



Welcome to the first quarterley newsletter for Biocontrol Services Victoria (BSV).

BSV is based at the Keith Turnbull Research Institute in Frankston, and is a group dedicated to the mass rearing and distribution of biological control agents for a range of weeds. The unit is also responsible for training all land managers in the effective use, production and re-distribution of these agents as part of integrated weed management plans.

The newsletter is designed to inform interested land managers in current programs available to them, as well as giving feedback on monitoring from previous releases. Your input will be critical for providing much of the news, so send all monitoring and other information to BSV.

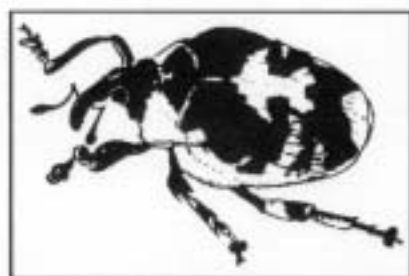
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Launching our new logo!!!

BSV's new logo represents the specific nature of biological control agents to weeds, and its safe use in the Australian environment.

Paterson's Curse weevils released at 43 sites



The Paterson's curse crown boring weevil, Mogulones larvatus

After the late Autumn break this year, the rush was on to set up 'nursery sites' for the Paterson's curse crown boring weevil. Nursery sites are areas where biological control agents are released, carefully managed and monitored for redistribution, as their populations increase.

The weevils had been in cold storage and there was concern that too long in the fridge might affect their egg laying ability when they were released. The first few nurseries were actually set up in early April, before the break, at sites where "Pato" was growing because of adequate soil moisture due to irrigation, seepage or summer rains. By June, with the help of 20 Landcare groups, 19 CMOs, Operation Blue Hills and many others, 41 nurseries had been set up around the state, with releases at a further 2 research sites. Most of these sites are in CNR's North

East Area and there are also nurseries in North West (3), South West (2), Port Phillip (2) and Gippsland (1) Areas.

Winter then made its presence felt with below average temperatures, and this slowed egg laying and larval growth.

But reports in from nursery managers so far suggest that establishment of the weevils is well on the way at most sites. Shot holes (adult weevil feeding damage) have been seen in leaves and the keener eyes have been able to find eggs. Crown damage (black discharge from crown or buds low on flowering stems) is well advanced at some sites, especially from the April releases, and should be apparent at most sites by now. If you're having trouble finding these signs of weevils check the photos in the booklet "A Guide to Establishing Field Populations of the Paterson's Curse Weevils" or ask someone who has seen them and get down amongst the weed at the nursery. Enlisting youth may be useful.

Some release cages have been damaged in one way or another. The one at Melbourne Airport, unfortunately, was attacked by vandals. The Friends of Gellibrand Hill Park, who are managing the site, are attempting to repair it in time for re-erecting in Spring. One or two others have been damaged by stock. It's important to exclude stock from nursery sites not only to protect the cage from damage but also because the weevils will find

it difficult to survive in numbers large enough to harvest if stock get in.

The next step in nursery site management is to re-erect the cage. This simply involves putting it back on exactly the same spot as it was put when the site was initially set up. Reminder notes with more detail will be sent to nursery managers soon.

As spring proceeds the new generation of weevils will begin to emerge from the soil and peak emergence will probably be some time in October or early November. It should be possible to see them by then. The onset and rate of emergence in Spring is affected by temperature; the warmer the weather the sooner and the faster emergence happens. Finding the weevils may be difficult if there is a lot of Pato in the cage. Look for them feeding on the youngest leaves and flowers. If there are shot holes then there's a good chance weevils are nearby. Make notes of what is seen (preferably on a PMIS BIOCONTROL AGENT RELEASE REPORT form), even if there are no weevils, and send a copy in to KTRI.

By the way, the prize (kudos only) for the most diligent site monitoring and reporting goes to Jenny Toy (Friends of Gellibrand Hill Park). Thanks to everyone who has sent us reports so far.

One more thing to mention and that's planning for next Autumn's releases. We need another 60 or so sites where nurseries can be set up in 1996; 50 for the crown boring weevil and 10 for the

next Pato insect, the root boring weevil. If you know of a site where the Pato is thick and persistent, where it can be fenced off or there is no stock, which can be looked after by a Landcare-type group, school or individual and which is likely to be undisturbed for a few years then contact your local CNR Catchment Management Officer about it.

It will be a "mitey" effort against St. John's Wort

St. John's wort mites have been released at over 50 sites throughout the state. The program which was funded by the Meat Research Corporation, was focused mainly in the north east of Victoria. The sites chosen will be used as nursery sites for harvesting and redistribution in future years. The mites have been successfully attacking plants in isolated areas of the state for the past 4 - 5 years. Twenty-one CMO's and over 15 Landcare groups were involved in setting up the sites this winter despite the torrential rains. The dedication award goes to Danny Kupsch (Nathalia) for taking his plants to the site at Barmah State Forest by boat. David Hayes and the Benalla crew were left watering their pots for a good month before the St. John's Wort in the field had grown, another impressive effort. Sites can be checked in late Spring for initial signs of damage such as leaf stunting. A big thankyou to all participants, particularly for persevering with PMIS.

Boneseed and bitou bush face a range of enemies

Boneseed and bitou bush are two extremely invasive weeds threatening natural environments in Australia. Currently three agents are being released for the control of these weeds. The blotched boneseed leaf beetle and the black boneseed leaf beetle, both leaf eating beetles are being released at selected sites in Victoria. The bitou tip moth, whose larvae eat the growing tips of the plant is being released throughout New South Wales and Victoria. It has successfully established at many sites in NSW and is spreading.

A program involving schools on the Mornington Peninsula, in the rearing and release of the blotched boneseed leaf beetle, is off to a good start. Ten schools have received their starter cultures of 30 beetles. Most recently Dromana Primary School has joined the program and the enthusiasm of both teachers and students is high.

Permission has been granted for the release of the Bitou Tortoise Beetle. Mass rearing of the beetle is now underway and we're anticipating the first release of the beetle to be made by the Minister for Natural Resources. Other agents including seed flies and a leaf rolling moth are still in quarantine undergoing testing.

Twigminer moth releases in the Alpine National Parks

English broom is another yellow flowered weed common to north central and north eastern Victoria and is particularly abundant in the national parks.

With the co-operation of CSIRO in Canberra, and CNR area staff, several small populations of the English broom twig miner moth have now been released in Victoria. The feeding damage of the moth causes twigs to brown and die off. With continued attack, shrubs will display large amounts of dead wood and reduced seeding.

Thanks go to Alan May (Creswick), and especially Kim Thomas, Craig Jeffs and George Sykes (Omeo), Nigel Watts (Dartmouth) and Ernie Cole (Mitta Mitta) for their efforts in locating appropriate release sites and getting us there against all odds, through rain, hail, snow and over large water bodies.

The moth alone will probably not be capable of controlling broom, but currently a range of insects are being tested by CSIRO to aid in the control of broom.

Unfortunately, further releases of the twig miner moth, and other biological control agents for English broom in Victoria, are now on hold pending funding approval for a large scale rearing and release program by KTRI.

Taking the prickle out of thistle control

During the summer of 1994/95, the biological control thistle team released thistle receptacle weevils on variegated thistles at sites near Maryborough and Penshurst. The spear thistle receptacle weevil was released at sites near Somerville, Penshurst and Port Fairy. Thanks to the active involvement of CNR staff, landcare groups and individual landholders, a high level of inoculation (egg laying) was accomplished at each site.

The spear thistle gall fly was released around the same time at sites near Yarram, Somerville, Port Fairy and Penshurst, which resulted in the production of many large galls in spear thistle heads.

Slender thistle rust has been released throughout the state and is ongoing. At this stage it is not possible to determine if the receptacle weevils will survive the winter, we must wait until the coming spring and summer when those that have survived should emerge from their overwintering state and become active on newly growing thistles. The gall fly larvae are alive and well but will not emerge as adults till early summer, so we must wait to discover the fruits of our labour.

During the coming spring it is planned to increase the number of release sites. The sites have been selected, these include 10 for thistle receptacle weevil (5 on spear and 5 on variegated) and 10 for the spear thistle gall fly.

Thistle workshops for area staff and

landcare group representatives are being held in Areas during September and October '95. The workshops will cover biological control in general, thistle control agents and how they work, selection of release sites, release techniques and site management.

Horehound plume moth survives at Swifts Creek

Horehound was originally brought out to Australia in the early 1800s as a medicinal plant and also as a substitute for hops to make Horehound Beer. Unfortunately it makes pathetic beer, (sort of like ginger beer, but more malty and without the nice flavour), and as it can produce lots of seeds which are easily transported (or hitch a ride) by man and animals it has become Victoria's third most widespread noxious weed.

As it has a bitter taste, very few things eat horehound, and due to its woody perennial nature, and hairy leaves it is hard to get rid of using chemicals. This is where the Horehound Plume moth comes in. It has undergone strict host specificity testing in quarantine and was approved for release in 1994. It only eats horehound.

Initial releases in Wyperfeld N.P., Murray Bridge (SA) and Swifts Creek, showed good promise, but with the drought over 1994/95 the Mallee sites

Ragwort to Riches

almost died out of both the moth and in some cases the weed. Swifts Creek with a less stressful summer has suited the moth much better, and it has spread out from its original release site and can be found up to 100 metres away. The larvae eat out the growing tip of the plant and feed on the leaves, reducing the vigour and may reduce the seeding potential of the plant.

A couple of other insects are still undergoing testing in quarantine and are looking very promising, but you will have to wait for those till at least next year.

We are looking for release sites closer to Melbourne, as we are sick of driving 5-7hrs to do the surveys! If you have (or are unfortunate to have) good infestations of Horehound a couple of hours from Frankston and are interested in getting some Horehound Plume moths, please contact either Sue Darby or John Weiss on (03) 9785-0111.

Ragwort is a noxious weed that invades disturbed areas in high rainfall areas of the Strzelecki, Otway and Dandenong ranges of Victoria. It is commonly found on dairy and cattle pastures.

The biological control program has four agents currently being released at many infestations throughout these areas. The crown boring moth has successfully established at many sites and will be released in large numbers again this summer. Two species of flea

beetles will be distributed from established sites to other infestations this summer. Schools will be assisting in the cinnabar moth rearing program and competing to release the largest numbers of larvae at selected sites.

Suitable release sites are required for all this summer's releases. Any one with suitable sites are requested to contact either Raelene Kwong or Sue Darby on (03) 9785 0111.

The BSV team

EL BRUZZESE is the leader of BSV. He is also responsible for the biological control program for thistles, blackberry and prickly pear.

PETER STEVENS is responsible for rearing and releasing agents for the spear, variegated and slender thistle projects. He also assists in training field staff to manage release sites for these agents.

BRAD ROBERTS assists in the thistles biological control project, rearing and releasing a range of agents and training field staff to manage release sites.

RAELENE KWONG is responsible for developing improved rearing and release techniques for a range of bio-control agents. She also has responsibility for implementing the biological control of ragwort, St. John's wort and Paterson's curse.

KAREN GREEN mass rears ragwort biological control agents and distributes them for release. She is also involved in assisting schools to rear these agents.

SUE DARBY is an Extension and Liaison Officer responsible for co-

ordinating releases of biological control agents to clients, in particular CNR field based staff. She is also responsible for the rearing program for boneseed and bitou bush, as well as the broom biological control project.

MELINDA NEWNHAM is also involved in extension and liaison for the range of programs in BSV, and mass rears and distributes agents for English broom.

KERRY ROBERTS is responsible for all of the boneseed and bitou bush agents, and their distribution for release. Kerry also assists researchers in ecological studies for boneseed and is involved in a project which assists schools to rear, release and study boneseed agents.

FRANZ MAHR is involved in the distribution of St. John's wort biological control agents. He also assists in thistles and horehound programs.

LEAH SYME is the Plant Propagator for the Institute, ensuring supplies of healthy plants for each project. She is also responsible for all facilities associated with plant rearing.

PETER ANDREW as the Quarantine Manager has responsibility for maintaining the quarantine facilities and ensuring that the facilities remain registered according to strict Australian Quarantine and Inspection Services regulations. He is also responsible for maintaining full working operations of all insect rearing facilities at the Institute.

ASSOCIATED STAFF

TOM MORLEY oversees the Paterson's curse biological control program.

JOHN WEISS co-ordinates the horehound biological control program.