



Lizards of Tasmania

There are 17 species of lizard found in Tasmania. Of these, seven are found nowhere else on Earth. The only other reptiles found in the State are three species of snake, which like our lizards, are members of the order Squamata, the most diverse and widespread reptile group.

Being a lizard

There are advantages to being a lizard. Lizards are ectotherms (which translated means 'outside heat'), using external sources of heat to raise their body temperature sufficiently to become active. By contrast, mammals and birds are endotherms ('inside heat') using internal processes to maintain their body temperature. Producing your own body heat is expensive. Mammals use 70-90% of the food they eat just to maintain their body temperature, so of course they have to eat a lot. Lizards, and other reptiles, can go for days, even months without food.

Most lizards are able to raise their body temperature rapidly above that of the air temperature on sunny days. They achieve this by choosing basking sites which are sheltered from the wind and exposed not only to direct sunlight but to the warmth reflected off rocks or logs. If the substrate has been warmed by the sun they will often flatten themselves against it to absorb as much heat as they can.

Being a lizard in Tasmania

Tasmania's relatively cool climate and high mountain ranges provide certain challenges for our lizards. Most species only become active when the air temperature is well above 15 degrees Celsius. Consequently, some species of reptile enter a torpor over winter and most have developed strategies and adaptations to thrive in Tasmania's cooler environment.

Reproduction

Three species of lizard found in Tasmania give birth to live young rather than laying eggs. In some cases the eggs merely develop within the body until they are ready to hatch. The eggshell has been dispensed with, but the young are still born within an amniotic membrane. Other species, such as the Grass skinks, have a well-developed placenta and the health of the newborn young is more



Photo: Metallic Skink (*Niveoscincus metallicus*) M. Driessen

closely tied to the health of the parent female.

In Tasmania's relatively cold conditions, keeping the young within the body allows the parent to have greater control over the incubation temperature and the chances of survival are increased. All over the world reptiles in colder areas tend to bear live young.

Life in a dry climate

Lizards are well adapted to survive dry conditions; they do not lose moisture through their skins by sweating. Land-dwelling reptiles conserve water by excreting uric acid in a solid white pellet at the end of their droppings. In other words these reptiles don't pee.

Many species have other adaptations for life in a dry environment. For example, most small Tasmanian skinks have a transparent scale in their lower eyelid, which provides protection for the eye and prevents moisture loss. These lizards normally close their eyes when at rest, but can still see. If there is any movement that might mean danger or food, they quickly open their eyes.

Tail dropping

Many people have witnessed a lizard dropping its tail. Most skinks and some dragons have the ability to lose their tail quickly if it is grasped by a predator, and can then grow a new tail (blue tongue lizards do not lose their tail). Dropping a tail is not something a lizard does casually—the tail is a useful part of a lizard, storing body fat, providing balance, assisting in temperature regulation and acting in breeding displays.

The tail breaks at a fracture plane in one of the bones, and immediately small muscle rings constrict the blood vessels around the break so the lizard doesn't bleed to death. At the same time muscles in the severed part of the tail begin to twitch rapidly.

This usually has the effect of making the predator hold onto the tail more tightly, becoming distracted while the lizard makes good its escape.

The tail will slowly grow back, but a change in colour pattern on the tail will identify the tail as regrown. Regenerated portions of tails do not have bones in them. The tail is supported by a rod of cartilage instead.

Species of lizards in Tasmania

There are five families of lizards in Australia; only two of these occur in Tasmania.

Skinks (Scincidae) are the most successful family of lizards in the world, and the group is well represented in Tasmania with 16 described species, of which seven are endemic (restricted to Tasmania). Tasmanian skinks are diurnal lizards, ranging in size from the Delicate skink through to the Blotched Blue-tongue. Skinks generally have glossy scales, each containing a small bone, or osteoderm, and enlarged head shields.

Dragons (Agamidae) are poorly represented in Tasmania with only one species, the Mountain dragon, occurring here. Other more famous members of the dragon family living in Australia include the Frilled Lizard of northern Australia and the Thorny Devil of the sandy deserts.

Dragons tend to have long hind limbs, small, coarse scales and large heads. All dragons lay eggs and they are most numerous in the warmer parts of Australia.

Conservation

The biggest threat to reptile fauna, indeed all fauna in Australia, is destruction of habitat. All bush, whether it is a council reserve or a patch of scrub on a farm that hasn't been cleared, is home to wildlife.

Off-reserve conservation is important (in some cases essential) for the long-term survival of many species of animals and plants.

Many lizards rely on rocks and logs for shelter. You can help protect them by buying quarried stone for rockeries rather than collecting bushrock. When collecting firewood, leave some larger logs (and all hollow logs) behind. Hollow logs, which don't form until a tree is at least 80 years old, provide shelter not only from cold, rain and predators, but from fire as well.

Cats cause a great deal of damage to Australia's fauna. Unfortunately, there is little difference between feral and domestic cats in this regard, except that feral cats are hunting to survive. If you own a cat, the responsible thing to do is to have it desexed and keep it indoors at night. Putting bells on your cat (unless it's a cow bell) is not a particularly good way to stop your cat from hunting wildlife. Cats tend to pounce on prey rather than rush at it so by the time an animal hears a bell it's often too late.

Other introduced animals that feed on lizards may have a serious long-term impact on populations. Laughing Kookaburras and lyrebirds have both been introduced to Tasmania and both species feed on lizards.

The introduction of reptiles into the State has the potential to introduce disease and competition into Tasmanian environments. The importation of reptiles into Tasmania is illegal without a scientific permit.