

Biological Control of Mimosa

CHALCODERMUS

Green Seed Weevil

January 2018

Chalcodermus serripes is the scientific name of the weevil commonly called chalcodermus. It is native to Central America and was introduced into the Northern Territory in 1996 after three years of quarantine testing.

Adult chalcodermus are about the size of a small pea, and are a golden brown colour. They feed on growing mimosa tips, especially where buds, flowers or green seed pods are present.

Adult weevils lay their eggs in the green seed pods when the developing seeds are between 4 and 7 mm long. The eggs hatch after two or three days and each larva feeds on a single seed, eating from one end while the seed develops. Once all seed contents are consumed (about 14 days later), the larva becomes a pre-pupa. The pre-pupa remains in the seed pod segment (in place of the seed) while the segments separate and fall to the ground.



Mimosa impacted by Chalcodermus



Chalcodermus Adult

Pre-pupae remain in the fallen segments until the start of the following Wet season. They then exit the segments and burrow into the ground, where they pupate, emerging as adults three to four weeks later. Adult weevils emerge from the ground at the beginning of the wet season and can live up to six months or more.

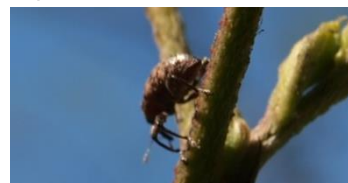
Chalcodermus is the only mimosa biocontrol agent that directly attacks developing mimosa seed. This can massively reduce seed production in a mimosa stand and so reduces the future production of new mimosa plants and reduces overall numbers via attrition. Chalcodermus is well established in the Northern Territory.



Larvae in seed pod



Pupae



Adult

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