

# In My Backyard: Dung Beetles

By C. W. (Bill) Smith

The first part of June I was staring out my kitchen window into the backyard, wondering what my crazy dogs were up to. They had their noses to the ground and their tails standing straight up, intently staring at a war going on in the backyard. Talk about a bug-tussle...the dung roller beetles were waging war on the piles of dog droppings carefully spotted around our yard, and they were going at it with fierce determination. The larger ones were skipping work by wrestling the little perfectly round packages from the smaller ones, who in many cases weren't giving up easily. Some had gotten away and were rolling the dung balls at a furious pace, but it was all backwards. They pushed with their front legs and guided with their rear legs, rolling the tight spheres of dung



*Dung rollers fighting over a dung ball. Photo:Wikipedia*

across the yard, backing all the way. It was a rite of spring that had gone on for millennia, and I had watched this since childhood, but I realized I didn't know much about these little creatures. I knew they weren't part of my unholy trinity of West Texas creatures...snakes, scorpions and centipedes...they didn't bite, sting, pinch or spray venom. They were just benign little bugs that had an appetite for poo. A little research was in order.

In general, there are about 18,000 species of beetles in the state of Texas. World-wide there are over a million species of insects described, maybe as many as 3 million separate species in all. Beetles are the largest group of insects in the world, with over 385,000 species being described. Texas has the largest diversity of insects of all the states, with about 1/3 of described species being found here. So much for statistics. Needless to say, we have a lot of bugs.

With such a diverse population of beetles it becomes difficult to identify the species. There are dozens of species that are classified as dung-rollers, and they all have various adaptations, specialized body parts and a rainbow of coloration. From drab black and muted brown to iridescent green and shimmering metallic blue, the only thing they all have in common is a love for dung. One researcher who has spent his life working with dung rollers thinks that their whole existence centers around cow, horse and animal manure in general. Okay, so they really like poop. So what?

Poop is life for the dung roller. When they find fresh droppings they attack with fervor, cutting out a chunk and carefully patting it into a smooth sphere to facilitate movement back to its nest. Once they get it back to their burrow, they pack it in and use it for food, or lay a single egg in a dung ball to brood their babies. When the eggs hatch the little grub feeds on the material until it pupates and emerges as an adult. Then it begins its lifelong search for the perfect food source or a mate.

And, by the way, dung rollers are the only known species of beetle in which both males and females work together to insure propagation of the young.

Researchers say there are two general types of dung rollers in our area. The first are those that make tunnels to the animal droppings and do everything secretly, generally during the cool part of the day. We seldom see this kind since everything happens in the privacy of their homes.

The other types are like those in my backyard, who move along the surface and visibly go about their work. The ones in my backyard were a drab black with small parallel ridges going down their back. They do fly, as I witnessed them taking off and landing, not fast like flies or bumblebees, but gracefully, like miniature blimps moving among the weeds and blades of grass. But mostly they walk...backwards, if they are pushing a package.

Because they raise their young in the earth, one researcher says their babies have a low mortality rate and that a female may only lay about ten eggs in a lifetime. Compare that with grasshoppers and other insects that may lay thousands of eggs in a lifetime, with many being consumed by predators.

Dung beetles are very important to ranchers and livestock raisers. Most importantly, they reduce droppings very quickly which could harbor parasitic flies such as horn flies and face flies, which have a negative economic impact on stock raisers. A study showed that up to 95% of fly eggs were destroyed by dung beetles. And then there are gastrointestinal parasites that incubate in animal droppings, and the dung beetles help to control them as well. They are very beneficial to stock raisers. In addition, animals don't like to graze near their own droppings, but dung beetles help to clear the material and return the pasture to proper grazing conditions, not to mention recycling the manure and returning nitrogen and nutrients to the soil. Researchers have discovered that dung beetles can remove up to one ton of wet manure per day and take 90% of the surface material underground. They are definitely the rancher's friend.

One of the problems today with pasturelands is that dung beetle populations have been destroyed through the over use of pesticides and herbicides. That is probably not a problem in our area, but it might be worth it to think of your beneficial insects in the garden when spraying for pests and unwanted grass and weeds. Sometimes the old fashioned methods give wonderful benefits. My grandmother saved my grandfather's cigarette butts and soaked them in a jar of water to use as an insecticide. Plant lice and grasshoppers hated it but beneficial beetles and bees were not affected.

So, where do you go to see dung beetles? If you have pets in your back yard, June, September and October are the months of activity for dung beetles. Keep your eyes open and watch for Papa Dung Beetle as he rolls the paycheck home to Mama. You will be fascinated.

And, what's in your backyard?