

Monkey beetles attack citrus fruit

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In October 2019, in the Gamtoos River Valley, Eastern Cape, numerous small beetles were recorded feeding on and damaging citrus fruitlets around the calyx end. The beetles appeared to be indiscriminate in their choice of cultivar, being recorded on lemons, Nova mandarins, Cambria Navels and Midnight Valencias. At this early stage of the season, the calyx had not yet closed on the fruit. As many as six beetles were recorded to feed simultaneously on a fruit (Fig. 1), leaving unsightly scarring. The beetles disappeared after about two weeks, without any insecticidal intervention. An assessment of damage three months later revealed no damage to any of the fruit remaining on the tree. This was probably because the initial damage took place very

early in the season, leading to the trees selectively abscising the damaged fruitlets. Although not measured, there was no apparent resultant reduction in yield.

These beetles were identified as *Platyhelus* sp. (Coleoptera: Scarabaeidae) (Fig. 2), belonging to the tribe Hopliini of the subfamily Melolonthinae, known as monkey beetles (Péringuey 1902). It is easy to see how this tribe of beetles acquired this name, with extraordinarily long hind legs, increasing the overall length of the insect by almost 50%. The legs not only have the appearance of the gangly forelegs of certain monkey species, but this impression is further reinforced when one observes the beetles in movement.

CONTINUED FROM PAGE 53 expression include nutrient deficiencies and toxicities, low-temperature injuries, insect damage, waterlogging, fluctuation in temperature and most importantly, improper horticultural practices.

Sanitation practices

To reduce the level of infection in nursery trees it is important to reduce the amount of aerial inoculum in the scion mother blocks, nurseries, as well as in the commercial orchards. This can be done by removing canker and dead material, especially when fruiting bodies are present from the orchard during all phases of propagation and planting. Fruiting bodies were found on diseased one-year-old apple trees, mother block trees, as well as one-year-old nursery shoots. Fruiting bodies produce spores, which are spread with wind and rain and will infect new wounds.

For the one-year-old commercial trees, the majority of the cankers formed on the scion shoot. Therefore, the removal of the scion shoot below the canker will not only reduce the aerial inoculum, but could also potentially save the tree. The cankerous one-year-old rootstock plant must be removed to reduce the chances of infection during budding.

Protect pruning wounds

It is also vital to apply a pruning wound protectant to all wounds made throughout the propagation process, as well as in the new orchards.

Renewal of scion mother block orchards

Older scion mother block trees harboured more canker pathogens. Therefore, obtaining scion material from younger mother block orchards is vital.

What happens next?

Current research focusses on testing various biological and chemical pruning wound protectants as alternatives to currently used pruning wound sealants on nursery tree rootstock wounds.

References

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South Africa is considered the global epicentre for endemism and diversity of monkey beetles. It is estimated that we have well over 1 000 monkey beetle species. However, only about half of them have been described and named to date. Monkey beetles, many of which are brightly coloured, are known to simultaneously feed on flowers and pollinate them (Colville 2009). To date, only one South African monkey beetle species has been recognised to have any pest status, namely the Small Wattle Chafer (*Monochelus calcaratus*). It is a minor pest of plantation black wattles. Its larvae, which are white-grubs, may feed on the lateral roots of young trees, reducing growth and killing seedlings, whereas the adults may rarely defoliate trees (Prins 1965). However, this species is not closely related to the *Platychelus* species recently recorded on citrus. Ornamental flowers in gardens are occasionally attacked by any number of Hopliini species.

In conclusion, we know very little about this monkey beetle species. It appears that this insect was an incidental visitor to the citrus orchards and despite the apparent damage at the time, no insecticidal intervention would have been justified. Additionally, there is obviously nothing registered for the control of these beetles on citrus, nor is there any knowledge in the public domain about their insecticidal susceptibility.

Opsomming

Talle klein kewertjies is in Oktober 2019 in die Gamtoosrivier-vallei, Oos-Kaap waargeneem waar hulle rondom die blomkelke van sitrusvruiggies gevoed het en die vrugte sodoende beskadig het. Die kewers is as *Platychelus* sp. geïdentifiseer, een van die baie soorte bekend as bobbejaankewers. Die kewers het binne twee weke verdwyn sonder dat enige insekdoders gebruik is. Drie maande later het 'n opname geen skade aangetoon nie. Die bome het waarskynlik die beskadigde vruiggies afgespeen omdat hulle so vroeg in die seisoen seergemaak is. Amper niks is oor dié kewersoort bekend nie, maar sy voorkoms op sitrus was waarskynlik toevallig en hy kan dus nie as 'n sitrusplaag beskou word nie. 🍀



Figure 1. Monkey beetles feeding under the calyx of citrus fruit (PHOTO: LUKE COUSINS)



Figure 2. A *Platychelus* sp. monkey beetle (PHOTO: LUKE COUSINS)

References

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