Wild Wednesday 21 October 2020 Horned Lizards by Walt Anderson

In late summer to early fall in Arizona, it's time to look for our anteaters! No, not those furry, toothless mammals of the Neotropics, though those are amazing creatures. Our anteaters are the horned lizards, squat and cryptic reptiles that many mistakenly call horny toads (when monsoon rains are heavy, truly horny toads come out in droves).

Horned lizards, despite being pretty squat and chunky, can scoot faster than you might expect, but they basically depend on camouflage to avoid predation. However, if a dog or coyote were to attack, these lizards can squirt blood from their eyes as a defensive measure. Their spines and rough skins can also deter some predators, but, prey tell, not all.

Ranges of seven species of horned lizards touch Arizona, but only three occur over a fairly large area: Greater Short-horned, Regal, and Desert (which has been split into Desert and Goode's by some authorities). While Desert and Regal lay eggs in burrows, the Greater Short-horned Lizard is viviparous, popping out an average of 16 young. Adults provide nothing in parental care when the babies venture out into the sunny world. Often the color of the substrate, they hide in plain sight.

All prey heavily on harvester ants, *Pogonomyrmex*, which create conical mounds in areas they have cleared of vegetation. These ants are highly venomous, and some people have suggested tying your enemy to a harvester ant mound as suitable torture (that doesn't come from me!). Horned lizards are hundreds of times more resistant to ant venom than are mice. Part of their resistance is salivary mucus that coats the ants, but there are blood components that also detoxify the venom.

Ants also produce formic acid, which surely could induce a belly ache in some ant-eaters, but horned lizards have natural ant-acid antacid.

Harvester ants prefer seeds of certain sizes and shapes, so they can modify plant communities by selectively removing certain species. They also create patchiness by removing vegetation around their entrance holes. Ants thus are major players in ecosystems. Horned lizard predation may have been a selective factor for greater ant toxicity, which in turn may have driven anti-ant adaptations in the lizards, an evolutionary arms race.

Horned Lizards head underground during the coolest months in Arizona, and they seek shade or retreat into burrows when it gets too hot during their active season. From a human perspective, they are good neighbors, and it is always a treat to find one.

Resembling animated granite, this horned lizard waits at the doorstep of its intended prey, a colony of harvester ants.

The Greater Short-horned Lizard ranges from the Canadian border in Montana through the interior west and down the Sierra Madre Occidental. They are common in the Prescott area, including the Granite Dells.

The Regal Horned Lizard appears hornier (check out its head) than the short-horned and tends to prefer drier environments. It ranges from central Arizona deserts down the west coast of Mexico.

The baby Greater Short-horned Lizard relies on its cryptic coloration to avoid most potential predators.

Watch where you step when you are near harvester ant nests, as they pack a mighty wallop with their venomous stings. The best antidote is avoidance. Even the horned lizard, well adapted to prey on them, will retreat if attacked by a large platoon of these formicdable social hymenopterans.