

COLUMNISTS

A 'bug' of many names

Jan Carrington Special to the Reporter-News

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When I was a kid in southeast Texas, we called them "Doodle Bugs." Out here in the Big Country, people call them "roly-polies" or "pill bugs." But, by whatever name you call it – and this critter has many names – this tiny animal is amazing.

Almost everyone loves roly-polies. And why not? They are completely safe and fun to play with; they don't bite, sting or buzz; and they don't carry diseases. In fact, they aren't even bugs.

They are crustaceans, more closely related to lobsters, shrimp, crabs and crawfish than insects or bugs. They are the only crustaceans to inhabit land and even though they cannot live in water, they still breathe through gill-like structures called pleopods on their undersides. This is left-over from their ocean existence, before they crawled out of the sea about 300 million years ago.

Another characteristic from their crustacean ancestry is the color of their blood. Roly-polies have hemocyanin in their blood. Hemocyanin contains copper, which makes their blood appear blue when exposed to oxygen. So, they are true blue bloods.

Their scientific name is a mouthful – *Armadillidium vulgare* – and they are found throughout the United States. They came from Europe and the Mediterranean, probably travelling in the timber of early ships. They quickly spread, hiding out under logs and rocks, seeking moist places in forests and woods to survive and thrive. And produce as many as three broods every year.

Roly-poly mothers are very caring, carrying up to 50 eggs around in a brood pouch called a marsupium. Even after the tiny eggs hatch, the babies stay in the brood pouch for up to two months until they are ready to feed on their own.

Roly-poly bugs are isopods, which means they have an equal number of legs on each side of their body. Seven pairs of legs in an adult, along with the usual head, thorax, and abdomen.

They shed their exoskeletons five times before reaching adulthood.

The most recognizable and fun feature of the roly-poly is its ability to curl up into a ball when disturbed. Many of us have picked up or poked one just for this reason. This is a defense mechanism and helps them fend off external attacks. But for us, it's just fun to watch them roll up. I think this is how they got the name "pill bug." When I lead children on field trips at Abilene State Park, finding and holding roly-polies is always a highlight of their outdoor experience.

These amazing creatures have other abilities, too. They communicate with each other by tapping their antennae. They have senses for sight, smell and touch, but have poor vision. They don't urinate. Instead, they have a high tolerance for ammonia gas, which escapes from their bodies through their exoskeletons.

Roly-poly bugs are decomposers and protectors of soil. They speed up the process of decomposition of plant materials. They also circulate the soil, which is very useful in composting. They do this by eating decaying matter, breaking it down so it can be digested by the fungi and bacteria necessary to keep soil healthy for plants.

They also love heavy metal. Not the music but actual contaminating metals. These creatures safely remove heavy metals from the soil by consuming them. Because of this ability, they are an important tool for cleaning up soils that have been contaminated by pollutants like lead, zinc, copper, cadmium and arsenic. The way they do this is by crystallizing the heavy metal ions in their guts, creating spherical deposits that remain in their bodies.

So, whether you call them roly-polies, doodle bugs, pill bugs, wood lice, armadillo bugs, potato bugs or tiggy hogs, these little guys are amazing creatures that help the environment, provide nourishment for our gardens, and deliver hours of entertainment for children everywhere.

Join the Big Country Master Naturalists at Abilene State Park as they look for those pill bugs, other living things and just enjoy the Texas outdoors.

- ▶ 10 a.m. Saturday, Jan. 18, at the Winter in the Park Walk; meet at the building by the pool.
- ▶ 6-9 p.m. Saturday, Jan. 25 with the winter constellations at the Star Party in the area across from the pool.

Be sure to check out our local chapter on Facebook at BCTXMN for event details and updates.

This article is courtesy of the Big Country Master Naturalists, a sister organization of the Master Gardeners. We are also sponsored by Texas Parks and Wildlife and the Texas A&M AgriLife Extension Service. Our Big Country Chapter is a group of volunteers interested in all things outdoors in Texas.