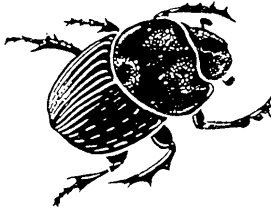


THE NORTHERN TABLELANDS DUNG BEETLE EXPRESS

SUMMER - DECEMBER, 2005

I had a farm in Africa ... (well visited one anyhow)



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Natural Heritage Trust
Helping Communities Help Australia

As you can see I am back, just in time to go on Christmas break! Life is just too good really!

You are all invited to a slide show to be held at my home. It doesn't matter what time or when you come as I will always have my wonderful photos to show you (all 418 of them). We can then discuss my travels in excruciating detail over a drink or two. BYO, of course!

If you think that that might be just a bit much you can look at my report on the Churchill Trust website. It should be there in a few months.

So, what did I actually do in South Africa? Well, I had a lot of fun, saw a lot of great stuff and met some amazing people. Oh - and did a study on the effects of grazing management on dung beetle communities.

What did I learn? That I can Braai really well (that's BBQ in South African) and that lions sound much like thunder when walking in the bush at 5:00 in the morning.

I also learnt that research in South Africa is the same as in Australia. It takes a long time, the weather does matter and everything is conspiring against you. In this case I had to contend with snow, drought, Suricate and Mongoose (or is that Mongeese?).

The weather in Cape Town was appalling - 6 degrees, windy and rainy with snow on the mountains. Pretoria on the other hand was hot and dry - very dry actually as the rains came late.

My work in Pretoria involved trapping beetles for six weeks which ought to have been easy. However, one of my sites had Suricate and another had Mongoose. These delightful little creatures are very curious and playful so they took to stealing my traps and playing with them. Hence my data had to be "normalised" before it could be analysed (I have also learnt to speak statistica fluently).

While not conclusive my small study suggests that dung beetles are generally more diverse in natural pastures with a mix of plant species rather than monocultures. Monocultures tend to favour specialist species resulting in less species richness. Abundance is often unchanged - it is the structure of the community which alters. This would obviously lead to more "gaps" in dung beetle activity.

Anyway, I am still in the "making sense of the data" stage of producing my report. I think that at this moment my results indicate a need to go back to South Africa and do some further study.

CLAW AND ORDER

These are the men and women of the Scarab Research Unit and these are their stories

Professor Clarke Scholz is head of the Research Unit and has an interest in a novel beetle of the genus *Pachysoma*. This beetle buries dung and then waits for it to re-hydrate (assisted by a myriad of underground organisms) and then consumes it. Sort of like a blue vein cheese I imagine.

Then there is Dr. Adrian Davis who is currently researching dung beetle assemblages in the Kalahari/Karoo, writing a book on dung beetle genera, supervising a research project in Botswana and, of course, assisting foreign researchers with their projects.

Next on the list is Dr. Ute Kryger who is working on the molecular genetics of the flightless dung beetle *Circellium* and has also been involved in bioassay work looking at anti-parasitocides and their effect on dung fauna.

Dr. Catherine Sole (or will be Dr. by the time you see this) also works on *Pachysoma* and also on the molecular relationship between two African genera *Canthonini* and *Dichotomiini*.

B. Power Tshikae is in the final year of his PhD working on assemblage structures in dung beetles in Botswana.

Yolandi van der Merwe is another young talent whose M. Sc. is focused on a fascinating beetle genera - *Trogidae*. These beetles feed on bone, feathers etc and even tackle hyena dung which is similar in consistency to twelve month old doggy stuff.

Last, but not least, is Christian Deschodt who has worked on numerous projects including molecular systematics of Canthonine dung beetles and molecular phylogeography of *Bohepilssus* for a M. Sc..

The Scarab Unit is also involved in a marketing initiative called “Certified Natural” where dung beetle species richness and abundance is used as an indicator of the general “naturalness” of a grazing system. Once producers have received approval, they are entitled to label their products with “Certified Natural” and include a dung beetle on the label. Kalahari Lamb is using this form of marketing very successfully.

While it might be classed as a developing country South Africa has definitely got a lead on us with its ongoing research into all things scarab.

BUFFALO BILL

Well, Buffalo fly anyway. They are probably coming to a paddock near you so this is just another gentle reminder of the damage caused by buffalo fly and the ways in which you can be kind to dung beetles but tough on buffalo fly.

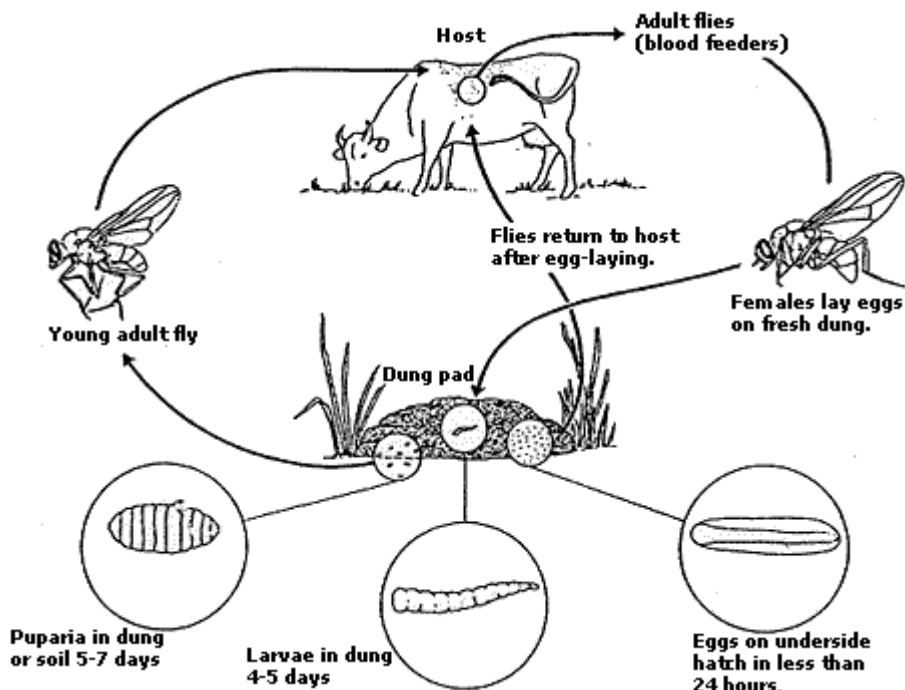
Buffalo fly cause severe irritation to cattle by feeding on their blood. Let's face it they are just a bunch of nasty suckers really. However, the swift revenge of going out and shooting them with the old pour-on needs to be carefully considered.

Many of the available buffalo fly treatments are detrimental to dung fauna. As dung beetles and their associates help prevent buffalo fly by burying their breeding habitat it is probably not a great idea to start flinging chemicals around with gay abandon. This sort of approach is very costly in both the short and the long term.

So - what do you do? Sally Spence and Lex Turner (and others) offer this advice:

- Tolerate a reasonable fly burden (200 flies per animal - may be less for Dairy cattle)
- Dark coated cattle and bulls are usually affected first - treat these but leave others
- Use a Buffalo Fly Tunnel Trap
- If you must treat chemically use ear tags or back-rubbers
- Cull cattle that are obviously "allergic" ie affected more severely than most
- Contact your local RLPB Veterinarian or DPI for updated advice

Life Cycle of the buffalo fly



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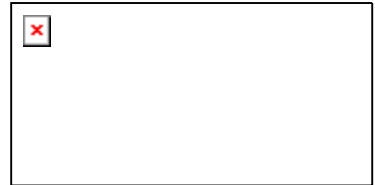
Or email:

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Northern Exposure!

We all need some exposure every now and then. The Northern Tablelands Dung Beetle Express invites all organisations to take the opportunity to book a field day, field walk or general talk in the New Year. We are also happy to attend other events so please put us on your invitation list. We will happily take up as much time (or as little) as you like.

www.dungbeetles.com.au



MLA SUPER PIRD – What, How and Why?

The Super PIRD project is up and running and we already have the answer to our first question and a partial answer to the second.

Yes dung beetles do utilise sheep dung. Now we are aware that all sheep producers knew this but it was necessary to establish this as fact not anecdotal evidence. While numbers have not been high we have trapped 5 species, one introduced and 4 natives. The introduced species is *Onthophagus gazella* and the natives are: *Onthophagus australis*, *Onthophagus capella*, *Onthophagus chepara* and *Onthophagus dandalu*.

These beetles were trapped using dung in a “pellet” or “pill” form rather than a mass. However, Judith Cox set a trap on her property using a mass and when we inspected it the next day it was swarming with *Onthophagus australis*.

So, we now have proof that dung beetles are attracted to sheep dung and we are well on the way to creating a list of which species are working and at what time of the year.

The next question to be answered now is how much work do these beetles do and is it enough to reduce worm burdens in sheep?

A big “thank you” to all our Site Co-operators who have helped us gain this information and have committed to a further two and a half years working with us on this very important project.

