

Dung Beetles of New York State

Cattle & Dairy Pastures

Dung Beetles

Dung beetles can be found on all New York beef and dairy farms. While they don't have the most glamorous job in the livestock ecosystem, dung beetles play a vital role in improved soil health and pasture ecology. Dung beetles are a beneficial part of the agricultural integrated pest management toolkit, aiding in dung decomposition, livestock pest and parasite reduction, nutrient cycling, and soil health.

Dung Beetle Lifestyles



There are three functional lifestyles for dung beetle species—rolling, tunneling, and dwelling. Together, they can coexist within the same pat.



Dwellers—*Endocoprids*

These species consume the manure as they tunnel within the dung pat and lay eggs directly in the manure or surrounding soil. Dwellers break apart the dung quickly which dries it out, making it less habitable for pest flies. Most dung beetles found in New York cattle pastures are dwellers.



Tunnelers—*Paracoprids*

These species consume the pat and burrow beneath it to bury brood balls. This tunnelling helps to recycle organic matter and nutrients in the soil, increase water filtration and improve soil structure.

Rollers have not yet been collected in our research of NYS cattle pastures.

Ken Wise, Hannah Tolz



Visual guide for more information

How Can You Help Dung Beetles?

- ✓ **Limit Chemical Use:** Reduce the use of dewormers and feed-through insecticides to protect dung beetles and other beneficial organisms by implementing IPM practices.
- ✓ **Concentrate Manure:** Concentrate the amount of manure in a paddock to increase the number of beetles in an area.
- ✓ **Minimize Chemical Exposure:** After deworming, keep animals in the same paddock until product residues are gone from the manure.
- ✓ **Treat During Cooler Months:** If deworming is necessary, do it when beetle activity is low.
- ✓ **Use Action Thresholds:** Control flies only when needed.
 - Horn flies: 200 per beef animal/ 100 per dairy animal
 - Face flies: 10 per face
 - Stable flies: 10 per four legs
- ✓ **Targeted Insecticides:** Use back-rubbers, dusters, face rubbers and direct sprays.
- ✓ **Use Fly Traps:** Consider using fly traps like walk-through traps or the CowVac as a natural alternative to insecticides.
- ✓ **Testing Cattle for Parasites:** Conduct fecal tests to identify the presence of parasites and make informed decisions about which animals require treatment.

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Dwellers

Acrossus rubripennis

6.2 to 9.0 mm long. Head and pronotum black, elytra over the abdomen is reddish. Darkens at the end.



Alloblackburneus rubeolus

3.5 to 5.0 mm long. Head pronotum, and elytra are roughly evenly reddish-brown throughout. Very smooth in appearance.



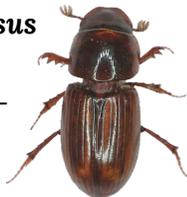
Aphodius fimetarius or *Aphodius pedellus*

6.9 to 9.5 mm long. The head and pronotum are black. The elytra is a uniform dark red.



Blackburneus stercorosus

3.0 to 5.0 mm long. Entirely shiny reddish-brown beetle with yellowish edges.



Calamosternus granarius

3.4 to 6.0 mm long. The head, pronotum, and elytra are all black. The tips of the legs can appear reddish.



Chilothorax distinctus

4.5 to 5.5 mm long. Black head and pronotum. Elytra is medium brown with distinct black markings.



Dialytellus dialytoides

3.2 to 4.6 mm long. Entire body is dark brown to black. Body is elongate and deeply punctured.



Eupleurus subterraneus

6.9 to 7.3 mm long. Body is entirely black, slightly flattened, and elytra ridged.



Labarrus lividus

3.5 to 5.8 mm long. Brown, dark line between elytra with parallel yellowish tan lines outline entire body.



Melinopterus prodromus

5.0 to 6.0 mm long. Head and pronotum medium brown with yellow-brown ribbed elytra.



Oscarinus rusicola

3.6 to 5.2 mm long. Head, pronotum, and elytra reddish-brown. Legs lighter red.



Otophorus haemorrhoidalis

4.1 to 5.4 mm long. Black body and elytra with red hue at apex of elytra. Long and punctured scutellum.



Teuchestes fossor

8.0 to 12.0 mm long. Large and robust entirely black, shiny beetle. Long scutellum.



Trichonotulus scrofa

3.0 to 4.0 mm long. Head, pronotum, and elytra dark brown to black. Pronotum and elytra very hairy.



Tunnelers

Colobopterus erraticus

6.0 to 8.1 mm long. Head and pronotum black, elytra brown. Long scutellum.



Onthophagus taurus

6.0 to 11.0 mm long. Entirely dull black body. Males have large or small horns, females no horns.



Onthophagus pennsylvanicus

3.5 to 5.0 mm long. Short and stout beetle, entirely black. Covered in pale hairs.



Onthophagus hectate

5.0 to 10.0 mm long. Body black, covered in pale hairs. Males have hornlike projection on pronotum.



Onthophagus nuchicornus

6.0 to 8.0 mm long. Head and pronotum black, elytra light brown with black mottling. Males have a single horn on head.



Other Predatory Beetles

Staphilinidae

Elongated beetles with short elytra and exposed abdomen.



Hydrophilidae

Round beetles either black, brown or with colored pattern.



Hister Beetles

Shiny beetles with a tiny head and tip of abdomen exposed.

