



No. 26

April 2002

Re-incursion of Nauru by Melon fly

The melon fly (*Bactrocera cucurbitae* (Coquillett)) was introduced into Nauru probably in the early 1980s. It was eradicated in early 1999 with the last fly trapped in February of that year. Unfortunately this pest has now reappeared in Nauru. Quarantine officers reported to SPC Plant Protection Service in December 2001 that they had collected melon flies in cue-lure traps from July 2001 onwards but had not recognized them as such at the time and therefore the occurrence had not been recorded. SPC PPS staff identified them as melon flies on a visit to Nauru in December.

It is postulated that melon fly was re-introduced as eggs and/or larvae in fruits in aircraft refuse that was off-loaded from the Air Nauru flight from Guam or through passengers carrying infested fruit from Guam. The aircraft refuse was taken to the rubbish dump but not incinerated. The re-incursion of melon fly and the continued lack of authority for the Quarantine Service in Nauru to start operations pose a great threat to countries that have direct flight connections with Nauru.

The melon fly is a native species in tropical Asia and is also present in Hawaii, Papua New Guinea (PNG), Solomon Islands, Guam and the Commonwealth of Northern Mariana Islands. This pest species causes considerable damage to all cucurbit crops everywhere it occurs. In PNG 95% of bitter gourd fruits are infested and destroyed and over 90% of snake gourds are attacked. Melon fly also attacks some 60-87% of pumpkins in Solomon Islands. More than 125 species of host plants have been recorded for this species in extensive host surveys in Asia and Hawaii. In Southeast Asia, it has been reared from 42 host species. Nine species of cucurbit hosts have been recorded in the Pacific. Non-cucurbit hosts recorded in Asia and Hawaii include beans (*Vigna unguiculata* and *Phaseolus vulgaris*) and papaya (*Carica papaya*). Its main host in Nauru is bitter gourd (*Momordica charantia*), a weed on Nauru.

The current fruit fly eradication program in Nauru, targeting melon fly and mango fly (*B. frauenfeldi* (Schiner), involves a combination of male annihilation, using BactroMAT™ cue-lure bait stations, and protein bait spraying. To monitor the success of the program, regular collections of host fruit and clearance of fruit fly traps are carried out.

The return of the melon fly pest to Nauru is a reflection of the lack of a functioning quarantine service there. To prevent the re-introduction of an exotic fruit fly species, it is imperative that an effective and functioning quarantine service is in place. Such a service would control waste material from aircraft and ships at ports of entry and ensure that all food rubbish was incinerated. The current challenge for the Government of the Republic of Nauru is to gazette the Quarantine Act upon which the quarantine service can operate



Adult melon fly, *Bactrocera cucurbitae*. Photo: Steve Wilson. Host *Momordica charantia* (bitter gourd) Photo: Konrad Englberger

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Communications of pest and disease incidents of interest to the Pacific region should be sent to: Plant Protection Service, Secretariat of the Pacific Community, Private Mail Bag, Suva, Fiji Islands. Tel: (+679) 3370733; Fax: (+679) 3370021; email: pps@spc.int