Pictorial keys for the identification of mosquitoes (Diptera: Culicidae) associated with Dengue Virus Transmission

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Abstract

Identification keys are provided for female adults and fourth stage larvae of the mosquito species likely to transmit dengue viruses in 4 regions of the world. The keys are illustrated with Auto-Montage® photomicrographs, allowing optimum depth of field and resolution. Species included for the Afrotropical Region are: Aedes (Stegomyia) aegypti (Linnaeus), Ae. (Stg.) africanus (Theobald),
Ae. (Stg.) albopictus (Skuse), Ae. (Stg.) luteocephalus (Newstead), Ae. (Stg.) opok Corbet and Van Someren, Ae. (Diceromyia) furcifer (Edwards), and Ae. (Dic.) taylori Edwards; for the South Pacific Islands and Australian Region: Ae. (Stg.) aegypti, Ae. (Stg.) albopictus, Ae. (Stg.) cooki Belkin, Ae. (Stg.) hebrideus Edwards, Ae. (Stg.) hensilli Farner, Ae. (Stg.) polynesiensis Marks, Ae. (Stg.) rotumae Belkin, Ae. (Stg.) scutellaris (Walker), and Ochlerotatus (Finlaya) notoscriptus (Skuse); for the Oriental Region: Ae. (Stg.) aegypti, Ae. (Stg.) albopictus, and Oc. (Fin.) niveus subgroup; and for the American Region (North, Central and South America, including the Caribbean Islands): Ae. (Stg.) aegypti, Ae. (Stg.) albopictus, and Oc. (Gymnometopa) mediovittatus (Coquillett).

Key words: Diptera, Culicidae, Ochlerotatus, Aedes, aegypti, albopictus, dengue, identification key, mosquitoes

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Introduction

Aedes and Ochlerotatus mosquitoes include species that are known or potential vectors of dengue viruses infecting humans. With an increasing number of human cases of dengue and dengue hemorrhagic fever worldwide, it is essential that identification keys for the mosquito vectors be readily available. A list of mosquito species (Table 1) includes 7 commonly known or potential vectors of dengue viruses in the Afrotropical Region, 9 in the South Pacific Islands and Australian Region, about 3 in the Oriental Region (particularly Southeast Asia) and 3 in the Americas (North, Central and South America including the Caribbean Islands). These species are treated separately according to regions (Fig. A) in the identification keys for both adults and fourth stage larvae. Two species, Aedes aegypti (Linnaeus) and Aedes albopictus (Skuse), are found in all 4 regions of the world that are treated in this work.