A Current List and Bibliography of the Mosquitoes of New Mexico

by

Theodore A. Wolff¹, Lewis T. Nielsen¹ and Richard O. Hayes²

The most recent checklist of New Mexico culicine mosquitoes, that of Sublette and Sublette (1970), reviewed publications from Theobald (1903) to Zavortink (1968) and cited most work referring to New Mexico mosquitoes published during that period.

The list presented here contains a number of changes from the 1970 checklist. The treehole anopheline listed as *Anopheles barberi* Coquillett by Nielsen et al. (1968), and Sublette and Sublette (1970) was described by Zavortink (1969a) as a new species, *Anopheles judithae*.

Aedes fitchii was added to the state list by Wolff (1970). Aedes cataphylla, A. communis, A. excrucians, A. hexodontus, A. implicatus, and A. schizopinax were new additions reported by Nielsen, Wolff and Linam (1973). Wolff, Nielsen and Linam (1974) added Aedes cinereus, Culiseta impatiens and the chaoborines: Chaoborus americanus, Eucorethra underwoodi, and Mochlonyx velutinus (Ruthe). Both publications contain additional distributional records of mountain mosquitoes previously reported in New Mexico.

Coquillettidia perturbans, Culex coronator and Culex erraticus are new distributional records for New Mexico. They were collected in light traps during a VEE virus surveillance program carried out jointly by the Arboviral Disease Section, Center for Disease Control, Fort Collins, Colorado and the New Mexico Environmental Improvement Agency during the summer of 1972.

Coquillettidia perturbans. One hundred fourteen specimens were collected in Quay County, 0.6 miles west of Tucumcari. The first collection was July 10. Additional collections were made on July 29, August 11, 25 and September 19.

Culex coronator. Twenty specimens were collected at three sites in Dona Ana County, near the Rio Grande, within the vicinity of Radium Springs and San Miguel. Collections were made on July 29, August 23 and September 12.

Culex erraticus. Four specimens were collected; two were obtained in

¹Department of Biology, University of Utah, Salt Lake City, Utah 84112

²Vector-Borne Diseases Division, Bur. Laboratories, Center for Disease Control, Public Health Service, U. S. Dept. Health, Education, and Welfare, P. O. Box 2087, Fort Collins, Colorado 80521 Quay County, near Tucumcari, on July 29 and two were taken in Curry County, 10 miles east of Clovis, near Texico, on August 10.

Four species previously reported for New Mexico are deleted from the state list. Aedes canadensis, A. taeniorhynchus and A. zoosophus were reported from light trap collections at military installations by Hill, Smittle and Philips (1958). The specimens have apparently been lost (Carpenter 1970) and their presence in New Mexico needs to be confirmed by additional collections. Culex pipiens was included in a key to New Mexican Mosquitoes by Miller (1965), but no valid record for this species exists.

The name, Psorophora columbiae has been substituted for P. confinnis, based on studies by Belkin, Heinemann and Page (1970).

The name Aedes epactius also replaces that of A. atropalpus (Zavortink 1972).

The bibliography contains all of the important papers relating to the mosquitoes of New Mexico that we are aware of.

The following list of the Mosquitoes of New Mexico includes 55 culicine species and 3 chaoborine species, and is current as of January 1975.

Culicinae

Aedes aegypti (Linnaeus)

- A. campestris Dyar and Knab
- A. cataphylla Dyar
- A. cinereus Meigen
- A. communis (De Geer)
- A. dorsalis (Meigen)
- A. epactius Dyar and Knab
- A. excrucians (Walker)
- A. fitchii (Felt and Young)
- A. hendersonii (Cockerell)
- A. hexodontus Dyar
- A. implicatus Vockeroth
- A. increpitus Dyar
- A. melanimon Dyar
- A. mitchellae (Dyar)
- A. monticola Belkin and McDonald
- A. muelleri Dyar
- A. nigromaculis (Ludlow)
- A. pullatus (Coquillett)
- A. schizopinax Dyar
- A. sollicitans (Walker)
- A. thelcter Dyar
- A. trivittatus (Coquillett) A. vexans (Meigen)

Anopheles crucians Wiedemann

- A. freeborni Aitken
- A. franciscanus McCracken
- A. pseudopunctipennis pseudopunctipennis Theobald
- A. punctipennis (Say)
- A. judithae Zavortink

Coquillettidia perturbans (Walker)

- Culex apicalis Adams
 - C. coronator Dyar and Knab
 - C. erraticus (Dyar and Knab)
 - C. erythrothorax Dyar
 - C. peus Speiser
 - C. quinquefasciatus Say
 - C. restuans Theobald
 - C. salinarius Coquillett
 - C. tarsalis Coquillett
 - C. thriambus Dyar
- Culiseta incidens (Thomson)
 - C. inornata Williston
 - C. impatiens (Walker)
- A. spencerii idahoensis (Theobald) Orthopodomyia alba Baker
 - 0. kummi Edwards
 - 0. signifera (Coquillett)

Culicinae

Psorophora ciliata (Fabricius)

P. columbiae (Dyar and Knab)

P. cyanescens (Coquillett)

P. discolor (Coquillett)

P. signipennis (Coquillett)

Uranotaenia sapphirina (Osten Sacken) U. anhydor syntheta Dyar and Shannon

Chaoborinae

Chaoborus americanus (Johannsen) Mochlonyx velutinus (Ruthe) Eucorethra underwoodi Underwood

BIBLIOGRAPHY

Aitken, T. H. G. 1945. Studies on the anopheline complex of Western North America. Univ. Calif. Publ. Ent. 7:273-364.

Barber, M. A. 1929. Some notes of the limitations of screens in the prevention of malaria. Pub. Health Rep. 44(10):523-528.

1939. Further observations on the *Anopheles* of new Mexico. Amer. Jour. Trop. Med. 19:345-356.

- Barber, M. A., W. H. W. Komp and C. H. King. 1929. Malaria and malaria danger in certain irrigated regions of the southwestern United States. Pub. Health Rep. 44:1300-1315.
- Barber, M. A. and L. R. Forbrich. 1933. Malaria in the irrigated regions of New Mexico. Pub. Health Rep. 48:610-623.
- Belkin, J. N., R. X. Schick and S. J. Heinemann. 1966. Mosquito Studies VI. Mosquitoes originally described from North America. Contr. Amer. Ent. Inst. 1(6):1-39.
- Belkin, J. N., S. J. Heinemann and W. A. Page. 1970. Mosquito Studies (Dipera, Culicidae) XXI. The Culicidae of Jamaica. Contr. Amer. Ent. Inst. 6(1):1-458.
- Carpenter, S. J. 1968. Review of recent literature on mosquitoes of North America. Calif. Vector Views 15(8):71-98.

- Carpenter, S. J. 1970. Review of recent literature on mosquitoes of North America. Supplement 1, Calif. Vector Views 17(6):39-65.
- Carpenter, S. J. and W. J. LaCasse. 1955. Mosquitoes of North America (North of Mexico). Univ. of Calif. Press, Berkeley and Los Angeles. 360 p.
- Ferguson, F. F. and T. E. McNeel. 1954. The mosquitoes of New Mexico Mosquito News 14(1):30-31.
- Freeborn, S. B. 1949. Anophelines of the Nearctic Region. In Boyd, Malariology 1:379-398.
- Gerber, C. W. 1931. Summary of malaria control work in Dona Ana County, New Mexico. Southwestern Medicine 15:370-375.
- Hill, S. O., B. J. Smittle and F. M. Philips. 1958. Distribution of mosquitoes in the Fourth U. S. Army Area. Fourth U. S. Army Medical Laboratory, Fort Sam Houston, Texas. 155 p.
- Hoff, C. C. and H. Campbell. 1957. A new artificial breeding place for mosquitoes in New Mexico. Mosquito News 17(4):314-315.
- King, W. V. and G. H. Bradley. 1941. Distribution of Nearctic Species of Anopheles. Amer. Assoc. Adv. Sci. Pub. 15:71-78.
- Matheson, R. 1944. A handbook of the mosquitoes of North America. Ithaca, N. Y. Comstock Pub. Assoc. 314 p.
- McNeel, T. E. and F. F. Ferguson. 1952. *Psorophora cyanescens* (Coquillett) new to the mosquito fauna of New Mexico. Mosquito News 12(4):241.
- 1954. Mosquito distribution and abundance in the Arkansas-White-Red River Basins. Pub. Health Rep. 69:385-390.
- Miller, B. E. 1962. The occurrence of Orthopodomyia alba Baker in New Mexico. Mosquito News 22(3):309-310.
 - 1965. A key to the mosquito larvae of New Mexico. New Mexico Dept. of Public Health. Publ. No. EF-VC-3. 8 p.
- Miller, B. E., J. M. Doll and J. R. Wheeler. 1964. New records of New Mexico mosquitoes. Mosquito News 24(4):459-460.
- Nielsen, L. T., J. H. Arnell and J. H. Linam. 1967. A report of the distribution and biology of the tree hole mosquitoes in the Western United States. Proc. and Papers of the Thirty-fifth Ann. Conf. Calif. Mosquito Control Assoc. 35:72-76.

- Nielsen, L. T., J. H. Linam, J. H. Arnell and T. J. Zavortink. 1968. Distribution and biological notes on the tree hole mosquitoes of the western United States. Mosquito News 28(3):361-365.
- Nielsen, L. T., T. A. Wolff and J. H. Linam. 1973. New distributional records for snowpool *Aedes* mosquitoes in the mountains of Arizona and New Mexico. Mosquito News 33(3):378-380.
- Stone, A., K. L. Knight and H. Starcke. 1959. A synoptic catalog of the mosquitoes of the world (Diptera: Culicidae)VI. The Thomas Say Foundation. Horn-Shafer Co., Baltimore, Maryland. 358 p.
- Stone, A. 1965. Family Culicidae. In: A catalog of the Diptera of America North of Mexico. Agri. Handb. No. 276:105-120.
- Sublette, J. E. and M. S. Sublette. 1967. The limnology of playa lakes on the Llano Estacado, New Mexico and Texas. Southwestern Nat. 12(4): 369-406.
- Sublette, M. S. and J. E. Sublette. 1970. Distributional records of mosquitoes on the southern high plains with a checklist of species from New Mexico and Texas. Mosquito News 30(4):533-538.
- Theobald, F. V. 1903. Notes on Culicidae and their larvae from Pecos, New Mexico and description of a new *Grabhamia*. Canad. Ent. 35:311-316.
- Wolff, T. A. 1970. The presence of *Aedes fitchii* (Felt and Young) in New Mexico. Mosquito News 30:472.
- Wolff, T. A., L. T. Nielsen and J. H. Linam. 1974. Additional records of culicine and chaoborine mosquitoes from the mountains of Arizona and New Mexico. Proc. and Papers of the Forty-second Annual Conference of the Calif. Mosq. Control Assoc. 42:41-42.
- Zavortink, T. J. 1968. Mosquito Studies (Diptera, Culicidae) VIII. A prodrome of the genus Orthopodomyia. Contrib. Amer. Entomol. Inst. 3 (2):1-221.

1969a. Mosquito Studies (Diptera, Culicidae) XV. A new species of the treehole breeding *Anopheles* from the Southwestern United States. Contrib. Amer. Entomol. Inst. 4(4):27-38.

1969b. New species and records of treehole mosquitoes from the Southwestern United States. Mosq. Syst. Newsletter 1(2):22.

1970a. Mosquito Studies (Diptera, Culicidae) XIX. The treehole *Anopheles* of the New World. Contrib. Amer. Entomol. Inst. 5(2): 1-35.

ś

Zavortink, T. J. 1972. Mosquito Studies (Diptera, Culicidae) XXVIII. The New World species formerly placed in Aedes (Finlaya). Contrib. Amer. Entomol. Inst. 8(3):1-206.