



Dung Beetle Assessment

When:

- 2 periods of the year for each site (April-June & September-October)
- Any time in the allocated months but not in, or within 24 hours of heavy rain
- Any time of day

Where:

- The habitat (i.e. a field) must have had grazing livestock feeding in the last 24 hours (fresh pats)
- Livestock are often moved between fields or, in larger areas, graze in patterns. Therefore you will not be able to assess an extensive area but must select sufficiently different areas for assessment

What you need:

- Sample tray (cat litter trays greater than 40cm x 25cm are suitable)

What dung:

- Dung without a glistening surface and not completely dry inside is suitable for assessment
- Do not sample dung too liquid to pick up in pieces and add to the sample tray
- Dung from each species present must be sampled according to the below protocol

How:

1. Select the location
2. Fill out the assessment form header and then for each dung pat complete a scorecard
3. Where possible take 6 dung pat samples from each species in each of the following:
 - a. In sun (not shaded for a significant portion of the day)
 - b. In shade (this can be the shaded side of a hedge or in a wood)
4. Each dung sample (called a pat) = one scorecard:
 - a. Each sample comprises of one cow pat, one horse pat or 12 sheep dung deposits (usually each one is in several pieces) or volume equivalent for other species.
 - b. It is important to sample each livestock species present
 - c. Place one pat at a time into the sample tray and where it touched the ground examine the area for beetle tunnels. The tunnels are recorded on the form
 - d. Then work your way through the dung in the tray and count the number of beetles of each of the three types (see illustration) and record them on the form
 - e. Return all dung and beetles back to where they were found
5. Add up the scorecard for each pat, select the top scoring half of the pats then add just these up and divide by the number of top scoring pats. At the end of the survey put this number in the average site score box after multiplying it by 2 to get your percentage score.

Scope:

This assessment methodology is designed to provide a very basic measure of the dung beetles at a site for citizen science use. This assessment tool is designed to provide a rudimentary understanding of your local dung beetle community. It is designed as a basic measure of dung beetle community health but it is not designed to inform questions about biodiversity and abundance for wider use. This type of analysis is not a substitute for a professional dung beetle diversity and abundance survey which is the domain of an experienced specialist and important to inform land and livestock management discussions.

Circumstances:

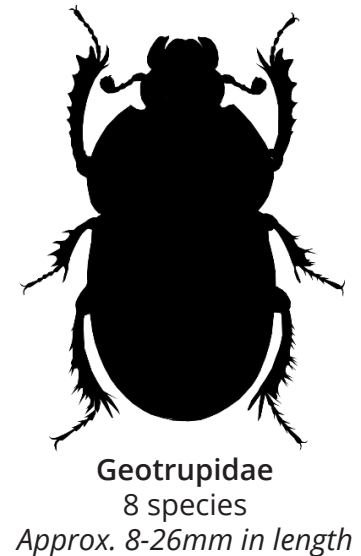
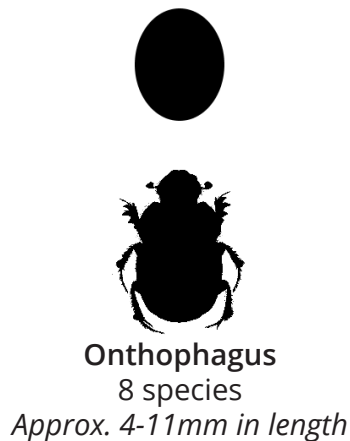
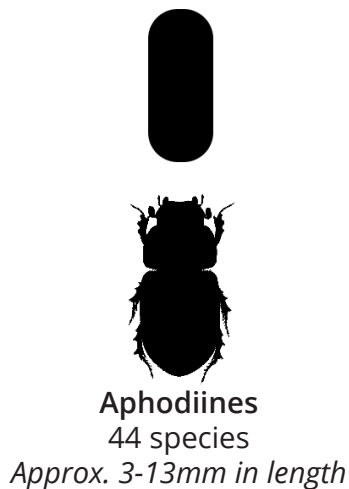
There are a wide range of important issues associated with being active in managed and unmanaged environments and it is assumed that prior to using this assessment method you (and your organisation) have undertaken all appropriate and relevant precautions - including risk assessments, safety actions, risk mitigations and permissions

Dung Beetle Assessment Site Scorecard

Date	
Location Name	
Habitat Type	
Sward Height (approx)	
Grid Reference	
Surveyor Name	
Average Site Score: An average of the top 50% pat scores (highest scoring half) Take the average score (scored up to 50) & multiply x2	%

An average site score over 50% is moderate health & over 80% very healthy for dung beetles

Use this chart to differentiate the types of beetles



Useful Quick Notes On Measures:

A pat = 1 cow pat = 1 horse pat = 12 sheep dropping patches = Other equivalent

6 pat samples from each of: Sun and Shade

Dung too liquid to pick up – don't sample & record pat dung type 'Runny' for scoring

Lots of holes on the underside of dung is a hole approximately every 1 cm

Holes more than 1.5cm wide are about a size you can fit an adult's little finger in



Dung Beetle Assessment Pat Scorecard

Species

Circle the species or write what species 'Other' is.

Cow	Horse	Sheep	Other:
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Circle (only one) appropriate score according to the criteria:

Dung type

Criteria:	Firm (folded/creased)	Soft	Runny (splatter)	Pellets
Score:	5	2	0	5

Holes on underside of dung

Criteria:	Reduced to powder	Lots	Few	None
Score:	10	8	2	0

Holes in the ground under dung

Criteria:	3+ big holes over 1.5cm hole width	1 to 2 big holes over 1.5cm hole width	Only small holes less than 1.5cm across	None
Score:	10	8	3	0

Aphodiines count

Criteria:	More than 300	Between 20 & 300	Less than 20	None
Score:	10	5	2	0

Onthophagus count

Criteria:	More than 30	Between 10 & 30	Less than 10	None
Score:	10	5	3	0

Geotrupidae count

Criteria:	More than 2	2	1	None
Score:	5	4	2	0

Download additional scorecards and more at
www.dungbeetlesforfarmers.co.uk/downloads

Sample Total Score:
(max. of 50)



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