

Phylogeography of the trans-Tasman marine caddisflies (Trichoptera: Chathamidae)

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Marine insects are an oddity but New Zealand is host to a small family of caddisflies whose larvae are entirely marine. Five species are described in the Chathamidae, all from the New Zealand region. One species (*Philanus plebeius*) has long been known to also live in Australian waters. This is the only example of a non-endemic New Zealand caddisfly. The origin of this trans-Tasman distribution has been debated with competing arguments for recent dispersal in one direction or the other. We report the results of the first phylogeographic study of marine caddisflies, which shows a lack of genetic variation in Australian *P. plebeius* but extensive and deep variation within New Zealand populations. We also confirm (with morphological and molecular evidence) the existence of a second 'New Zealand' marine caddisfly in Sydney Harbour, *Chathamia integripennis*.

