



DUNG BEETLE Friendly Farms

A project to increase dung beetle populations in the Upper Gwydir.

AUDIENCE:

Landholders, community members, advisors, Landcare staff and NRM staff from New England-North West NSW.

CONTACT:

Upper Gwydir Landcare Association, Bingara.

OVERVIEW:

The Dung Beetle Friendly Demonstration Farms was created to build on the work of Northern Tablelands Dung Beetle Express - an initiative commenced in 1998, which involved landholders across the region for 10 years.

Lessons learned from dung beetle trapping, monitoring and research

conducted in the Northern Tablelands has injected valuable local nous and benchmarks for the Dung Beetle Friendly Farms project.

In 2010, Upper Gwydir Landcare Association launched its Dung Beetle Friendly Demonstration Farms Project, which continued until 2012. The project was funded by the Australian Government's Caring for our Country Community Action Grants. The success of the project and strong interest among landholders has seen similar projects adopted in a number of regions across NSW.

HOW IT WORKS:

The project focuses on increasing awareness of dung beetle management and building the diversity and resilience of dung beetle populations.

Landholders in the Gineroi Landcare Group, a sub-catchment group of Upper Gwydir Landcare Association, were invited to take part.



PHOTO: New England-North West Landcare (Network Chairs) Inc.

PROJECT OUTPUTS:

10 Dung Beetle Demonstration Farms in the Upper Gwydir

More than 70 land managers skilled in Dung Beetle ID and their management

16 new Dung Beetle colonies released

Six landholders signed on to participate in year one.

Each landholder agreed to trap beetles on-farm for a 12 month period. Landholders were equipped with kits, including pit fall dung beetle traps and instructions, project log and printed resources such as the Dung Beetle Dictionary.

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PHOTO: Upper Gwydir Landcare Association.

The field day has proven a popular event with landholders. The event also utilises the publication, *The Dung Beetle Dictionary*, printed resources from Northern Tablelands Dung Beetle Express (see page 4 for resources) and a paddock session where participants are able to practice techniques for trapping and try their hand at identifying beetles.

DUNG BEETLE ROADSHOW

The *Dirty Deeds Done Dirt Cheap Roadshow* concept was borne from the broad regional interest in dung beetles and also the need to cost-share the expense of enticing an eminent dung beetle authority to the region.

The Roadshow was a collaboration between New England Landcare Networks and the Regional Landcare Facilitator (RLF) for Northern Tablelands, Jennie Coldham.



PHOTO: Northern Tablelands Dung Beetle Express.

Landholders commenced trapping and beetles were euthanised being forwarded to a specialist to be identified. Each participating landholder was provided with feedback regarding species identified.

At the conclusion of the monitoring period, suitable complementary dung beetles colonies were identified. The Upper Gwydir Landcare project sought expert opinion and consultation of dung beetle experts Dr Bernard Doube and / or entomologist John Feehan along with Parasitologist, Dr Mahri Koch.

Each participating landholder receives two dung beetle colonies, which are released on-farm.

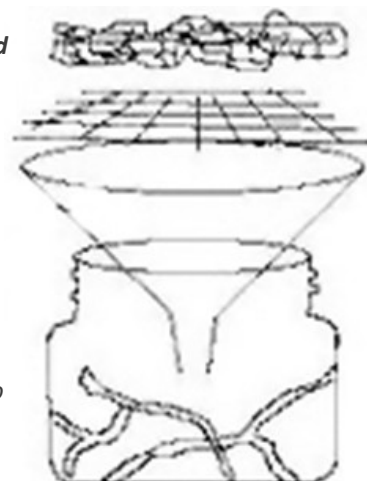
SHARING THE KNOWLEDGE

In order to share results of the project and increase knowledge of dung beetles and their management, a field day was held on farm at the end of the trapping phase.

Speakers at the field day included esteemed dung beetle authority, Dr Bernard Doube and Dr Mahri Koch, who provided identification services during the project. Northern Tablelands Dung Beetle Express's Beth White also outlined the group's long term involvement with dung beetle research.

A Pit Fall Trap (above and right) consists of:

1. A PVC funnel
2. Metal sheeting to accommodate the funnel.
3. Wire mesh to hold the dung bait.
4. Nylon netting to hold the dung bait.
5. A suitable container to accommodate the funnel and collect the beetles.





The Roadshow Field day event attracted over 200 participants across the region, with a series of half-day workshops. With increasing concerns over buffalo fly among cattle producers, the Livestock Health and Pest Authority's District Veterinarian spoke on the link between buffalo fly and dung beetles as well as treatment options.

Roadshow speakers have included Dr Bernard Doube and also John Feehan—both esteemed dung beetle experts. Both have worked internationally as well as throughout Australia researching dung beetles and working to increase Australia's dung beetle population and its diversity.

Overall event Roadshow coordination was undertaken by the RLF, in conjunction with each hosting Landcare organisation.



ABOVE:

The outdoor sessions of the field day was highly popular and allowed participants to practice identification of beetles.

PHOTO: Upper Gwydir Landcare Association.

BUDGET OVERVIEW

ITEM	DETAILS	BUDGET REQUIRED
Pit fall traps	Fabricated by volunteers or local organisations such as Men's Shed.	\$20 ea
Kits for landholders	Include monitoring log, gloves, trap, instructions, Dung Beetle Dictionary, printed resources.	\$20 ea
Beetle Identification	Rates dependent on specialist engaged. See page 4 for expertise available. Some universities also may offer services in-kind. UGLA identification undertaken by Dr Mahri Koch (see page 4 for contact details).	Up to \$90 / hr
Dung Beetle Dictionary	Hard copy provided to all monitoring sites. Online version available through Landcare Australia. Hard copy version available from Upper Gwydir Landcare Association (see page 4 for contact details).	\$12 ea
Field Day Speaker	Speaker engaged for half-day workshops.	\$1500 / day
Field Day catering	Morning tea and lunch provided by community group / service club.	\$15 / head
Dung Beetle colonies	Prices for colonies vary between species. Suppliers include <i>Dung Beetle Solutions</i> and <i>Dung Beetle Expert</i> (see page 4)	\$600-800 / colony
Farm-gate signs	Participants are provided with metal 'Dung Beetle Friendly Farm' sign	\$80 ea



PROJECT PARTNERS:



CARING
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OUR
COUNTRY

ABOVE:

Dr Mahri Koch leads a dung beetle workshop during the 2013 Landcare Adventure at Bingara.

PHOTO: New England-North West Landcare (Network Chairs) Inc.

USEFUL RESOURCES

The following resources are recommended for dung beetle projects:

UPPER GWYDIR LANDCARE ASSOCIATION

<http://www.ugla.com.au/>

UGLA's website with links to UGLA's Facebook page and past projects. Sales of Dung Beetle Dictionary (\$12).

NORTHERN TABLELANDS DUNG BEETLE EXPRESS

<http://www.dungbeetles.org.au/>

Comprehensive, downloadable resources, history of dung beetles in Australia, extensive links to dung beetle resources. Trapping and release techniques.

DR BERNARD DOUBE—DUNG BEETLE SOLUTIONS AUSTRALIA

<http://www.dungbeetlesolutions.com.au>

Dung beetle sales, research, workshops, reference books.

JOHN FEEHAN

<http://dungbeetleexpert.com.au/>

Dung beetle sales, identification service, workshops, research articles.

DUNG BEETLE DICTIONARY

http://apps.landcareaustralia.com.au/dungbeetle/DungBeetle_Dict.aspx

Landcare Australia site with online based dung beetle dictionary with search tool. Hard copy versions available from Upper Gwydir Landcare Association for \$12.

DUNG BEETLE IDENTIFICATION

Services provided by Dr Mahri Koch.

Email: mahri_koch@harboursat.com.au

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