PICTORIAL KEYS TO THE MOSQUITOES OF MEDICAL IMPORTANCE III. MALAYA

KATHRYN M. SOMMERMAN AND RICHARD H. FOOTE
Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, United States Department of Agriculture

The accompanying keys continue a series being prepared under a transfer of funds from the Department of the Army to the Bureau of Entomology and Plant Quarantine, which are designed primarily to assist public-health workers in rapidly separating and identifying the mosquito species of primary medical importance (Mosquito News, vol. 13, no. 3, March 1953). The keys are so constructed that they separate the important species not only from each other but also from all other species known to occur in the area concerned. Suggestions and comments will be welcomed, particularly from persons having information on the faunas of the countries involved.

Although 48 species of Anopheles are known from Malaya, only 8 are especially important as vectors of malaria. A. sundicus and A. minimus minimus are of great importance wherever they occur. The former is typically a brackish-water breeder and occurs along the entire coast, where it is responsible for the extensive endemic malaria present there. A. minimus minimus breeds throughout Malaya in slow-running, partly shaded streams and springs. A. minimus flavirostris, although an important vector in the Philippines, is extremely rare in Malaya. The larvae of flavirostris and typical minimus are virtually indistinguishable. A. maculatus, an extremely important vector, inhabits foothill regions near coastal areas and prefers sunlit breeding places, entering cleared areas to replace those species, such as umbratus, which prefer shaded sites. The latter is also an important vector, but is restricted to jungle swamps and their immediate vicinity in the plains region. A. leitifcr, a close relative, is one of the most economically important vectors, breeding and transmitting malaria to a high degree in plantations in the flat coastal areas. A. barbirostris is not considered to be important in Malaya, except where it occurs in great numbers or serves as an accessory vector during an epidemic. Because of past confusion in identification of sinensis and hyrcanus nigerrimus, some doubt still exists as to their relative medical importance in Malaya. However, both have been found naturally infected there, and are thought to play a role in malaria transmission. Both species generally breed in open situations, such as rice fields, lakes, and the edges of slowly moving streams.

In addition to those mentioned above, the following species of Anopheles have been recorded from Malaya, or are suspected of being present in that country: aeonitus, aitkeni aitkeni, aitkeni bengalensis, aitkeni palma tus, albotaeniatus, annandalei annandalei, annularis, ariais, aurisirostris, baeki, barbumbrosus, brevipalpus, brevirostris, gigas sumatrana, hunteri, hyrcanus williamsoni, insulaeformu, karwari, kochi, leitifcr, leucosphyrus hackeri, leucosphyrus leucosphyrus, lindeyi camerounensis, minimus varuna, montanus, palidus, philippinensis, ramsayi, roperi, schiffneri, separatus, similissimus, subpictus indefinitus, subpictus malayensis, subpictus subpictus, tessellatus, vagus, watsoni, and wellingtonianus.

Of the approximately 175 nonanopheline mosquitoes known definitely to occur in Malaya, only Aedes aegypti and albopictus are the vectors of dengue fever, a common disease in Malaya. Both of these mosquitoes are urban, and they breed in all kinds of artificial containers near human habitats.