



## Bug of the week



**The Mango Flower Beetle (*Protaetia fusca*)** is a recognized minor pest found around the Pacific islands, South-East Asia, India, China, Australia, and central parts of America. The adults are a robust, medium sized beetle (12-17mm long) that vary in colour from dark grey brown to reddish-brown or black with lighter blotches. Males can be recognized by a pointed structure protruding from their rear. There are many hosts, but the more common ones include avocado, coconut flowers, mango, dragon fruit, citrus, yellow and white ginger, figs, guava, Cassia species, longan, peach, lychee and orange jasmine. The adult beetles feed on flowers, new growth and fruit, often damaging flowers when trying to obtain pollen and/or nectar. The destruction of flowers can reduce the abundance of fruits. This species prefers already damaged or overripe fruits and they also attack growing tips of host plants to feed on sap from the wounds. Adults have also been recorded infesting beehives and stingless bee nests.



Side view (left) and top view (right) of an adult female mango flower beetle (*Protaetia fusca*) (Photos: Mike Bowie)

Female beetles may deposit as many as 147 eggs in detritus on the ground during their 6–7 month adult lifespan. Eggs are oval, 2.2mm long and 1.6mm wide. Hatching larvae grow to reach maturity after 50 days and are important plant detritus feeders, so are considered beneficial (rather than a pest) as they convert mulch to soil. Larvae reach 20-32mm in length and pupate in a cylindrical chamber 17mm long and 12mm wide. The chamber is rough externally, composed of faecal pellets, but is smooth-walled internally, consisting of fine soil particles.

Three parasitoid wasps, *Scolia vollenhoveni*, recorded in Malaysia, *Campsomeris annulata* from Guam, and *Tiphia paralella* from Mauritius have been introduced into Hawaii in attempts at biological control of the mango flower beetle. These beneficial wasps don't appear to be in the Cook Islands but could be introduced if the pest status of the mango flower beetle increases to unacceptable levels. Predators of the mango flower beetle in Cook Islands are likely to include chickens, mynas, the Pacific giant centipede and the two species of huntsman spiders found here. In situations where the beetle is numerous, handpicking might be beneficial, as adults are slow moving. In very rare cases when pesticides may be warranted due to large numbers of these beetles, plant-derived products such as derris, neem or synthetic pyrethroids are likely to be effective against adults.

