Aedes (*Stegomyia*) *scutellaris* (Walker)

NZ Status: Not present – Unwanted Organism

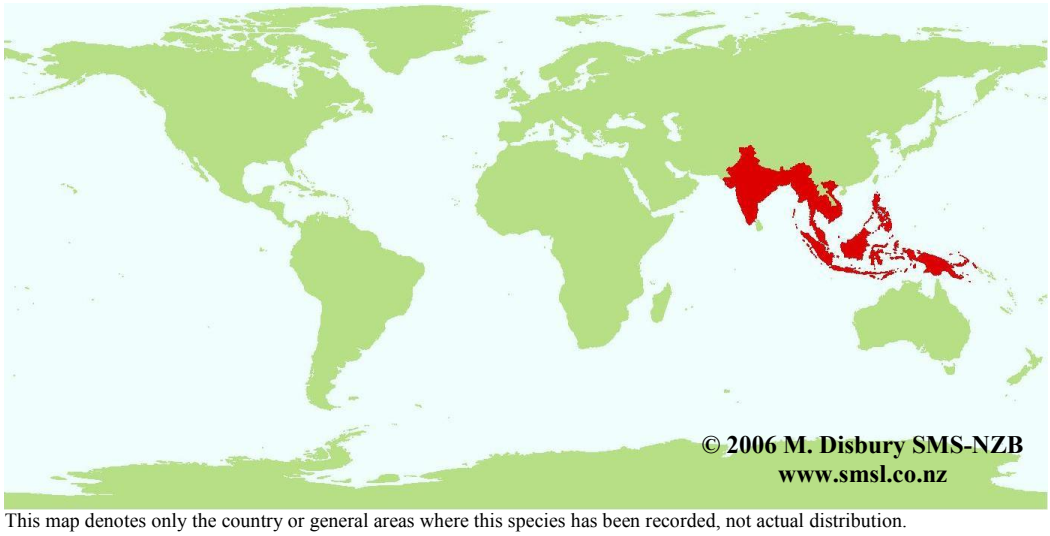
Vector and Pest Status

Aedes scutellaris is a vector of dengue (Mackerras, 1946; Foote and Cook, 1959). It has also been infected with the filaroids *Brugia malayi* and *Brugia pahangi* in the laboratory (Trpis, 1981).

Geographic Distribution

This species is found throughout Papua New Guinea, Tonga, South East Asia, South Pacific (Foote and Cook, 1959; Huang, 1972) and Torres Straight Islands and Cape York Peninsula in Australia (Lee *et al*., 1987; van den Hurk *et al.*, 1996).

The potential distribution of *Aedes scutellaris* in New Zealand is thought to be restricted to the northern coastal areas of the North Island.



This map denotes only the country or general areas where this species has been recorded, not actual distribution.

Incursions and Interceptions

This species was intercepted in New Zealand on an aircraft from New Hebrides/New Caledonia during 1943-1944 (Laird, 1956; Derraik, 2004).

Taxonomy

Aedes scutellaris belongs to the *scutellaris* group of the subgenus *Stegomyia* which contains 16 species according to Huang (1972) or 23 species according to Lee *et al*. (1987).

Habits and Habitat

Aedes scutellaris is an autogenous, semi domestic container breeding mosquito, but it is also considered a bush mosquito (van den Hurk *et al*., 1996). It commonly breeds in clean water and sometimes in polluted water (Lee *et al*., 1987). It has been collected from tree-holes and other natural containers such as ground pools, coconut husks, shells, tree-holes, fallen coconut fronds, leaf axils, cocoa pods, pools in lava holes and crab holes (Lee *et al*., 1987). It will also breed in artificial containers such as water tanks, canoes, tins, bottles, cement drains and wells (Lee *et al*., 1987). Eggs are laid at or just above the water line (Forbes and Horsfall, 1947). *Aedes scutellaris* eggs are far less resistant to desiccation than those of *Aedes aegypti* (Woodhill, 1949).

Aedes scutellaris is diurnal host-seeking species (Standfast, 1967), and will attack readily during the day in shadowed areas, but not in direct sunlight (Bonne-Wepster, 1954a, 1954b; Standfast, 1967). This species has a preference for humans and will bite indoors and outdoors (Bonne-Wepster, 1954a; 1954b; Foote and Cook, 1959). Adults may be found in houses, forests, bushes or in coconut plantations (Forbes and Horsfall, 1947; Penn 1947).

In dispersal experiments, this species has been observed to fly 455m, but not more than 727m (Lee *et al*., 1987; Forbes and Horsfall, 1947). The majority of adults disperse less than 100m during their lifetime. Forbes and Horsfall (1947) found that moderate breezes do not prevent feeding, but strong ones keep the mosquitoes from coming out. Dispersal of this species varies depending on availability of shelter, food and available breeding sites.

It is interesting to note that on Yorke Island in the Torres Strait, Australia, there is evidence that *Ae. albopictus* is displacing *Ae. scutellaris* (Ritchie *et al*., 2006).

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