neses ha sido inaccessible a cuantos no dominaban el idioma japonés. Este estudio por Hsiao y Bohart sintetiza en inglés para el uso de los entomólogos los importantes conocimientos disponibles sobre los mosquitos de estas regiones.

Presentan claves a las hembras adultas y a las larvas de la cuarta etapa. Los autores lograron examinar 35 de las 44 especies japonesas, tomándose de la literatura los datos referentes a las demás especies. A continuación de las claves, se da una lista de las especies, con anotaciones sobre su taxonomía, difusión, biología y relación a las enfermedades. El *Anopheles sinensis* Wiedemann lo consideran como una especie en lugar de mera subespecie del *hyracanus*. Se presentan indicaciones de que el *Anopheles edwardsi* Yamada, 1924, es un sinónimo del *A. koreicus* Yamada y Watanabe, 1918, o cuando más, una variedad de esta especie. Se cree que el *A. edwardsi* es una variedad que habita las regiones de las aguas frías.

Se presentan la difusión y la incidencia de infección de las cuatro enfermedades transmitidas por mosquitos en el Japón, como también los datos incriminatorios de las especies vectoras. La filariasis predomina sobre todo en las islas más meridionales y en las islas Riu-Kiu. Los autores se refieren a las conclusiones de Yamada al efecto de que los *Aëdes togoi, Culex pipiens pallens, C. vagans* y *C. whitmorei* son sumamente susceptibles a la infección, mientras que los *C. sinensis, C. tritaeniorhynchus* y *Anopheles sinensis* lo son en menor grado.

La encefalitis "B" japonesa se ha difundido por todo el Japón, con epidemias que ocurren generalmente durante el tiempo cálido del verano. Investigadores japoneses han demostrado que los *Culex pipiens pallens, C. tritaeniorhynchus* y *Aëdes togoi* son susceptibles a la infección, y hasta se dice que en el *C. pipiens pallens* el virus es capaz de pasar de generación en generación.

El paludismo no constituye un problema serio en el Japón, aunque es más común en la parte sur de las islas Riu-Kiu. El vector es el *Anopheles sinensis*.

El dengue es transmitido por los *Aëdes aegypti* y *A. albopictus* en las islas japonesas. No se ha podido encontrar el *A. aegypti* en las islas principales, en las cuales el transmisor de la enfermedad parece ser el *A. albopictus*.

Los autores hacen mención de tres casos de fiebre amarilla que habían sido denunciados en el Japón, pero señalan que éstos probablemente no sean autóctonas.

(Translation of a review by Lloyd E. Rozeboom, Johns Hopkins University.)

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WINTER SURVIVAL OF *Aedes Aegypti* (L.) IN HOUSTON, TEX. Stephen P. Hatchett, United States Public Health, Service Reports 61(34): 1234–1244, 1946.

The study was inaugurated in order to learn the winter habits of *Aedes aegypti* (L.) in an area where the winter weather consists of warm days alternating with cold ones. The winter of 1944–45, during which the investigations were conducted, was an unusually mild one with only one day of freezing weather and a minimum temperature of 30° F. Approximately 10,000 eggs from laboratory-reared females were deposited on the sides of containers, on the water surface and on filter paper, and placed outdoors under various conditions during the period of study.

A 43.5 per cent hatch resulted from the group of eggs which was kept immersed throughout the winter. In a second group where the eggs were attached to the inner surface of the containers and water was supplied only by normal rainfall, the hatch was 28.4 per cent. In a third group the eggs were allowed to incubate 72 hours and then kept dry for several months. In this group a 21.4 per cent hatch was obtained. In all three groups the hatch was lower in fully exposed containers than in ones in partially protected areas. The number of eggs hatching at any one time was markedly affected by temperature. When the mean temperature was 70° F. or above, there was an acceleration in the hatching rate. Few eggs hatched when the temperature dropped below 50° F. A small number of eggs hatched 48 hours after being placed outdoors, while some did not hatch until 90 to 95 days of immersion had elapsed. The mean period of immersion before hatching was about 32 days. The period between hatching and emergence of adults ranged from 7 to 59 days, with most specimens taking 2 to 3 weeks. Larvae which had just hatched and mature larvae about to pupate, were particularly susceptible to low temperatures. Larvae were better able to survive cold weather where there was a layer of organic matter on the bottom of the container. In general, temperature had little effect on the duration of the pupal period which averaged about four days. During the entire season about half of the larvae under observation became adults. The majority of adults that emerged prior to February 15 died soon after emergence while most of the females appearing after this date lived at least long enough to mate, feed and oviposit.

A series of experiments was also performed to learn the effects of artificial cold on *A. aegypti* eggs. It was found that eggs that had been continuously wet since time of deposition, did not survive artificial cold of 26° F. when it lasted 24 hours or longer. However, 10 per cent of the eggs hatched that previously had been dry and were then immersed in cold water and frozen at this temperature for 24 hours. Approximately half of all eggs hatched that were previously exposed to artificial cold of 34° F. for 24 hours. (Ralph C. Barnes, S. A. Sanitarian (R), Communicable Disease Center, U. S. Public Health Service, Atlanta, Ga.)