

A Bibliography of Mosquito Writings
of R. C. Shannon^{1/}

Kenneth L. Knight and Ruth B. Pugh
Department of Entomology
North Carolina State University
Raleigh, North Carolina 27607

Previous papers presented bibliographies and vignettes of the lives of early American systematists Ludlow (1852-1924), Coquillett (1856-1911), Knab (1865-1918), and Dyar (1866-1929).^{*} Each of these individuals worked for many of their years in Washington, D. C., and all contributed significantly to the development of mosquito taxonomy. This article carries the Washington story forward a generation with a bibliography of the mosquito writings of Raymond Corbett Shannon (1894-1945). In all, Shannon published 129 publications^{**}, of which 58 deal significantly with mosquitoes.

Beginning as a student assistant in the U. S. Bureau of Entomology under Frederick Knab in 1912, serving in the Sanitary Corps in World War I, and receiving his B. S. from Cornell in 1923, Shannon began a career in medical entomology in 1924. The remainder of his life, except for four years in Greece (1932-36), was lived almost continuously in South America, and brought him accolades and widespread recognition for his many contributions to the study of arthropod-borne diseases. Employed as a special member of the International Health Division of the Rockefeller Foundation from December 1927 onward, his most newsworthy discovery was the first finding of *Anopheles gambiae* in Natal, Brazil in March 1930. Had the authorities heeded his recommendation that the localized infestation be immediately eliminated, a multi-million dollar control program and thousands of malarial deaths would later have been avoided. An equally significant finding was his demonstration in 1938 that yellow fever existed in the jungle and was there transmitted by *Haemagogus*, *Aedes leucoce-laenus* and one or more sabethine species.

Shannon should be considered a martyr to the hazards of medical entomology. He died in Trinidad on March 7, 1945, less than 51 years of age, from an overdose of sedative drugs. During the latter portion of his life, he suffered from a wide variety of parasitic diseases, ending with dengue fever and an intractably painful tumor of the arm.

His collections, papers and field notes are at the U. S. National Museum.

^{1/} Supported in part by Research Contract No. DADA 17-72-C-2113 from the U. S. Army Medical Research and Development Command, Office of the Surgeon General, Washington, D. C.

^{*}Knight, K. L. and R. B. Pugh, Mosquito Systematics 6(1):11-26 and 6(3):214-219. 1974.

^{**}See McAtee, W. L. and J. S. Wade, Proc. Ent. Soc. Wash. 53(4):211-222. 1951.

- Shannon, R. C.
1915. Mosquitoes attacking a frog. Proc. ent. Soc. Wash. 17:99.
- Matheson, R. and R. C. Shannon
1922. New mosquito records and notes on the habits of certain species from Central New York. Annals ent. Soc. Am. 15:157-163.
1923. The anophelines of Northeastern America (Diptera, Culicidae). Insect. Inscit. Menst. 11:57-64.
- Shannon, R. C.
_____. The pleural sclerites of Diptera. Can. Ent. 55:219-220.
1924. Notes on the maxillary teeth of *Anopheles*. Proc. ent. Soc. Wash. 26:142-143.
- Dyar, H. G. and R. C. Shannon
_____. New *Culex* from Panama (Diptera, Culicidae). Insect. Inscit. Menst. 12:46-48.
- _____. Notes on sabethids from Panama (Diptera, Culicidae). Insect. Inscit. Menst. 12:85-91.
- _____. Another new *Culex* from Panama (Diptera, Culicidae). Insect. Inscit. Menst. 12:143-144.
- _____. The subfamilies, tribes, and genera of American Culicidae. J. Wash. Acad. Sci. 14:472-486.
- _____. The American species of *Uranotaenia* (Diptera, Culicidae). Insect. Inscit. Menst. 12:187-192.
1925. The types of Philippine mosquitoes described by Ludlow and other notes on the fauna (Diptera, Culicidae). Insect. Inscit. Menst. 13:66-89.
- _____. The mosquitoes of Peary's North Pole expedition of 1908 (Diptera, Culicidae). J. Wash. Acad. Sci. 15:77-78.
- _____. New mosquitoes from Brazil (Diptera, Culicidae). J. Wash. Acad. Sci. 15:39-41.
- _____. A new sabethid mosquito from Panama (Diptera, Culicidae). J. Wash. Acad. Sci. 15:234.
- Shannon, R. C. and E. S. Shannon
1926. A dipterological tour in Europe. Ent. News 37:149-152.
- Shannon, R. C. and N. C. Davis
1927. Condiciones de reproducción de *Anopheles pseudopunctipennis* en la provincia de Tucumán durante la estación seca. Revta del Inst. Bact. Buenos Aires 4:662-678.

- Paterson, G. C. and R. C. Shannon
1927. Mosquitos de Embarcación (Salta) con notas sobre la zona biológica del Chaco (Chaco Life Zone). Rev. Univ. Buenos Aires 24:1273-1282.
- Shannon, R. C., N. C. Davis, and E. Del Ponte
_____. La distribución del *Anopheles pseudopunctipennis* y su relación con el paludismo, en la Argentina. Revta del Inst. Bact. Buenos Aires 4: 679-705.
- Shannon, R. C. and E. Del Ponte
_____. Cuatro notas sobre especies nuevas de Dípteros, Nematóceros, Hematófagos o no, de la República Argentina. Revta del Inst. Bact. Buenos Aires 4:724-736.
- _____. Los Culicidos en la Argentina. Revta del Inst. Bact. Buenos Aires 5:29-140.
- _____. Informe de una investigación preliminar sobre los Anofeles del río Alto Paraná, en la Argentina. Revta del Inst. Bact. Buenos Aires 4: 706-723.
- Davis, N. C. and R. C. Shannon
1928. The blood feeding habits of *Anopheles pseudopunctipennis* in Northern Argentina. Am. J. trop. Med. 8:443-447.
- _____. The habits of *Anopheles rondoni* in the Argentine Republic. Am. J. trop. Med. 8:448-456.
- Davis, N. C. and R. C. Shannon
1929. Studies on yellow fever in South America. IV. Transmission experiments with *Aedes aegypti*. J. exp. Med. 50:793-801.
- _____. Studies on yellow fever in South America. V. Transmission experiments with certain species of *Culex* and *Aedes*. J. exp. Med. 50:803-808.
- Shannon, R. C.
1930. O aparecimento de uma especie africana de *Anopheles* no Brasil. Brasil-Medico 44(19):515-516.
- _____. Observations on *Anopheles pseudopunctipennis* in Peru. Am. J. Hyg. 12:442-448.
- Shannon, R. C. and N. C. Davis
_____. Observations on the Anophelini (Culicidae) of Bahia, Brazil. Ann. ent. Soc. Am. 23:467-505, 7 pls.
- _____. The flight of *Stegomyia aegypti* (L.). Am. J. trop. Med. 10:151-156.

- Shannon, R. C., A. W. Burke, and N. C. Davis
 1930. Observations on released *Stegomyia aegypti* (L.) with special refer-
 ence to dispersion. Am. J. trop Med. 10:145-150.
- Shannon, R. C. and J. Seraphim, Jr.
 _____. Revisão do catalogo da fauna de anophelinos no Brasil. Com observa-
 ções sobre algumas especies do grupo Nyssorynchus encontradas na Bahia
 e Recife, consideradas de importancia como os mais provaveis vehicula-
 dores de malaria nessa região. Arquivos de Hig. 4:79-96.
- Davis, N. C. and R. C. Shannon
 _____. The location of yellow fever virus in infected mosquitoes and the
 possibility of hereditary transmission. Am. J. Hyg. 11:335-344.
1931. Studies on yellow fever in South America; attempts to transmit the
 virus with certain aedine and sabethine mosquitoes and with triatomas
 (Hemiptera). Am. J. trop. Med. 11:21-29.
- _____. Further attempts to transmit yellow fever with mosquitoes of South
 America. Am. J. Hyg. 14:715-722.
- Shannon, R. C. and M. Frobisher, Jr.
 _____. A comparison of the effect of various substances upon larvae of *Aedes*
aegypti. Am. J. Hyg. 14:426-432.
- Frobisher, M., Jr., N. C. Davis, and R. C. Shannon
 _____. On the failure of yellow fever virus to persist in a colony of *Aedes*
aegypti. Am. J. Hyg. 14:142-146.
- Shannon, R. C.
 _____. List of species of Argentine Culicidae. Sexta reunion de la Soc.
 Argentina de Patologia regional del Norte Salta, p. 494-500.
- _____. The environment and behavior of some Brazilian mosquitoes. Proc. ent.
 Soc. Wash. 33:1-27.
- _____. On the classification of Brazilian Culicidae with special reference
 to those capable of harboring the yellow fever virus. Proc. ent.
 Soc. Wash. 33:125-164, illus.
- Frobisher, M., Jr. and R. C. Shannon
 1931. The effects of certain poisons upon mosquito larvae. Am. J. Hyg.
 13:614-622.
- Shannon, R. C.
 1932. *Anopheles gambiae* in Brazil. Am. J. Hyg. 15:634-663.

1933. Anophelines of the Amazon Valley. Proc. ent. Soc. Wash. 35:117-143, illus.
- _____. Correction. Proc. ent. Soc. Wash. 35:58.
- _____. An Algerian anopheline found in Greece. (Diptera, Culicidae, *An. marteri*, S. & P.) Riv. Malariologia 12:521-522.
- Shannon, R. C.
1934. The genus *Mansonia* (Culicidae) in the Amazon Valley. Proc. ent. Soc. Wash. 36:99-110, 2 colored illus.
- Shannon, R. C. and P. Putnam
- _____. The biology of *Stegomyia* under laboratory conditions. I. The analysis of factors which influence larval development. Proc. ent. Soc. Wash. 36:185-216.
- Putnam, P. and R. C. Shannon
- _____. The biology of *Stegomyia* under laboratory conditions. II. Egg-laying capacity and longevity of adults. Proc. ent. Soc. Wash. 36:217-242.
- Shannon, R. C.
1935. Malaria studies in Greece. The reaction of anopheline mosquitoes to certain microclimatic factors. Am. J. trop. Med. 15:67-81.
- Shannon, R. C. and J. Hadjinicolaou
1937. Greek Culicidae which breed in tree-holes. Acta Inst. et Musei zool. Univ. Atheniensis 1:173-178.
- Shannon, R. C. and A. Papadakis
- _____. Some comparative rearing experiments with Greek anophelines. Acta Inst. et Musei zool. Univ. Atheniensis 1:179-192.
- Shannon, R. C., L. Whitman, and M. Franca
1938. Yellow fever virus in jungle mosquitoes. Science 88:110-111.
- Shannon, R. C.
1939. Methods for collecting and feeding mosquitoes in jungle yellow fever studies. Am. J. trop. Med. 19:131-140, 1 pl.
- Shannon, R. C. and G. C. de Andrade
1940. Dry season observations on the African mosquito *Anopheles gambiae*, in Brazil in 1938. Am. J. trop. Med. 20:641-668.
- Shannon, R. C. and J. Hadjinicolaou
1941. Egg production of Greek anophelines in nature. J. econ. Ent. 34: 300-305.
- Shannon, R. C.
1942. Brief history of *Anopheles gambiae* in Brazil. Caribbean med. J. 4(4): 1-7, map. (reprinted in Rev. Canad. Biol. 2(2), 1943).

Downs, W. G., H. P. S. Gillette, and R. C. Shannon
1943. A malaria survey of Trinidad and Tobago, British West Indies. J. nat. Malaria Soc. (Supp.) 2:5-44.

Shannon, R. C. and N. L. Cerqueira
_____. *Psorophora lanei*, um novo mosquito do Brasil e da Bolívia (Diptera, Culicidae). Rev. de Ent. 14:135-137.

Shannon, R. C.
1943. Introduction in [J. Lane and N. L. Cerqueira] Os Sabetineos da América (Diptera, Culicidae). Arquivos de Zoologia do Estado de Sao Paulo, Imprensa Oficial do Estado 3:475-482.