



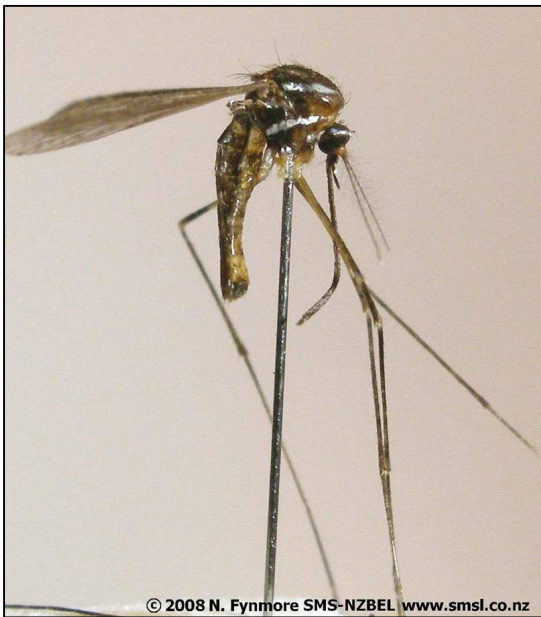
NEW ZEALAND BIOSECURE
Entomology Laboratory



Maorigoeldia argyropus (Walker)

No common name

NZ Status: endemic



Adult female



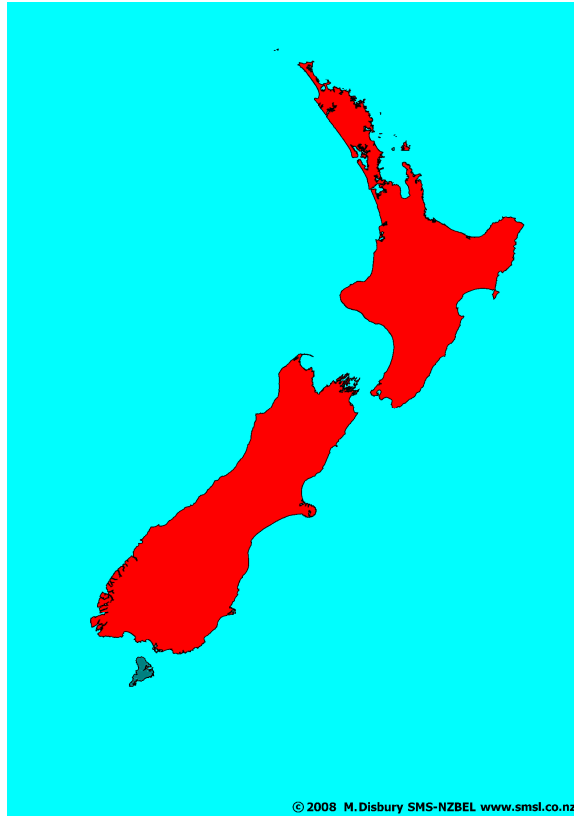
Adult male

Vector and Pest Status

The vector status of *Maorigoeldia argyropus* is not currently known (Holder *et al.*, 1999). It does not appear to blood feed (Snell *et al.*, 2005) and is not seen in dense numbers (Pillai, 1965). It appears to have no significant pest status (Holder *et al.*, 1999).

Geographic Distribution

Maorigoeldia argyropus is an endemic species described by Walker in 1848 (Dumbleton, 1968) with a disjunct distribution throughout New Zealand (Sandlant, 2002). This species has been recorded in Auckland, Waitakere ranges, Little Barrier Island (Lee *et al.*, 1988), Mahia, Ohakune, Wellington, Nelson (Graham, 1929), Westland and Otago (Pillai, 1965) though it appears to have disappeared from many North Island sites (Snell *et al.*, 2005).



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

Incursions and Interceptions

This species has not been intercepted at New Zealand's borders.

Taxonomy

Although the species name of *Maorigoeldia argyropus* was settled upon in 1848, it did not receive the genus name *Maorigoeldia* until the 1930's. Until this time, this species has been included in the genera *Tripteroides*, *Culex*, *Uranotaenia* and *Rachionotomyia* (Graham, 1929; Belkin 1962; 1968).

Mg. argyropus is the only known member of the genus and is most closely related to members of the genus *Tripteroides*, treehole breeding mosquitoes found in Eastern Australia and the Pacific islands (Pillai, 1965). Both genera belong to the primitive mosquito tribe Sabethini (Belkin, 1962; 1968), and *Mg. argyropus* is considered to be one of the most primitive sabethines known (Pillai, 1965).

Maorigoeldia argyropus is easily distinguished from all other species of mosquito in New Zealand. The adults have distinctive bluish white scales forming lines running across the thorax when viewed in profile and two white scale spots between these (Edwards, 1924; Pillai, 1965). On the head, the eyes are bordered by the same bluish white coloured scales and a white ring may be seen around the middle of the palps (Miller, 1952; Belkin, 1962). The fourth and fifth tarsal segments of the hind legs are completely white (Pillai, 1965).

The larvae are also distinctive in that they have more than six pairs of hairs on a strongly tapered siphon (Dumbleton, 1968) and a very large patch of comb scales numbering around 100 (Belkin, 1962).

Habits and Habitat

Maorigoeldia argyropus is a sylvan species, found only in relic areas of relatively pristine native forest (Pillai, 1965, Derraik, 2005). It has been found breeding in phytotelmata such as rot holes in trees and fallen nikau fronds (Belkin, 1968), and also in artificial containers such as rainwater tanks, tins, jars and tyres near edges of forest (Belkin, 1962; 1968; Dumbleton, 1968; Snell *et al.*, 2005). It has been found associated with *Aedes notoscriptus* (Belkin, 1968).

Females appear to be autogenous and lay eggs on the water surface in batches of 12-20 (Graham, 1929). Eggs are laid in the shade and once hatched the larvae also seek out the shade (Graham, 1929) while they complete their development. The larvae are able to remain underwater for extended periods of time, likely due to their very large gills (Graham, 1939). When at rest, the larvae usually lie horizontally often under cover of any vegetation in the bottom of their container (Graham, 1929). When surfacing the larvae have been recorded to be able to crawl up the side of their container with the aid of hooked hairs at the base of their siphon (Graham, 1929).

Larvae may complete development within 28 days if laid in warmer months (Graham, 1929) but are often found developing at a slow rate over winter and emerging as adults in the spring (Pillai, 1965). They do not appear to hibernate and have been found active in pools of 4.5°C (Pillai, 1965).

Adult females of this species have been reported flying in winter in the most northern parts of this species' range (Dumbleton, 1968) but in the Waitakere ranges, adults were found "hibernating" in sheds and houses close to the bush (Graham, 1929). They have also been found hibernating under dead nikau or tree fern fronds still attached to the tree (Graham, 1929) indicating they may over winter as adults. Adults have been observed resting on tree trunks (Belkin, 1968).

Adult females of *Maorigoeldia argyropus* have not been caught in CO₂ baited light traps (Snell *et al.*, 2005) and there is no real evidence of any attraction to humans (Belkin 1968). A number of studies have been unable to get females to blood feed but the females still lay eggs when living off sugar water (Snell *et al.*, 2005). When considered in conjunction with the large size of the larvae indications are that *Mg. argyropus* is an autogenous species (Snell *et al.*, 2005) with resources for egg production being carried over from the larval stage.

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