



# WHICH DUNG BEETLE SPECIES FOR MY PROPERTY?

It is necessary to find out which dung beetle species are already on your property before attempting to bring in more species. Different dung beetle species are active at different times of the year and in different site conditions. So, when you know what you have, you can work out which months of the year or parts of the property still need dung beetles.

To find out what you have requires you to collect and identify the dung beetle species present.

## Are dung beetles present?

If the cattle dung is quickly disappearing it is highly likely there are dung beetles present. Some dung beetle species are easily spotted as they move around in dung pads. For many species, the presence of soil casts beside a dung pad or tunnels in the soil under the dung pad, are sure signs that dung beetles are working that dung pad.



*Soil casts around a dung pad*

## Collecting dung beetles

Dung beetles need to be collected for identification.

Dung beetles in the pads can easily be collected by picking a few out of the pads. This may be easier in the summer in Southern Australia, as these beetles are often found in their hundreds in a single dung pad, making them easily visible.

If there does not appear to be any beetles in the dung pads, then lift up the pad, or the remains of the pad, to see if there are tunnels underneath it. If tunnels are present, dig down in the soil to find the beetles. As you dig, try to follow the tunnel down to find the beetles. You may have to dig down to 400 mm, or more, to find some species.



*Tunnels in the soil under a dung pad*

Beetles can also be collected by using traps. One of the simplest traps is to place a piece of shade-cloth on the ground, then a fresh pad of dung on the shade-cloth. The beetles will fly to the dung, but the shade-cloth acts as a barrier and the beetles will not be able to bury themselves in the soil. A day after setting up this trap, turn the dung pad over and search for beetles in the upturned dung.



Dung on shade-cloth (left) and collecting the beetles from the upturned dung (right) (wear a disposable glove).

## Identifying dung beetles

You may be able to immediately identify which dung beetle species you have found if you have identification books with you in the field (see below), or you can, on your phone, visit the website given below.

If you cannot immediately identify the beetles in the field, then take photos of the beetles (see below) to use for identification purposes later on.

If you cannot take suitable photos in the field, then put the collected beetles in a plastic bag, or a jar, and take them to a place where you can gently wash them to remove excess dirt and dung.

Once the beetles are cleaned, you may be able to observe the identifying features with the naked eye, or a magnifying glass. If not, you can try again to take photos of the beetles, but if they are too active to take good photos, they can be put in a plastic bag in the fridge for 5 minutes to slow down their activity. If they are left in the fridge too long, they will die. Once photos are taken then the books and online resources can be used for identification.

If a species cannot be identified after taking photos of the beetles, then the series of photos can be emailed to [info@creationcare.com.au](mailto:info@creationcare.com.au) for assistance with identification.

## Taking photos

To make identification easier take close up photos of the head and shoulders (pronotum): a top view; a side view; and a front on view.

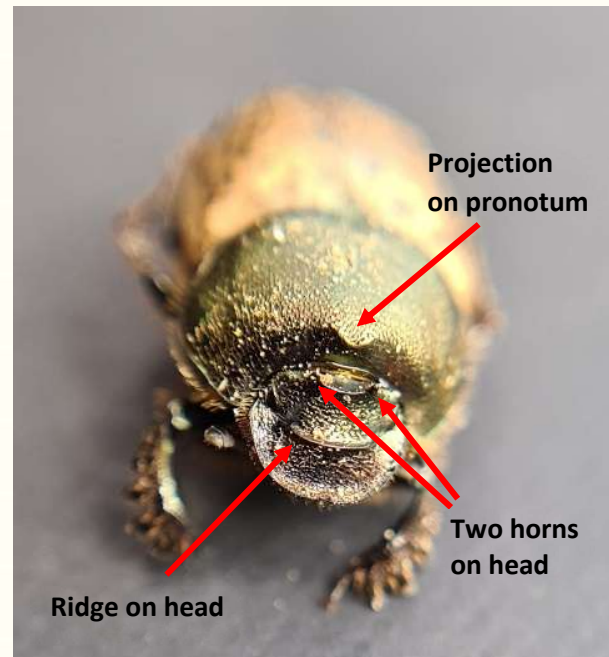
These close-up photos will show the horns and ridges on the head and pronotum, which are key identifying features. Spurs on legs can also help identify some beetle species.

It is useful to zoom in on photos for a closer look at the identifying features.

When taking the photos, try to place the beetle near a scale bar such as a tape measure or ruler, as size can be another key identifying feature.

## Identification Resources

The following resources are very useful for identifying dung beetles.



*Onthophagus vacca* female front on view



Introduced Dung Beetles in Australia A Pocket Field Guide, by P. Edwards, P. Wilson & J. Wright, 3<sup>rd</sup> edition. This can be purchased from <https://www.publish.csiro.au/book/7207/>.

The “Dung Beetle Ecosystem Engineers” Project has produced an online database for dung beetle identification, this can be found at:

<https://www.dungbeetles.com.au/species>

## For Further Information on Dung Beetles

Creation Care website: <https://creationcare.com.au/>

Enquiries: [info@creationcare.com.au](mailto:info@creationcare.com.au)