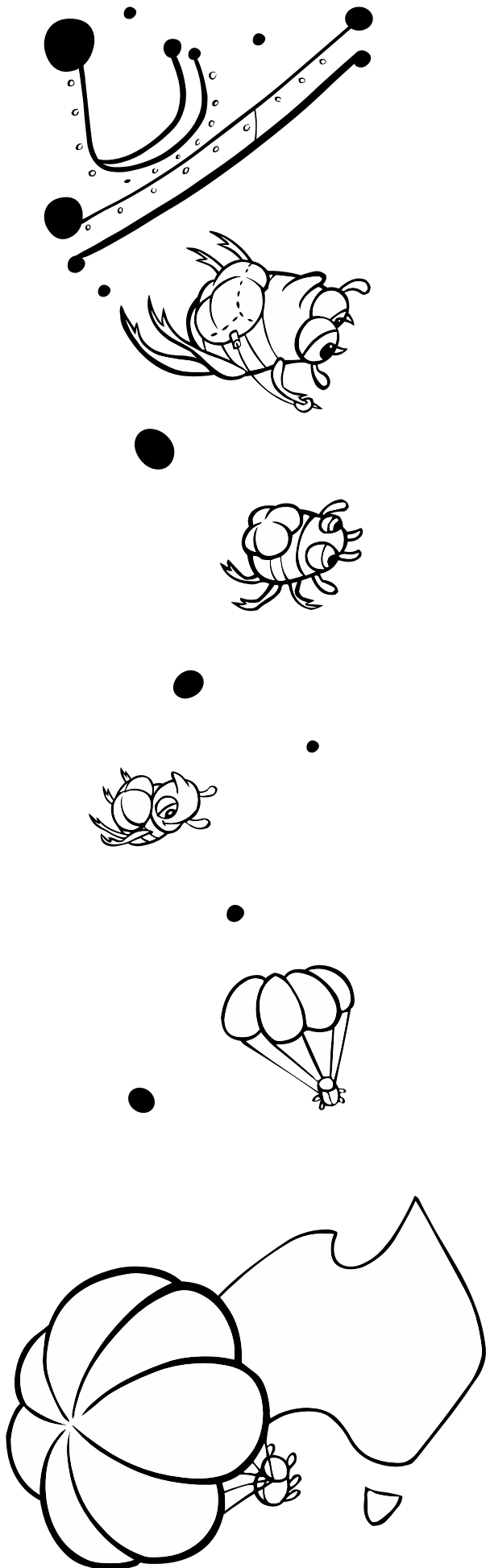




Resource sheets

- 1 Dung beetles arrive in Australia!
- 2 Operation 'Dung Beetle'
- 3 Queensland distribution of common introduced dung beetles
- 4 Dung beetle data collection sheet
- 5 Common dung beetles in Queensland: colour identification sheet
- 6 Agent Doug the dung beetle and his dungbusters!
- 7 Dung beetles and nutrient cycling
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Resource sheet 1

Dung beetles arrive in Australia!

When the First Fleet arrived in Australia in 1788 they brought five cows, two bulls, seven horses and forty-four sheep, all of which started producing dung as soon as they arrived. The problem was that they forgot to bring the right kinds of dung beetles with them to get rid of all the dung that the cattle would produce.

Australia's landscape has changed a lot since that time. Trees have been cleared for farming and to make way for plants and animals that didn't normally live in Australia. Now, over 12 million cattle dung pats are dropped onto our soil every hour. On average, cattle 'poo' about 12 times per day, producing about 18 kilograms of dung. (This does not include all the dung made by sheep and other animals.)

We do have some dung beetles that belong to Australia (native beetles), but these mainly attack the dung of our native marsupials such as kangaroos and wombats. Although most native dung beetles can't disperse the huge pats that cattle produce they are attracted to cattle dung—sometimes in large numbers.

Since cattle arrived in Australia their dung has provided an abundant source of food for fly pests such as the introduced buffalo fly found in northern Australia and the native bush fly found throughout our continent. One undisturbed cattle dung pat can produce over a thousand bush flies under certain conditions.

What is the solution? Bring in the dungbusters—the dung beetles.



Resource sheet 2

Operation 'Dung Beetle'

Dung beetles were introduced into Australia from Africa and Europe to bury and disperse dung. Forty-three species of dung beetle were released during the 1970s and early 1980s. By attacking the dung, these clever little beetles help to control the fly pests that breed in the pats, and provide other agricultural and environmental benefits.

The process of dung burial and dispersal:

- removes breeding habitat for some fly pests and other parasites of livestock, helping to reduce their numbers
- helps nutrient recycling by exposing dung to soil microbes, earthworms and plant roots
- improves water infiltration and aeration of soil by generating a network of underground tunnels
- reduces pasture fouling and nutrient run-off into waterways.

Some questions to think about:

- What happened to cow dung before dung beetles from overseas were released into Australia?
- What effect would having no dung beetles to attack dung in Australia have on our environment and on us?
- What are the benefits of introducing dung beetles into Australia?

