

Spiky Lizards



A short-horned lizard outside of Elko

Short-horned lizards do not look like other lizards and do not act like them, either. People may know them as “horny toads”, but these spiky, pancake-shaped lizards look odd. They also use unique adaptations to solve problems encountered in their arid environment. The body shape works, since this successful family of 13 lizard species occupies much of the western United States.

Horned lizards, like most lizards, eat insects and finding enough food can be hard. Horned lizards have adapted to this by concentrating on ants. Ants make up 90% of their diet and are a good choice, since where found, ants are found in abundance.

With that flattened, rounded shape, horned lizards obviously do not chase down their food like other lizards. Instead, short-horned lizards lie in wait near an ant hill and lap up passing ants with a quick, sticky

tongue. But ants are ants and horned lizards have been known to run from a mobbing of ant bites.

A diet of ants creates another problem. Ants consist largely of an exoskeleton made of indigestible chitin, so it takes a lot of ants to obtain enough nutrition. Horned lizards may eat 200 ants in a day and have evolved a way to handle this rough diet. Their stomachs are much larger than other lizards, holding more ants for digestion. Larger stomachs require larger bodies. They have exchanged that svelte, slender look of other lizards for tank-shaped bodies, flat and wide.

This body shape has created another problem, since they cannot simply run away from predators. Several adaptations have compensated for this lack of speed.

First, they escape notice. Horned lizards will often keep still when danger approaches, relying on their cryptic coloration. Even when they do run, they tend to only run a short distance, hoping to startle the predator.

If the predator persists, then the horns on their heads, back, and sides may intimidate predators. They stand with back legs high and heads low to show off their spikes.

They also stand up high and suck in air to look larger, while hissing and thrashing their tails. Horned lizards may actually hop toward the predator, brandishing those head horns.

That fascinating story from childhood is true, they can squirt a bloody liquid from their eyes. They increase the blood pressure in their heads until capillaries near the eyes burst and eject the liquid, throwing a thin stream as much as four feet. Besides surprising the predator, the liquid is thought to irritate the mucous membranes of some predators.

These cold-blooded lizards live in a cold desert, and horned lizards spend their nights buried in loose soil or sand. They dig their way into the soil using a sharp-edged lower jaw. The head vibrates side to side as the lizard walks forward, cutting into the soil. They can bury themselves 3” deep in less than a minute.

When the sun comes up, their head often emerges first to be warmed by the sun. They need to be fully alert before exposing themselves to dangers. They emerge from the soil and tilt their body so their flat, upper

surface catches direct sunlight and warms up. Later in the day, they move into cool shade or bury themselves in shaded soil.

In many areas, horned lizard populations are declining. Besides habitat loss, their biggest problem is being picked up. Too many are collected as pets. Unfortunately, most die quickly since people usually do not keep on hand an adequate supply of ants. Besides, individual lizard species eat very specific ants and people rarely offer the correct types.

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