

# Background information for teachers and students.🐞

(Source: Queensland Dung Beetle Project Training Notes 2002)

## What is a dung beetle?

Dung beetles belong to the scarab family of beetles (Scarabaeidae). There are about 4500 species worldwide. Most are found in Africa, where they have evolved with large herbivores such as buffalo and elephants. There are over 300 native species in Australia.

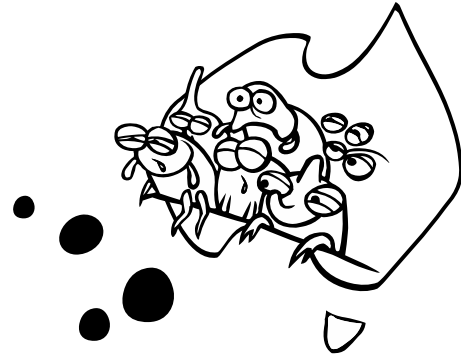
Dung beetles spend most of their time in dung. They feed on it. They grow up in it. The only time they aren't actually living in it, or working in it, is when they're flying around looking for more of it!

Although dung beetles are famous for making dung into balls then rolling it along, not all types do this. Some tear off chunks of dung and roll them away from the pat, while others make balls of dung within the tunnels that they dig under the dung pat.

## Environmental benefits of dung beetles

Dung burial and dispersal provide agricultural and environmental benefits by:

- removing the breeding habitat of some fly pests and other parasites of livestock
- assisting nutrient recycling by exposing dung to soil microbes and earthworms
- improving water infiltration and soil aeration by generating a network of underground tunnels
- reducing pasture fouling and nutrient run-off into waterways.



## Dung beetles in Australia

Most native Australian dung beetles don't cope well with the dung of introduced domestic animals and, as a result, cattle dung is not dispersed effectively.

The CSIRO introduced dung beetle species into Australia from Africa and Europe in an attempt to reduce numbers of bush fly and buffalo fly by improving dung burial. Forty-three species were released throughout Australia during the 1970s and early 1980s. Of the 29 exotic species released in Queensland, eight are widely established, seven have a limited distribution, and the remainder are presumed to have failed (see figure 2).

Some species released in Queensland are still spreading, with some potential climatic niches yet to be filled. Many areas require a greater diversity of species to achieve optimal dung burial. For maximum burial from spring to autumn it is desirable to have several species of dung beetle with complementary periods of activity.

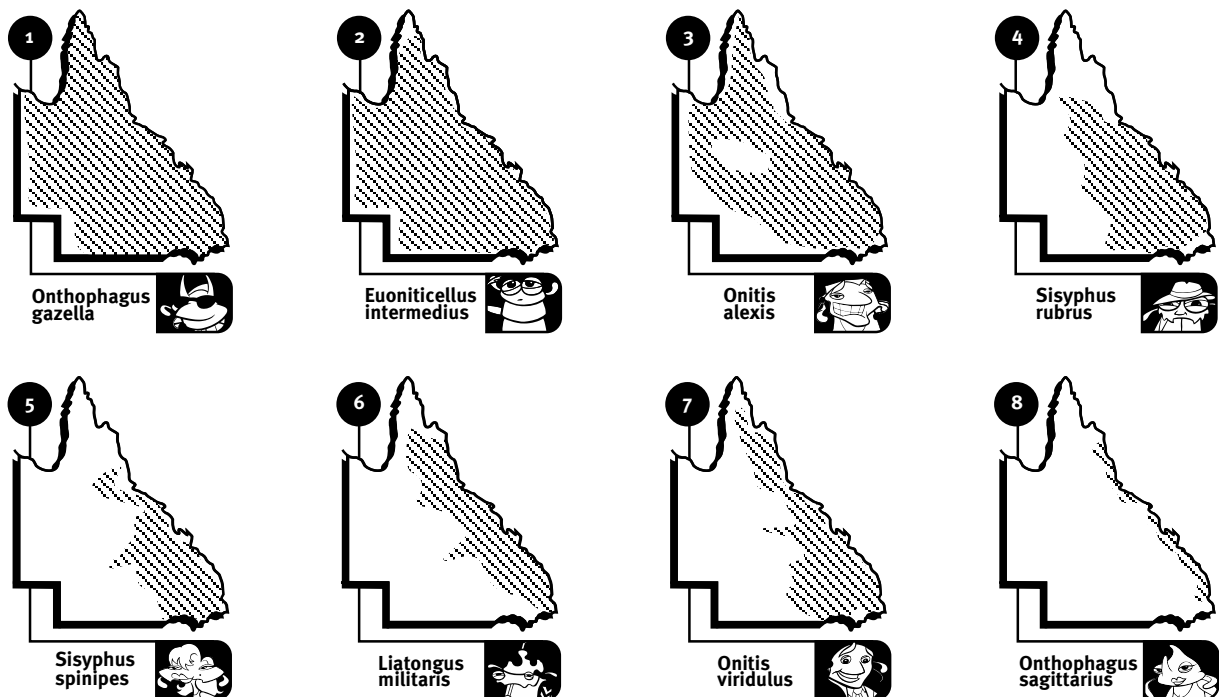


Figure 2: Distribution of common introduced dung beetles in Queensland (Source: Queensland Dung Beetle Project Training Notes 2002)