



NEW ZEALAND BioSECURE

Entomology Laboratory



Anopheles (Cellia) farauti s.s. Laveran

NZ Status: Not Present – NSP Watchlist

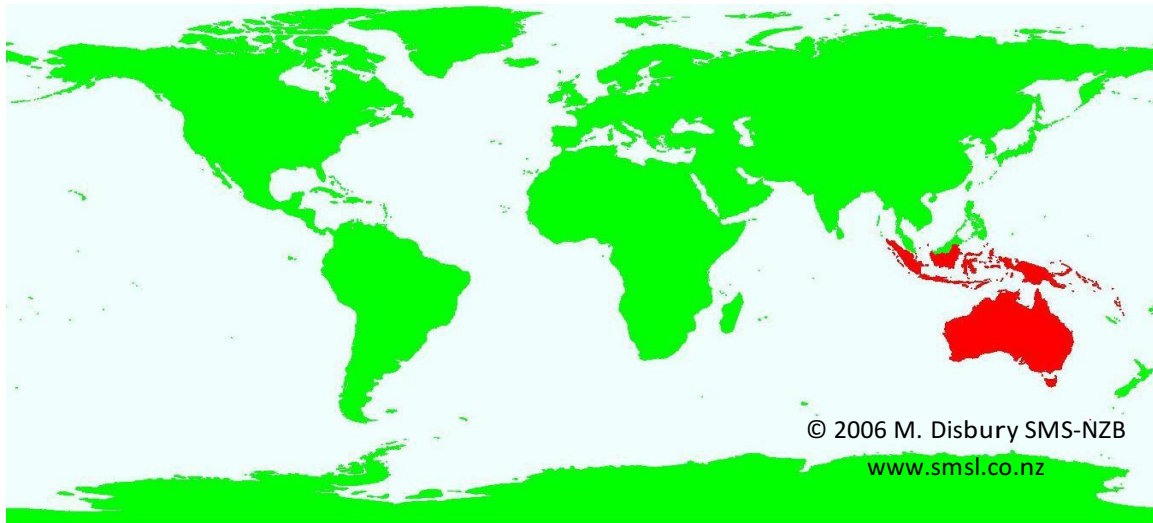


Vector and Pest Status

Anopheles farauti s.s. is a vector of malaria, and is highly susceptible to *Plasmodium vivax* and *P. falciparum* (Lee et al., 1988). It is also a vector of Bancroftian filariasis (*Wuchereria bancrofti*) (Lee et al., 1988).

Geographic Distribution

The *Anopheles punctulatus* group (including *An. farauti*) is present in Australia, Indonesia, Solomon Islands, Papua New Guinea, Solomon Islands, Bismarck Archipelago and the islands of Vanuatu (Lee et al., 1988). *Anopheles farauti* s.s. is the most widely distributed species of the group and is found throughout northern Australia east to the islands of Vanuatu (Beebe et al., 2000b).



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

Interceptions and Incursions

This species has not been intercepted in New Zealand.

Taxonomy

Anopheles farauti is part of the *An. punctulatus* group, which are important vectors of malaria in the southwest Pacific. Presently the group is considered to contain about 12 cryptic species with overlapping morphology (Beebe et al., 2000b), including

- *An. farauti* s.s. Laveran (formerly *An. farauti* No. 1) (Schmidt et al., 2001)
- *An. hinesorum* Schmidt sp.n. (formerly *An. farauti* No. 2) (Schmidt et al., 2001)
- *An. torresiensis* Schmidt sp.n. (formerly *An. farauti* No. 3) (Schmidt et al., 2001)
- *An. farauti* No. 4-6,
- *An. irenicus* Schmidt sp.n. (formerly *An. farauti* No. 7) (Schmidt et al., 2003)
- *An. punctulatus* Donitz
- *An. sp. near punctulatus*
- *An. koliensis* Owen
- *An. clowi* Rozeboom and Knight (Cooper et al., 2000)

Some members of this group cannot be reliably identified by morphological markers, making field studies on their biology and behavior difficult. Only recently has work to determine their distributions been initiated (Beebe et al., 2000b).

Habits and Habitats

Anopheles farauti s.s. is a coastal species which has larvae that are tolerant of saline conditions (Sweeney, 1987), although they will also breed in fresh water (Beebe et al., 2000b). Breeding sites include the margins of creeks and rivers entering the sea, pools and swamps formed behind beaches and coastal sand dunes (Beebe et al., 2000b), semi-permanent ground waters with emergent vegetation such as swamps, lagoons and ponds, pig wallows, garden pools. Containers such as tins, coconut shells drums and canoes are an exception rather than the rule (Lee et al., 1988).

This species is capable of crossing large expanses of water as indicated by its presence in the Solomon and Vanuatu islands (Beebe et al., 2000b). Perry (1945) observed that females did not mate within two days of emergence.

In a biting study on the Solomon Islands investigating three members of the complex, *An. farauti* s.s. was the only species collected on human bait, with a much higher biting rate early in the evening between 6 30pm-8pm than later between 9pm-12am (Beebe et al., 2000a). Other hosts include dog, pig, horse, cat, cattle, goat, ruminant, possum, kangaroo.

Adult females predominantly bite at night, both indoors and outdoors. Variations in peak biting activity have also been recorded (Lee et al., 1988). Studies on dispersal have shown that females could fly 1 mile [1.6km] from the nearest larval habitat (F.H.S. Roberts & O'Sullivan, 1948) while the distance flown by marked females was generally less than 50m (Charlwood, Dagoro & Paru, 1985).

References

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