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

Ronald A. Ward and Richard F. Darsie, Jr.

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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19a. NAME OF RESPONSIBLE PERSON

Standard Form 298 (Rev. 8-98)  
Prescribed by ANSI Std Z39-18
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
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* (Pinlaya) *togo* (Theobald). Belton (1980) presented conclusive evidence that *Ae. togo* is now established south of Anacortes, Washington, in rock pools along the coastline. He indicated that *Ae. togo* 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* (Coquillet). 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* (Coquillet) and *Wyo. (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 F₁ 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.
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.

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<tr>
<th>SPECIES</th>
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<tr>
<td>Ae. atropalpus</td>
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<td>Ae. dorsalis</td>
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<td>Ur. sapphirina</td>
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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).

ANNOTATED REFERENCES


Belton, P. and E. M. Belton. 1981. A revised list of the mosquitoes of British Columbia. J. Entomol. Soc. B. C. 78:55-64. (New country record for *Ae. nevadensis* and additional locality records for numerous species.)


Lunt, S. R. and W. F. Rapp, Jr. 1981. An annotated list of the mosquitoes of Nebraska. Mosq. News 41:701-706. (Four species deleted from state list as records could not be verified.)


