

Dung Beetle Report for MVLandcare AGM 5.12.21

Mitta Valley Landcare is continuing its quest to enable year-round dung burial by the introduction of dung beetle species which work across different seasons.

Small summer beetles, introduced by CSIRO between 1968-1984 are now very well established.

In 2009 Mitta Valley Landcare introduced two “so-called” winter active species. These have established well, particularly *Bubus bison*, a large black beetle. *Geotrupes spiniger* is even larger with a distinctive metallic blue/black underbelly. Both beetles are active for longer than just winter in this Valley. In fact they seem to be working for 8-9 months, each covering a slightly different period which amounts to almost year round coverage though there are definite peak periods which tail off at either end. Both these beetles bury dung 20-40cm underground and it is easy to see if they are present in your paddocks by the mounds of excavated earth they leave on or near the dung pats. *Spiniger* does not seem to have established as well in some parts of the Valley and we are hoping to introduce more next year.

Spring is the season that requires better coverage and to this end 2 new species have been introduced recently. *Onthophagus vacca* has now been trialled in our Valley for 4 years and the results have been quite disappointing so far with continuing poor breeding rates.

In August this year, beetles were obtained through a Smart Farms grant, designed to be a 2 year breeding program with 13 breeding sites over the Mitta To Murray Landcare Network. In the Mitta Valley, three volunteer breeders have each been given 100 *Bubus bubalus* beetles to raise in enclosures and hopefully increase numbers for eventual paddock release or breeding.

These beetles have originally come from Morocco to CSIRO and then to Greg Dalton, who breeds them in South Australia. He has supplied our beetles and enclosures and has given us informative zoom sessions to help us care for these precious beetles correctly. It is the first time for quite a few years that new dung beetles have been brought into Australia. It is a very expensive and exacting process and we are lucky to be part of the trial.

Though it is early days yet, these seem to be very active beetles. They are bigger black beetles similar to *Bubus bison* and once hatching occurs next spring we will be better able to assess their suitability to our region.

I would like to thank our facilitator, Simon Feillafe and treasurer Irene Lewis for all the hard work they put in to obtain the grant for these beetles and for distributing them under difficult circumstances on 24th August this year. I would also like to thank our volunteer breeders Karen Maroney and Libby Paton and in my absence Alec, who now knows that it does involve quite a lot of work collecting dung and regularly feeding the very hungry beetles. Data collection is also a very important part of the project especially once the next generation of beetles start hatching. Only by keeping accurate records of the hatching results can we determine the suitability of different species for our area.

Lets hope our endeavours result in the important task of year round dung burial and all its benefits to soil and water health and the reduction of flies and internal parasites in stock. The deep burying of dung can help reduce agricultural inputs including fertilisers and drenches thereby increasing overall farm profitability. It can also sequester carbon and reduce methane outputs – a very relevant benefit in reducing our greenhouse gasses.

