

Pest of the month

A new biocontrol agent for broom

First release of the broom leaf beetle in Tasman

Tasman District Council has purchased the broom leaf beetle, a new biocontrol agent, to release on Scotch broom, a widespread pest plant in Tasman and Nelson. It has been released at a carefully selected “nursery” site to breed and build up numbers. Adult beetles will be harvested and taken to other sites by biosecurity officers as soon as numbers permit but it will take at least two years before mature adult beetles are available for collection and distribution.

The broom leaf beetle

The broom leaf beetle is a native of Europe and has undergone extensive testing before being released. It has a life cycle that starts with laying of eggs that soon hatch into small brown larvae, which go through four instar stages before they pupate and emerge as new adults. The adult males are small, 2-4 mm long, and have an orange-red tinge, while the females are larger (4-5 mm long) and gold-brown in colour. Both the larvae and adult beetles feed on broom leaves and stems.



Female adult beetle



Male adult beetle

Why broom?

Broom is considered to be one of the five worst agricultural weeds because it is unpalatable to stock, shades out desirable pasture species and forms dense impenetrable thickets. It grows rapidly and produces large quantities of seed that are distributed by water, mud on machinery and animals. Herbicides and mechanical treatment only provide short-term control of this pest plant.

Broom is also a problem for the forest industry as it competes with young pine seedlings. It impacts on biodiversity by preventing the establishment and growth of native plants on reverting land. Its seed remains viable for decades and this allows it to emerge after harvesting of pine forests that were established on broom sites.

Existing biocontrol agents on broom

There are already three biocontrol agents on broom - broom seed beetles that attack the seed, broom psyllids that damage new foliage, and broom twig miners that feed on broom stems. The presence of the broom leaf beetle will further reduce the vigour and health of broom.

There are two further agents being reared in a secure environment – a broom shoot moth and a broom gall mite. While broom will never be eradicated, these agents should substantially reduce its future spread. Biocontrols provide a long-term solution with benefits for future generations.