

# DISTRIBUTION RECORDS OF *MANSONIA* BLANCHARD (DIPTERA, CULICIDAE) IN TEXAS

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Our attention was recently focused upon the genus *Mansonia* by the light trap collection of four specimens of *M. titillans* (Walker) at Austin, Texas. This was considered unusual as the mosquito had been previously taken by the writers in Texas only in the semi-tropical Lower Rio Grande Valley (Cameron and Hidalgo Counties).

The importance of *Mansonia titillans* as a pest mosquito in the Lower Rio Grande Valley has not been widely recognized. King, Bradley and McNeel (1942) state that the species is found in the United States only in southern Florida. Matheson (1944) also records the mosquito only in southern Florida in the United States. *M. titillans* has been reported from

Cameron and Hidalgo Counties in Texas by McGregor and Eads (1943) and Randolph and O'Neil (1944) and from Cameron County by Joyce (1948).

During the months of April, May and June in 1942, extensive field collections of adult mosquitoes were made in the Lower Rio Grande Valley in the course of a cooperative project on equine encephalomyelitis between the Hooper Foundation for Medical Research, San Francisco, California and the Texas State Department of Health. Over 16,000 mosquitoes were collected alive in light traps; the most abundant species proved to be *Psorophora confinnis* (Lynch Arribalzaga) (2,766), *Culex erraticus* Dyar and Knab (2,615), *Anopheles quadrimaculatus* Say (1,903) and *Mansonia titillans* (Walker) (1,785). The *M. titillans* attacked viciously and were probably second only to *P. confinnis* in annoyance to humans.

After the Austin, Texas, collection of *Mansonia titillans*, an examination of the State Department of Health mosquito collection revealed a female of this species which had been taken in 1942 by light trap (latitude 33.50) from Grayson County, Texas. This county is on the border between Texas and Oklahoma and the collection record represents a considerable extension of the northern limits of the range of this mosquito. The previous northern limit of its range as given by King, Bradley and McNeel (1942) has been Orange County, Florida (latitude between 28° and 29°).

Pratt (1945) reported for the first time the presence in the United States of

*Mansonia indubitans* Dyar and Shannon, a mosquito easily confused with *M. titillans* in the adult stage. Pratt identified larvae, pupae and reared adults collected by D. G. Denning and W. W. Wirth from the roots of *Pistia stratiotes* Linnaeus in Boca Raton, Florida, August 16, 1944. These findings cast doubt on the validity of previous United States records of *M. titillans*. A re-evaluation by Chamberlain and Duffey (1945) of Florida material previously identified as *M. titillans* showed that many specimens were actually *M. indubitans*. A similar study has been made of the *Mansonia* in the collection of the Texas State Department of Health (Table 1). The *M. titillans* were all found to be correctly identified.

As shown in Table 1 large numbers of *Mansonia* larvae were collected in the Lower Rio Grande Valley during October, 1948, to supplement the material in our collection which was checked in an effort to determine whether or not *M. indubitans* is present in Texas. However, all of the specimens taken were *M. titillans*. The larvae had typical thorn-shaped comb scales and the female a row of short spines on the posterior margin of the seventh tergite and a median series of close-set spines on the posterior margin of the eighth tergite.

King, Bradley and McNeel (1942) list water-lettuce (*Pistia stratiotes*) as the common host plant of *Mansonia titillans* in Florida. This plant is rare in Texas; the only known locality record is a spring-fed lake near San Marcos. The aquatic plant with which the larvae of this mos-

Table 1. Texas Records of *Mansonia titillans* in the Collection of the State Department of Health

Number	County	Date	Stage	Collector	Determined By
4	Hidalgo	9-20-41	Adult	T. McGregor	T. McGregor
2	Cameron	4-7-42	Adult	R. B. Eads	R. B. Eads
1	Grayson	4-7-42	Adult	Kerby	L. J. Ogden
1	Cameron	9-10-42	Larva	R. B. Eads	R. B. Eads
1	Travis	8-24-48	Adult	H. Hargis	"
1	Travis	8-30-48	Adult	"	"
1	Travis	10-13-48	Adult	"	"
1	Travis	10-15-48	Adult	"	"
30	Cameron	10-28-48	Larvae	R. B. Eads	"
40	Hidalgo	10-28-48	Larvae	"	"

quito has constantly been found associated in Texas has been the water-hyacinth, *Eichhornia crassipes*. Cattail, *Typha latifolia*, has been less frequently encountered. *M. titillans* is readily collected by lifting the water-hyacinths quickly into a white enameled pan. The larvae detach and can be found in the debris in the bottom of the pan. No larvae have been found still attached to the roots of the hyacinths.

Adults of *Mansonia perturbans* (Walker) have been rather commonly taken in Texas (Table 2). As far as can be ascertained only one larva has been taken although

amined a genitalia slide of a male taken in Cameron County, Texas, in 1943, a genitalia slide of a female taken in Travis County, October 15, 1948, and eight larvae taken in Hidalgo County, October 29, 1948. He expressed the opinion that the specimens were typical *Mansonia titillans*.

#### Literature Cited

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Table 2. Texas Records of *Mansonia perturbans* in the Collection of the State Department of Health

Number	County	Date	Stage	Collector	Determined By
1	Colorado	4-10-39	Adult	T. McGregor	T. McGregor
4	Cameron	5-15-42	Adult	R. B. Eads	R. B. Eads
1	Liberty	7-24-42	Adult	D. C. Thurman	D. C. Thurman
3	Jefferson	5-27-43	Adult	T. D. Weatherby	K. O'Neil
1	Harris	6-12-43	Adult	Grimsley	"
1	Hays	8-2-43	Adult	A. Lee	"
1	Hays	8-10-43	Adult	H. V. Miles	"
1	Brazoria	8-25-43	Adult	A. J. McCrocklin	"
1	Hays	9-9-43	Adult	A. Lee	"
1	Harris	9-16-43	Adult	Grimsley	"
18	Orange	9-27-43	Adult	J. D. Weatherby	"
1	Brazoria	9-25-43	Adult	A. J. McCrocklin	"
2	Harris	10-9-43	Adult	Grimsley	"
1	Harris	1-29-44	Adult	"	"
3	Orange	6-14-44	Adult	J. D. Weatherby	"
1	Jefferson	6-21-44	Adult	"	"
15	Orange	6-21-44	Adult	"	L. J. Ogden
1	Cameron	12-15-44	Larva	L. J. Ogden	"

light trap records of Malaria Control in War Areas (now Communicable Disease Control), United States Public Health Service and the Texas State Department of Health show this species to be rather widely distributed over the eastern and gulf coast regions of the state. The paucity of larval records of *M. perturbans* is no doubt due to the small amount of specific collecting that has been done and should not be considered as an index to its abundance.

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