

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER
CARIBBEAN ISLANDS: No. 20.

CULICINAE FROM THE NETHERLANDS ANTILLES
AND SOME OTHER CARIBBEAN LOCALITIES

by

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Dr P. WAGENAAR HUMMELINCK entrusted me with the identification of the mosquitoes he collected during his trips to the West Indies in 1936–1937 and 1948–1949. Although dr HUMMELINCK told me that it was not his intention to catch representative material, the present collection is of particular hygienic and biological interest as some mosquitoes were found on islands from which they had not been reported before.

This paper deals with 16 species:

- Wyeomyia celaenocephala* – Curaçao,
Anopheles pseudopunctipennis pseudopunctipennis – Margarita, Curaçao, Aruba,
Anopheles albimanus – St. Martin,
Aedes taeniorhynchus – Curaçao, Saba, Dog Island,
Aedes aegypti – Curaçao, Aruba, St. Barthélemy, St. Martin,
Haemagogus anastasianis – Curaçao, Aruba,
Psorophora confinnis – Bonaire, Curaçao,
Psorophora pygmaea – St. Martin,
Deinocerites cancer – St. Martin,
Culex erraticus – Curaçao,
Culex americanus – St. Eustatius, St. Martin,
Culex bahamensis – St. Eustatius, St. Barthélemy, St. Martin,
Culex maracayensis – Curaçao,
Culex chrysonotum – Suriname at Zanderij,
Culex coronator – Venezuela near La Guaira,
Culex nigripalpus – Bahamas, on South Bimini, and
Culex quinquefasciatus – Bonaire, Curaçao, Aruba,
St. Eustatius, St. Martin.

The majority of the localities have been described in the 1st, 4th and 17th papers of this series. HUMMELINCK's material has been deposited with the Institute of Tropical Hygiene and Geographical Pathology at Amsterdam.

Wyeomyia celaenocephala Dyar & Knab, 1906

VAN DER KUYP, 1949a, 1953.

Curaçao: *Sta. 235B*, Northwestern slope of the Seroe Christoffel, jungle, 23.XII.1948, 5 adults.

Previously reported from Curaçao. — Central America and Venezuela.

Anopheles pseudopunctipennis pseudopunctipennis Theobald, 1901

COVA-GARCÍA, 1940; VAN DER KUYP, 1949a, 1950, 1953.

Margarita: *Río de la Fuente*, South of Paraguachí, brooklet, Cl. abt 100 mg/l, 11.V.1936, larva. Curaçao: *Sta. 75*, Tanki Mamaja, Hato, pond, Cl 450 mg/l, pH 8.6–8.8, 6.X.1936, larva; *Sta. 76A*, Bron Wandongo, Hato, pool, Cl 230 mg/l, pH 7.1–7.3, 6.X.1936, 3 larvae; *Sta. 88*, Pos Sjimarrón, Rood Beroe, Savonet, pool, Cl 3500 mg/l, 10.XI.1936, 2 larvae; *Sta. 396c*, Tanki di Tera Corá, pool, Cl 480 mg/l, pH 9.0, 11. II.1949, larva; *Sta. 397d*, Tanki Martha-Koosje, pond, Cl 510 mg/l, 15.IV.1949, larva. Aruba: *Sta. 104*, Bron di Rood Prins, pool, Cl 1300 mg/l, 9.I.1937, 5 larvae.

Previously reported from Margarita (COVA-GARCÍA) and Curaçao (VAN DER KUYP). — U.S.A. to Chile and Argentina.

Anopheles albimanus Wiedemann, 1821

VAN DER KUYP, 1953.

St. Martin: *Sta. 538*, Doctor's Well on Rockland, Cul de Sac, Cl 355 mg/l, pH 8.0, 24.V.1949, larva.

U.S.A. to Venezuela and Ecuador, Greater and Lesser Antilles.

Aedes taeniorhynchus Wiedemann, 1821

VAN DER KUYP, 1949a, 1953.

Curaçao: *Sta. 88a*, Pos Sjimarrón, Rood Beroe, Savonet, pool, Cl 1490 mg/l, 23.XII.1948, numerous larvae. Sabab: *Sta. 517*, Well of Spring Bay, Cl 160 mg/l, 28.VII.1949, 3 larvae. Dog Island: *Sta. 546*, well, Cl 1410 mg/l, pH 8.0, 17.VI.1949, 2 larvae and 2 pupae.

Previously reported from Curaçao. — U.S.A. to Brazil and Perú.

Aedes aegypti Linné, 1762

WATERMANN, 1918, 1919; EVANS, 1921; HOFFMAN, 1930; VAN DER KUYP, 1948a, 1948b, 1949a, 1953.

Curaçao: *Willemstad*, house, 20.XI.1948, 2 adults; *Museum*, Willemstad, 20.XII.1948, 2 adults. Aruba: Top of Seroe *Canashito*, rock hole with goat faeces, 7.XII.1936, 13 larvae. St. Barthélemy: *Gustavia*, drinking water probably from artificial receptacle, 4.VI.1949, larva. St. Martin: *Marigot*, empty battery case and stoneware jars, 15.IV.1947, many larvae, E. VAN DER KUYP coll.

Previously reported from all of the inhabited Netherlands islands by VAN DER

KUYP; on Curaçao in 1915 by BONNE & BONNE-WEPSTER (from personal communication), on St. Martin and Saba between 1923 and 1927 by EMANUELS (from personal communication). — Tropical and subtropical regions of the world.

Haemagogus anastasianis Dyar, 1921

VAN DER KUYP, 1949a, 1949b, 1953.

Curaçao: *Sta. 339A*, Hofje Groot Piscadera, at leaf base of a coconut tree, 27.I.1949, adult; *Sta. 235B*, Northwestern slope of the Seroe Christoffel, jungle, 23.XII.1948, adult. Aruba: Top of Seroe *Canashito*, rock hole with goat faeces, 7.XII.1936, larva; *Sta. 404*, Rood Kabaai, tree hole in *Bursera tomentosa*, 28.XII.1948, larva.

Previously reported from Curaçao. — Costa Rica, Venezuela and Colombia.

Psorophora confinnis Lynch Arribálzaga, 1891

VAN DER KUYP, 1948b, 1949a, 1953.

Bonaire: *Sta. 376a*, Pos North of Kralendijk, Cl 90 mg/l, pH 8.5, 24.II.1949, 6 larvae. Curaçao: *Hato*, shallow pool with rainwater, 15.VIII.1949, larva and pupa, A. D. RINGMA coll.

Previously reported from Curaçao, Aruba and Bonaire. — U.S.A. to Argentina.

Psorophora pygmaea Theobald, 1903

VAN DER KUYP, 1953.

S. Martin: *Sta. 531*, Puddle in Rolands Canal, Cl 1500 mg/l, pH ?7.0, 25.V.1949, numerous larvae.

U.S.A., Greater Antilles and adjacent Lesser Antilles.

Deinocerites cancer Theobald, 1901

VAN DER KUYP, 1948a, 1948b, 1949a, 1953.

S. Martin: *Marigot*, crab hole, 15.IV.1947, larvae and adult males and females, E. VAN DER KUYP coll.

Previously reported from Curaçao, Aruba, Bonaire and St. Martin. — U.S.A. to British Guiana.

Culex erraticus Dyar & Knab, 1905

VAN DER KUYP, 1949a, 1953.

Curaçao: *Sta. 75*, Tanki Mamaja, Hato, pond, Cl 450 mg/l, pH 8.6–8.8, 6.X.1936, numerous larvae; *Sta. 78*, Tanki Monpos, near Hato, pond, Cl 310 mg/l, pH 8.1–8.3, 11.X.1936, 2 larvae.

Previously reported from Curaçao. — U.S.A. to Venezuela.

Culex americanus Neveu-Lemaire, 1902

VAN DER KUYP, 1948a, 1949a, 1953.

S. Eustatius: *Sta. 504*, De Kant of the Quill, water in Bromeliad, 12.VII.1949, 23 larvae; *Sta. 424*, Big Gut near base of White Wall, 6.VII.1949, 4 larvae; *Sta. 425*, near top of White Wall in *Tillandsia utriculata*, 6.VII.1949, 1 larva. S. Martin: *Marigot* Hill, water in *T. utriculata* on mango tree, 17.IV.1947, a few larvae, E. VAN DER KUYP coll.; *Sta. 540*, Base of Meschrine Hill, S. of Simson Bay bridge, water in *T. utriculata*, 27.V.1949, 17 larvae and 2 pupae.

Previously reported from the Windward Group. — Greater Antilles and adjacent Lesser Antilles, French Guiana.

Culex bahamensis Dyar & Knab, 1906

VAN DER KUYP, 1948a, 1949a, 1953.

S. t. Eustatius: *Sta. 511A*, King's Well, Downtown, cemented trough, 13.VII.1949, 4 larvae. *S. t. Barthélémy*: *Sta. 523*, Puddle South of Lorient, Cl 3500 mg/l, pH 7.2, 3.VI.1949, 21 larvae; *Sta. 524*, Mare des Palmiers, Lorient, Cl 3540 mg/l, pH 8.0, 3.VI.1949, 2 larvae. *S. t. Martin*: *Sta. 530*, Crab Hole Cistern, East of Philipsburg, Cl 9920 mg/l, pH 8.7, 18.V.1949, 8 larvae; *Sta. 533*, Well of Heyligers, Colombier Valley, Cl 160 mg/l, pH 8.0, 20.V.1949, 3 larvae; *Sta. 1134*, cemented trough at S. E. shore of Great Salt Pond, Cl 46000 mg/l, 19.V.1949, numerous larvae and pupae.

Previously reported from St. Eustatius and Netherlands St. Martin. — Florida, Bahamas, Greater Antilles and Virgin Islands.

Culex maracayensis Evans, 1923

VAN DER KUYP, 1949a, 1953.

Curaçao: *Sta. 88*, Pos Sjimarrón, Rooi Beroe, Savonet, puddle, Cl 3500 mg/l, 10.XI.1936, 2 larvae; *Sta. 89*, Tanki di Hofje Savonet, puddle, Cl 3200 mg/l, 29.X.1936, 17 larvae.

Previously reported from Curaçao. — Venezuela and Colombia.

Culex chrysonotum Dyar & Knab, 1908

BONNE & BONNE-WEPSTER, 1925; DYAR, 1928.

Suriname: *Sta. 408*, Zanderij, pond, Cl 17 mg/l, 3.VIII.1948, many larvae and a few pupae.

Previously reported from Suriname. — Panamá, Venezuela and French Guiana.

Culex coronator Dyar & Knab, 1906

EVANS, 1921; NÚÑEZ TOVAR, 1924; ANDUZE, 1941; ANDUZE, PIFANO & VOGEL-SANG, 1947.

Venezuela: *Sta. 371, 371A*, Puddles in the Quebrada Los Angelitos, La Guaira; Cl 105 and abt 100 mg/l, 10.VIII.1948, numerous larvae.

Previously reported from Venezuela. — U.S.A. to Argentina.

Culex nigripalpus Theobald, 1901

VAN DER KUYP, 1949a, 1953.

South Bimini (Bahamas): *Sta. 549*, "Fountain of Youth", soft mud, Cl 475 mg/l, 20.VIII.1949, 38 larvae.

Previously reported from Curaçao. — U.S.A. to Brazil.

Culex quinquefasciatus Say, 1823

WATERMAN 1920; EVANS, 1921; VAN DER KUYP, 1948a, 1948b, 1949a, 1953.

Bonaire: *Sta. 374*, Rincón, puddle, Cl 85 mg/l, pH 8.0, 26.II.1949, 10 larvae.

Curaçao: *Museum*, Willemstad, glass bowl, 14.XII.1948, numerous larvae, pupae, adult males and females; *Sta. 348*, Cueba Bosá, Savonet-St. Hyronimus, cave, 7.III.1949, adult male. *Aruba*: *Oranjestad*, house, 1.I.1949, 2 adults; *Oranjestad*, 16.I.1949, 3 adults; *Oranjestad*, 8.X.1949, 9 adults, A. D. RINGMA coll. *S. t. Eustatius*: *Sta. 507*, Twin Cisterns, Downtown, Cl 515 mg/l, 7.VII.1949, 3 larvae; *Sta. 512*, Golden Rock, iron trough, Cl 105 mg/l, pH 8.2, 8.VII.1949, 16 larvae. *S. t. Martin*: *Marigot*, well, 15.IV.1947, a few larvae, E. VAN DER KUYP coll.

Previously reported from all of the inhabited Netherlands islands by VAN DER KUYP; on Curaçao, in 1915, by BONNE & BONNE-WEPSTER (from personal communication), on St. Martin and Saba between 1923 and 1927 by EMANUELS (from personal communication). — Warmer regions in the world between the 39th parallel of latitude North and South.

REFERENCES

- ANDUZE, P. J., 1941. Lista provisional de los zancudos hematófagos de Venezuela. *Bol. Ent. Venez.* 1, p. 6.
- ANDUZE, P. & PIFANO, F. & VOGELSANG, E., 1947. Nómima de los arthrópodos vulnerantes conocidos actualmente en Venezuela. *Bol. Ent. Venez.* 6, extra No. p. 1-7.
- BONNE, C. & BONNE-WEPSTER, J., 1925. Mosquitoes of Surinam. *Publ. Departm. Trop. Hyg.* 13, *Publ. Colon. Inst. Amsterdam* 21.
- COVA-GARCÍA, P., 1940. Especies anofelinas encontradas en el Territorio Amazonas y en otros Estados de la República. *Tijeretazos sobre malaria* 3 (2), p. 16.
- DYAR, H. G., 1928. The mosquitoes of the Americas. *Publ. Carnegie Inst.* 387.
- EVANS, A. M., 1921. Notes on Culicidae collected in Venezuela. *Ann. Trop. Med.* 15, p. 447.
- HOFFMAN, W. A., 1930. From San Juan to Aruba. *Puerto Rico J. Publ. Health Trop. Med.* 5, p. 357-369.
- KUYP, E. VAN DER, 1948a. Mosquito records of the Netherlands Windward Islands. *Am. J. Trop. Med.* 28, p. 747-749.
- KUYP, E. VAN DER, 1948b. Mosquito records of Aruba and Bonaire. *Am. J. Trop. Med.* 28, p. 895-897.
- KUYP, E. VAN DER, 1949a. Annotated list of mosquitoes of the Netherlands Antilles including French St. Martin.... *Docum. neerl. indones. Morbis trop.* 1, p. 69-70.
- KUYP, E. VAN DER, 1949b. Notes on Haemagogus anastasianis Dyar of Curaçao. *Docum. neerl. indones. Morbis trop.* 1, p. 142-144.
- KUYP, E. VAN DER, 1950. Iets over de malaria in Suriname. *West-Indische Gids* 31, p. 174.
- KUYP, E. VAN DER, 1953. Mosquitoes of the Netherlands Antilles. *Studies Fauna Curaçao* 5, *in press*.
- NÚÑEZ TOVAR, M., 1924. Mosquitos y flebótomos de Venezuela. *Mem. IV. Congr. Venez. de Med.* 1, p. 130-157.
- WATERMAN, N., 1918 & 1920. Reports of the Public Health Service of Curaçao, 1917 and 1919 respectively.
- WATERMAN, N., 1919. De geneeskundige organisatie in de Kolonie Curaçao. *West-Indische Gids* 1, vol. 2, p. 35-47.