

Corrections and Additions to the Publication, Identification  
and Geographical Distribution of the Mosquitoes  
of North America, North of Mexico

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ABSTRACT. Corrections and additions are provided as a supplement to the publication, Identification and Geographical Distribution of the Mosquitoes of North America, North of Mexico.

#### INTRODUCTION

Following the publication of Darsie and Ward (1981), certain errors and corrections have been brought to our attention and are appended below in an Errata section. As the chapters, Bibliography of Mosquito Taxonomy and Geographical Distribution, and Addendum to Bibliography in Darsie and Ward (1981) surveyed the relevant literature through most of 1979, we are providing annotated references from 1979 to mid-1982. In addition, several pre-1979 publications are cited that were earlier omitted. Certain species merit comment and are noted along with new distribution records at the state (U.S.A.) and province (Canada) level.

We wish to thank Peter Belton, Alain Maire and Lewis T. Nielsen who have provided data for our use and Bruce Harrison for his advice on an earlier draft.

#### ERRATA

Page 7, line 19

For Interocular setae (IS), read Interocular setae (ISe)

Page 8, lines 39, 43, 48

For meskatepisternum, read mesokatepisternum

Page 9, line 39

For Fig. 15, read Fig. 38

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- Page 9, line 41  
For Fig. 221, read Fig. 222
- Page 10, line 49  
For the, read The
- Page 14, In list of abbreviations for Plate 4, add PMe-pleural membrane
- Page 27, Couplet 1, lines 1 and 2  
For hindtarsomere, read hindtarsomeres
- Page 30, Figs. 59, 61  
For Hindtarus, read Hindtarsus
- Page 44, Fig. 140  
For *candensis*, read *canadensis*
- Page 51, line 2  
For posterior, read anterior
- Page 115, line 44  
For Fig. 789, read Fig. 815
- Page 115, line 45  
For Fig. 815, read Fig. 784
- Page 116, line 25  
For Figs. 514, 516, read Figs. 514, 516, 855
- Page 119, line 7  
For mesurement, read measurement
- Page 132, Couplet 11  
Should read:  
11 (10). Saddle completely encircling segment X (Fig. 538),  
or if not, siphon aciculate (Fig. 824) . . . . . *Culex*  
  
Saddle not completely encircling segment X (Fig. 539);  
siphon not aciculate . . . . . (in part) *Aedes*
- Page 133, Couplet 14, lines 2 and 3  
For tergum on VII, read segment VII
- Page 182, Figs. 790, 792  
For 1-I-IV, read 1-IV
- Page 199, Figs. 878, 880  
For Ventral view, read Dorsal view
- Page 202, Fig. 895  
For *inornator*, read *inornata*

- Page 214, Couplet 8  
For *johnstoni*, read *johnstonii*
- Page 215, Fig. 958  
For abdomen *Ps.*, read abdomen - *Ps.*
- Page 220, Fig. 983  
For thorax *Wy.*, read thorax - *Wy.*
- Pages 226 and 233, column 1  
Heading should read Mosquito Species
- Page 241, line 8  
For MAN (470), read MAN (70, as *Ae. triseriatus*)
- Page 258, line 5  
For NE (164), read NE (373)
- Page 260, Plate 35, line 2  
For NM 3/8K\_!(, read (502)
- Page 260, Plate 35, line 3  
For MQ, read M0
- Page 287, ref. 311  
For *silvertris*, read *silvestris*
- Page 290, ref. 398  
For Schyler, read Schuyler
- Page 297, line 12  
For 57, 60, read 57-60
- Page 305, Fig. 670  
For Pina, read Pima
- Page 312, line 46  
For *mulrennai*, read *mulrennani*
- Page 313, line 4  
For *s. spenceri*, read *s. spencerii*

## COMMENTS ON CERTAIN SPECIES

*Aedes (Aedes) hemiteleus* Dyar. Bickley (1980) studied the adult morphological characters of the North American members of the Cinereus Group (sensu Peus 1972) and found them too variable to discriminate *Ae. hemiteleus* from *Ae. cinereus* Meigen, or other members of the group. However, in the absence of adequate North American specimens with associated immature skins, we feel it is not advisable to synonymize *Ae. hemiteleus* with *Ae. cinereus*.

*Aedes (Finlaya) togoi* (Theobald). Belton (1980) presented conclusive evidence that *Ae. togoi* is now established south of Anacortes, Washington, in rock pools along the coastline. He indicated that *Ae. togoi* is probably a recent introduction from Asia (within the past 40 years) and may have been dispersed through the agency of ferry traffic among islands. Since this species is already included in Darsie and Ward (1981), no modifications to the keys are required.

*Culex (Melanoconion) taeniopus* Dyar and Knab. The new synonymy of *Cx. (Mel.) opisthopus* Komp with *taeniopus* by Sirivanakarn and Belkin (1980) will undoubtedly cause consternation among some North American mosquito workers. Through the proper examination of type-specimens and the application of the principle of priority, Sirivanakarn and Belkin (l.c.) have resolved a difficult problem of nomenclature.

*Culex (Tinolestes) latisquama* (Coquillett). The presence of this species in the U. S. is based on one male supposedly collected in 1906 from Estero, Lee county, Florida (Stone 1968). Since additional specimens have not been collected north of Honduras, Berlin and Belkin (1980) believed the Florida record is erroneous. They attribute this to an incorrect label on specimens collected for the "Mosquitoes of North and Central America and the West Indies" (Howard, Dyar and Knab 1915). As we do not wish to perpetuate the error, *Cx. latisquama* is removed from the list for the subject area. This reduces the list of species and subspecies known to occur in North America, north of Mexico, from 167 to 166.

*Culiseta (Culiseta) annulata* (Schrank). Faran and Bailey (1980) collected a single adult female *Cs. annulata* at Fort McHenry, Baltimore, Maryland, from the inner walls of an old munitions bunker. This female was collected in association with overwintering *Cx. pipiens* Linn. females and survived 20 days in the laboratory. Due to the proximity of Fort McHenry to Baltimore harbor, it is probable that this specimen or its ancestors were introduced into the area by a ship travelling from Europe. Since further specimens have not been reported, *Cs. annulata* is not yet an established faunal component.

*Wyeomyia (Wyeomyia) smithii* (Coquillett) and *Wy. (Wyo.) haynei* Dodge. Bradshaw and Lounibos (1977) examined the effects of latitude, altitude and longitude on photoperiodicity, morphology of larval anal papillae, stage of dormancy and response of F<sub>1</sub> hybrids of pitcher-plant mosquitoes of the genus *Wyeomyia* from eastern North America. They conclude that *Wy. smithii* is probably a polytypic species which includes *Wy. haynei* as a geographic subspecies. Their observation that *Wy. haynei* populations from the Gulf Coast possess four long anal papillae is of interest and indicates the need for a rigorous taxonomic analysis of extensive series of reared specimens of both species throughout the entire range. These should be complemented by a series of cross-breeding experiments from various critical populations. Until these studies have been accomplished, *haynei* and *smithii* should be retained as discrete species.

reads "a single polytypic species"  
and

"... that there is but one species."  
"W. haynei is apparently the same as..."

## CHANGES TO STATE AND PROVINCE DISTRIBUTION RECORDS

The following new United States and Canada distribution records have come to our attention since Darsie and Ward (1981) was submitted to the printer. Changes in distribution such as county records are included in the Annotated References.

SPECIES	POLITICAL UNIT	REFERENCE
<i>Ae. atropalpus</i>	IN	Restifo and Lanzaro (1980)
<i>Ae. atropalpus</i>	NFLD	Nielsen and Mokry (1982b)
<i>Ae. cinereus</i>	WV	Butler and Amrine (1980)
<i>Ae. decticus</i>	NFLD	Nielsen and Mokry (1982b)
<i>Ae. diataeus</i>	NFLD	Nielsen and Mokry (1982b)
<i>Ae. dorsalis</i>	NH	Burger (1981)
<i>Ae. euedes</i>	WY	Nielsen (1982)
<i>Ae. grossbecki</i>	MI	Cassani and Newson (1980)
<i>Ae. hendersoni</i>	FL	Zavortink and Belkin (1979)
<i>Ae. hexodontus</i>	NFLD	Nielsen and Mokry (1982b)
<i>Ae. nevadensis</i>	BC	Belton and Belton (1981)
<i>Ae. pionips</i>	NFLD	Nielsen and Mokry (1982b)
<i>Ae. sollicitans</i>	WV	Butler and Amrine (1980)
<i>Ae. sticticus</i>	NFLD	Nielsen and Mokry (1982b)
<i>Ae. togoi</i>	WA	Belton (1980)
<i>Cs. alaskaensis</i>	UT	Bickley (1979)
<i>Cs. melanura</i>	NFLD	Nielsen and Mokry (1982a)
<i>Or. alba</i>	WV	Heaps (1980)
<i>Ps. cyanescens</i>	IA	Ritchie and Rowley (1980)
<i>Ps. mathesoni</i>	MI	Cassani and Newson (1980)
<i>Ur. sapphirina</i>	CO	Maloney (1980)

Four species were deleted from the list of Nebraska species by Lunt and Rapp (1981) as they were unable to verify their presence within the state on the basis of valid collection records. These include: *Aedes fitchii* (Felt and Young), *Ae. implicatus* Vockeroth, *Culex quinquefasciatus* Say and *Culiseta melanura* (Coquillett).

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