Literature Pertaining to the Mosquito Fauna and the Mosquito-borne Diseases on Guam. Addendum.

Wesley R. Nowell and Ronald A. Ward

ABSTRACT. An additional 117 references have been compiled for inclusion with the annotated bibliography of the mosquitoes and the diseases associated with them on the island of Guam published in earlier issues of *Mosquito Systematics*.

INTRODUCTION. Documentation of the mosquito fauna and incidence of mosquito-borne diseases on Guam began soon after the ceding by Spain of the island of Guam to the United States of America upon conclusion of the Spanish American War in 1898.

The need for a definitive bibliography emerged as the number of species increased and medical significance of the mosquito population became apparent. An initial bibliography was published in this journal (Vol. 8(4): 355-385 (1976)) and supplemented soon thereafter (Vol. 10(2): 211-224 (1978)). This addendum increases the number of annotated references to the mosquito fauna and the mosquito-borne diseases on Guam to 430 articles, studies and reports. While many of the references are to unpublished U.S. military and other reports which are difficult to find, they are included so that the bibliography will be as comprehensive as possible.

1 Mailing address: 357 Reindollar Ave., Marina, California 93933-3639, U.S.A.

2 Department of Entomology, Walter Reed Army Institute of Research, Washington, D.C. 20307-5100. Research Associate, Department of Entomology, Smithsonian Institution, Washington, D.C., U.S.A.
BIBLIOGRAPHY

Ajax. 1911. Ouch! Guam News Letter 2(8): 4. Describes in rhyme the introduction and ravages of dengue fever. It is assumed that this ditty was written for a local variety show on Guam.


Center for Disease Control, Bureau of Tropical Diseases. 1979b. Control of dengue. Vector Topics No. 2, 39 p. U.S. Dep. Health, Education, and Welfare, Public Health Serv., Atlanta, Georgia. Comments that while at least six confirmed cases of dengue were imported onto Guam during the admission to the United States of refugees from Vietnam in 1975, no spread to the residents of Guam occurred because of early detection and extensive efforts toward mosquito control, p. 3.


Centers for Disease Control. 1982b. Malaria surveillance annual summary 1980. U.S. Dep. Health and Human Services, Public Health Serv., Atlanta, Georgia. 36 p. Shows a single case for Guam in the geographic distribution of cases, Fig. 2, p. 3, and includes the island in the list of malaria-free countries or areas, Tab. 19, p. 21, and Tab. 20, p. 25.


Guam, Territory of. 1974. Union catalog of the Guam Public Library: Guam and Pacific area materials. Collections of the Guam Public Library and the Micronesian Area Research Center. Prepared by the Staff of the Nieves M. Flores Memorial Library. 464 p. Provides an alphabetic list (by author) of published books pertaining to Guam. It does not include technical papers or articles printed in journals or other periodicals.


Herms, W.B. 1946. Some references to recent literature and sundry notes of interest to our members. Proc. Calif. Mosq. Control Assoc. 15: 10-17. References "Mosquitoes of Okinawa and islands in the Central Pacific" by R.M. Bohart and R.L. Ingram (NAVMED 1055), and notes that 12 species of mosquitoes were known for the Mariana islands in 1946, p.13.


Hutchinson, C.B. 1949. Welcoming address, University of California. Proc. Calif. Mosq. Control Assoc. 17: 2. In listing special departmental personnel at the University of California at Berkeley, the speaker refers to Dr. S.F. Bailey as “a Navy entomologist, who was the savior of Guam when dengue threatened.”

Jenkins, D.W. 1964. Pathogens, parasites and predators of medically important arthropods: annotated list and bibliography. WHO Bull. 30 (Suppl.): 1-150. Includes *Aedes guamensis* and *Ae. pandani* from Guam in the list of mosquitoes found infested by *Dirofilaria immitis*, p. 53.


which could easily have included the island of Guam with its several fully operational airfields and surface port which hosted a near-constant flow of aerial and sea travel beginning in 1944 and continuing to date.


Quarterman, K.D. and D.R. Johnson. 1972. *Anopheles* and malaria transmission, p. 30–33 (in Biology and Control of Important Insect Pests of Disease, p. 14–45). *In: J.V. Smith and R. Pal*, editors. Vector Control in International Health. WHO, Geneva. 144 p. Comments on the discovery of *Anopheles subpictus indefinitus* on Guam in 1948, and notes that six cases of malaria were reported from Guam in 1969 with at least one of the cases having been transmitted locally on this previously classified malaria-free island, p. 32.


Ramalingam, S. 1984a. Disease vector surveillance and training, Guam. WHO Regional Office West. Pac. Assignment Rep., 3–30 June 1984 (ICP/VBC/003), dated 24 July 1984. 42 p. Describes workshop activities and provides a checklist and keys to both the larvae and adults of all the mosquito species reported from Guam. The key includes 17 species which were misidentified or are no longer considered as occurring on the island.


Sabin, A.B. 1964. Dengue. Part II. Research activities, p. 40-62. In: J.B. Coates, Jr., E.C. Hoff, and P.M. Hoff, editors. Preventive medicine in World War II. Vol. VII. Communicable diseases: Arthropodborne diseases other than malaria. Office of the Surgeon General, Dept. of the Army, Washington, D.C. States that neutralization tests on sera from individuals who had dengue fever on Guam in 1944-45, indicated that another type or types of dengue other than the Hawaii type of virus were probably more prevalent there, p. 59.


U.S. Navy. 1944. Guide to the western Pacific. For the use of the Army, Navy, and Marine Corps of the United States of America. CinCPac-CinCPAC Bull. No. 126-44. 124 p. Notes that filariasis and dengue fever occur throughout the Mariana islands, but that malaria is rare, p. 67; also states "Mosquitoes are found everywhere, and although the malaria-bearing mosquito has not yet been introduced into the islands, the bearer of dengue fever and the nocturnal mosquito are both present," p. 67.


Ward, R.A. 1983. Mosquito fauna of Guam: case history of an introduced fauna (Abstract). Programme, abstracts and congress information, Pac. Sci. Assoc., 15th Congress, Univ. Otago, Dunedin, New Zealand (Feb. 1-11, 1983). 2 vols. 2: 249. While analyzing the 35 species of mosquitoes that had been reported in the literature as occurring on the island of Guam, the author points out that only 24 are valid species records: six species are restricted to the island, with the remaining 18 having been introduced since the United States acquired the island in 1898.

Ward, R.A. 1984. Mosquito fauna of Guam: case history of an introduced fauna, pp. 143-162. In: M. Laird, editor. Commerce and the spread of pests and disease vectors. Praeger Scientific, New York. 354 p. Analyzes the 41 species and subspecies of mosquitoes reported in the literature as having been found on Guam with emphasis on their period of introduction, validity of occurrence on the island, and their medical significance. Only 24 species are considered to be valid records: seven are endemic in the Mariana archipelago; 17 comprise an introduced fauna; and the remaining 17 are deleted from the list because their presence can not be confirmed.


World Health Organization. 1971. Vector quarantine in air transport. WHO Chron. 25(5): 236-239. References the five new species of mosquitoes which were recently introduced onto Guam and are potential vectors of dengue fever, Japanese encephalitis, and filariasis on the island, p. 236.

World Health Organization. 1975. Dengue fever surveillance in some countries of Asia and the south-west Pacific. W.H.O., Wkly. Epidemiol. Rec. 50: 269-272. Notes that while Guam had been reported free of *Aedes aegypti* since the late 1940s, one adult and two larval forms were found during a survey in 1971, and that *Ae. scutellaris* and *Ae. albopictus* were also identified on the island, p. 271.