis, with 4th segment about twice as long as 3rd; apical margin of 7th abdominal tergite bearing a close-set row of minute, pointed spines (visible on pinned specimens with dissecting microscope); spines of 8th abdominal tergite clumped posteriorly..... *titillans*
Palpus less than $\frac{1}{3}$ as long as proboscis, with 4th segment about $1\frac{1}{2}$ times as long as 3rd; apical margin of 7th abdominal tergite without minute spines; spines of 8th abdominal tergite more or less uniformly spaced.....
..... *indubitans*

¹ 2nd Lt., Sanitary Corps, Army of the United States.

² S/Sgt., Medical Department, Army of the United States.

MALE TERMINALIA

1. Dististyle without a tooth-like branch arising from inner margin; lobes of 9th tergite distinct, about as long as broad, widely separated, each bearing several short stout setae..... *perturbans*
Dististyle with a tooth-like branch arising from inner margin; lobes of 9th tergite indistinct, without setae..... 2
- 2 Dististyle broad and thick at base, gradually

becoming narrower and thinner to tip, not convoluted *titillans*
Dististyle broad and thick at base, becoming a little narrower and abruptly much thinner beyond basal third, somewhat convoluted (about $\frac{1}{4}$ to $\frac{1}{2}$ turn)..... *indubitans*

Literature Cited

Pratt, Harry D., 1945. A New Mosquito Addition to the United States Fauna (in press).

TABLE I. Collection Record of *M. titillans* and *M. indubitans* in Florida
(M = males, F = females, L = larvae)

Date and Location	<i>M. titillans</i>			<i>M. indubitans</i>			Date and Location	<i>M. titillans</i>			<i>M. indubitans</i>		
	M	F	L	M	F	L		M	F	L	M	F	L
Avon Park, Fla.							Hobe Sound, Fla.						
1931							1943						
Sept.	..	..	..	..	..	I	Aug.	..	2	..	..	1	..
1944							Sept.	..	..	..	..	2	..
July	..	..	..	..	2	..	1944						
Aug.	..	..	..	0	6	..	Aug.	..	2	..	1	5	..
Sept.	..	..	..	1	1	..	Sept.	..	1	..	..	1	..
Oct.	..	I	..	..	2	..	Melbourne, Fla.						
Boca Raton, Fla.							1933						
1943							March	..	..	..	..	..	I
Aug.	..	I	..	..	I	..	Okeechobee, Fla.						
Sept.	..	..	..	..	I	..	1931						
Oct.	..	..	..	..	..	5	July	..	..	..	..	..	2
Nov.	..	..	..	..	..	3	Sarasota, Fla.						
Dec.	..	..	..	..	I	3	1945						
1944							May	..	..	..	26	54	..
Jan.	..	..	..	..	2	11	June	..	..	..	2	13	..
Mar.	..	I	..	I	..	..	W. Palm Beach, Fla.						
Apr.	..	..	..	..	6	..	1943						
May	..	..	..	..	6	..	July	..	I	..	..	..	..
June	..	I	..	6	13	7	Aug.	..	I	..	..	..	..
July	..	5	..	5	42	I	Sept.	0	3	..	..	..	..
Aug.	I	4	..	22	76	..	1944						
Sept.	2	26	..	22	140	..	March	..	I	..	..	..	..
Oct.	I	42	..	7	56	..	May	I	2	..	..	..	..
Nov.	..	29	..	10	44	..	June	..	2	..	..	..	..
Dec.	..	6	..	..	18	..	July	..	5	..	..	I	..
1945							Aug.	..	16	..	I	..	..
Jan.	..	..	..	..	I	..	Sept.	I	18	..	..	12	..
Mar.	..	4	..	..	6	..	Oct.	..	6	..	I	..	..
Apr.	..	..	..	..	I	..	1945						
May	..	I	..	..	I	66	Jan.	0	3	..	..	..	8
June	..	3	..	..	..	..	Feb.	..	7	..	..	..	..
Fort Pierce, Fla.							Mar.	..	I	12	16	22	..
1939							May	..	..	25	..	..	154
July	..	..	..	I	..	I							