



DUNG BETTLES ON 'NAOURS' SOMERTON

BY WAYNE CHAFFEY- LANDHOLDER AND VICE CHAIR
TAMWORTH REGIONAL LANDCARE ASSOCIATION

A landholder account as part of the North West Dung Beetle Monitoring Project



Wayne Chaffey (at front and below) at a monitoring day on his property 'Naours' at Somerton (near Tamworth)



Russ Burrow from Charles Sturt Uni demonstrating monitoring techniques

Why did you decide to be part of the North West Dung Beetle Monitoring Project?

I read about the Dung Beetle Ecosystem Engineers (DBEE) project in a Landcare newsletter and was immediately attracted to it. I have always felt that I really lacked knowledge about these amazing creatures which can potentially do so much good for the environment, the soil, and the grazer in terms of economics. I do enjoy being a citizen scientist, and this provided an opportunity to work in this field AND learn about these little critters.

I knew that there were native beetles which could deal with pelleted faeces (from our marsupials), and that we needed imports to cope with the large dung pats from cattle etc.

So, we happily put our hands up to host a field day so that other local, like-minded people could be more informed about what was involved in being part of the national project. Project members from Wagga Wagga (Russ and Graeme) and Armidale (Zac), along with local Tamworth Landcare and Local Land Services staff attended and presented information on the benefits of dung beetles, species expected to be present, and the protocols involved with trapping for the project. Interested landholders were then supplied with kits and all the information necessary to become part of the project. This included training in using an application (App) on our smart phones for regular data input.



What have you found? What impacts have the beetles had on your production/pastures/soils?

The first thing that we found out was that we did indeed have dung beetles present. I had not seen much evidence in recent times to indicate dung beetle activity. But, results from the very first 24 hour traps in October 2020 showed that they were there; more that 30 in each of the four traps that were each separated by a distance of 500 metres (so they were spread across the property). There were 8 different species recorded in those first samples with a mix of native and introduced species. And a very different species selection were present, compared to the website map¹, indicating what we were most likely to find in this part of the country. Because we have not been doing any other specific measurements prior to this study, it is difficult to say exactly how they are impacting on our soils and production system, but it is very reassuring to know they are there; with both a diversity of species and abundance of numbers.

The research data clearly shows that their presence is beneficial to soils (improved cycling of nutrients, increasing aeration, increasing water infiltration and hence water holding capacity), pasture production (more nutrients available for plant growth), animal health (life cycle of parasites are interrupted and fewer flies can successfully breed when dung is quickly buried), and thus economic benefits to us as producers (healthier soils, better pastures, healthy stock). It is also believed that dung beetles may play a role in our challenge to achieve carbon net zero.

Since that first sample in October, samples were collected during summer, with amazing results. The diversity of species increased slightly (some summer-active species appearing) and the abundance was extraordinary (up to 400 individuals of a single species captured in 24 hours in one trap!). So, we can clearly see that numbers (both diversity and abundance) are seasonal, with a peak at the end of summer.

The species that are most active are obviously most suited to the warmer months of the year; the time of the year when it is important to turn over those dung pats before flies can have their maggots hatching, and when internal parasites are very active. However, it would be great to get some more winter-active species here to recycle nutrients faster, so that the large cow pats are not smothering winter-active grasses and forbs. Russ² suggested in a recent article that he would like to see "...sheep or cattle grazing in the paddock, with a dozen boxes sitting beside them which are dung beetle nurseries." Bring it on!

¹ <https://www.dungbeetles.com.au>

² Dr Russ Barrow, Charles Sturt University, article in MLA newsletter, 10 Sept 2021

WANT TO KNOW MORE?



You can monitor dung beetles at your place - download the MyDungBeetleReporter App



Visit the website: www.dungbeetles.com.au



Article - 'Dung Beetle FAQ's - Ask the Expert'. An article supporting the importance of the dung beetle in our farming systems and the impact of grazing practices on the presence of dung beetles.

<https://www.mla.com.au/news-and-events/industry-news/>

Need more info or have questions? Contact Rachel Dorney ralf@nsla.net.au or Lana Andrews lane@trla.org.au

