



# KEYS TO THE LIZARDS AND SNAKES OF SOUTH AUSTRALIA

## INTRODUCTION

Branching keys are commonly used by biologists to find their way to the identity of an animal or plant. Keys are constructed as a series of paired questions, listing one or more features that should be checked, with each alternative leading either to another set of questions or to the name of the creature. In these keys to South Australian reptiles, we have aimed to rely mainly on readily observed and interpreted features of the exterior of the animal, and to minimise the use of unfamiliar anatomical features that might be more extensively used in more technical publications. However, for some species we have not been able to avoid using some more technical characteristics, such as some details of scale shape or arrangement. We have tried to address this unfamiliarity with heavy use of illustrations.

We also aim to use features as they would be observed in living (or recently dead) specimens rather than long-preserved museum specimens in which many colour shades become altered by the effects of the alcohol preservative.

With all that said, the keys nevertheless have to be used with a realistic idea of their limitations. Keys have to rely on the features of species they describe. Some individuals of some species may be atypical in one respect or another. Where species are rather closely related, variation in the same features may overlap and cause confusion. For this reason we have tried to use at least two characteristics in many areas of the keys where similar species are being discussed. So if one feature appears not to fit, this variation may be the reason why. However, especially when you are a beginner, mistakes are easy to make and so be ready to double check the descriptions and images just in case. Finally some species are so similar in external appearance that they make life difficult even for specialists. From time to time you may have to be content with identification to a genus or a group of species within a genus and leaving it at that.

Over time we will expand the resources available on the SA Museum Herpetology web site, so that we can make it increasingly easy to make confident identifications of all of the state's herpetofauna. We hope that these keys will be of use to anyone who encounters reptiles in South Australia, from professional field biologists, to students to interested persons who would like to improve their knowledge of our wildlife.

Be aware that trapping and holding of native wildlife has to be done under a permit – we make the keys available on the assumption that those using them will inform themselves on any restrictions regarding wildlife conservation.

<http://www.environment.sa.gov.au/managing-natural-resources/plants-and-animals>

**To get started, the first key to use is the one to the major groups; this will give you the family that your specimen belongs to. Then you can go to the relevant family level key to find the species.**

Example of how a key is used.

Suppose you have been camping on the Eyre Peninsula and you pull up your swag and find this underneath:



Turning to the *Key to the Main Groups of Lizards and Snakes of South Australia*, you read the first pair of questions

- 1a. Hind legs and toes absent; if any rudiment of a hind limb is visible it looks like a small scaly flap or a single thorn-like claw . . . . .2
- 1b. Hind legs present and bearing toes (sometimes fewer than five); forelimbs also present in all but three species (these retain hind limbs with just two toes) . . . . .3

This lizard is a bit elongate and snake like but it definitely has front and back legs with toes. So you chose the 1b option and go to couplet number 3.

- 3a. Head scales are relatively large symmetrical plates; dorsal body scales moderate to large sized, fish-like and overlapping. . . . . **skinks**
- 3b. Head scales small, numerous, similar in size to adjacent body scales; dorsal body scales rather small, weakly overlapping or granular . . . . .4

On close inspection you can see that the lizard does have rather large plate like scales on its head and the body scales are overlapping, sleek and fish like.



Conclusion: The lizard is some sort of skink. To go further with the identification, you would then turn to the *Key to the Skinks of South Australia* and work through until you reach a species name. In this case, *Lerista dorsalis*, the four-toed slider.

General note on terminology for colour patterns in all keys.

In all the keys:

- **“band”** is used for a light or dark pattern
- **“stripe”** is used for a light or dark pattern back;
- **“line”** is used for a very narrow “stripe”, i
- **“zone”** is occasionally used to denote a re contain other patterns

Other terms used:

**Dorsal** – back or upper surface

**Nuchal** – the nape of the neck

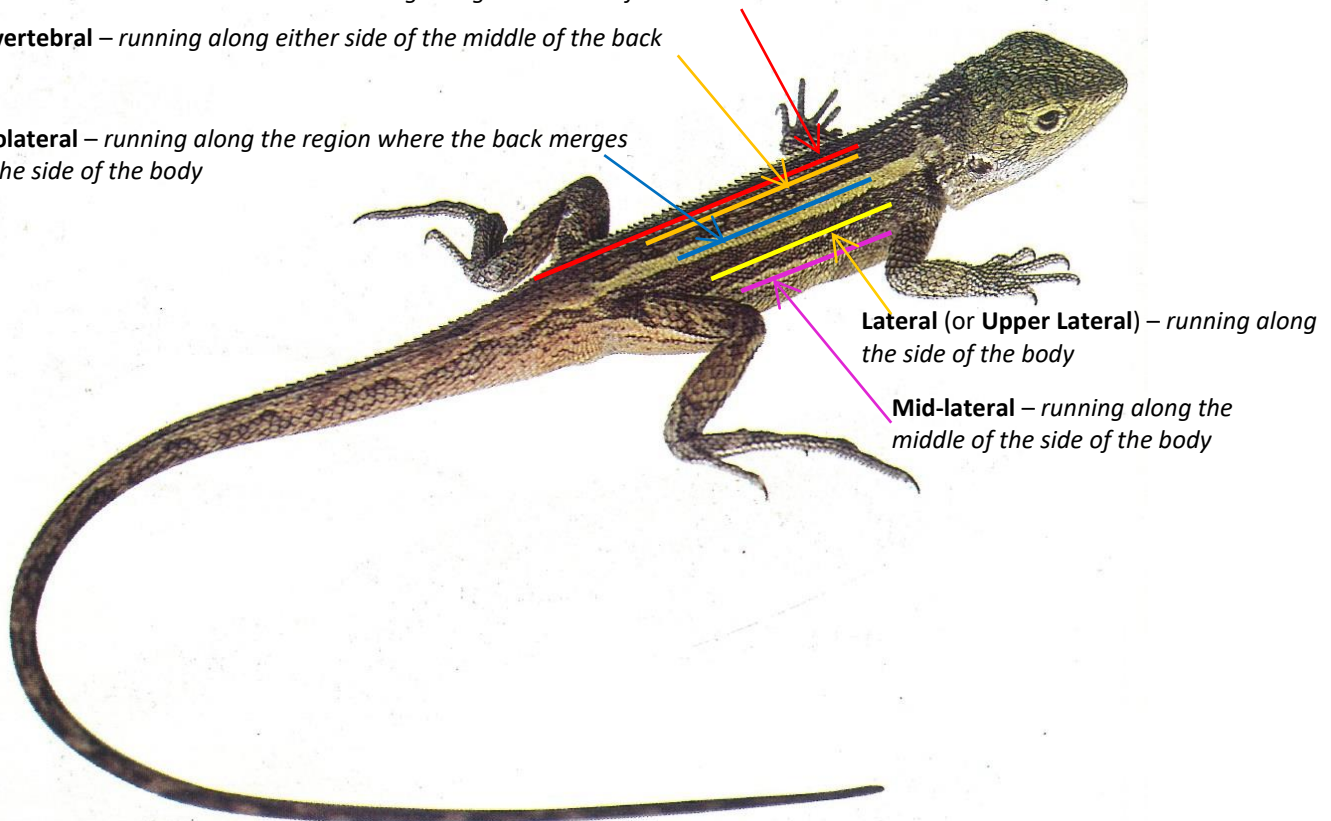
**Ventral** – belly or lower surface

Terms that describe the positions of structures and patterns running along the body, used in all keys, are shown on the diagram below

**Vertebral** – running along the middle of the back

**Paravertebral** – running along either side of the middle of the back

**Dorsolateral** – running along the region where the back merges into the side of the body



**Lateral (or Upper Lateral)** – running along the side of the body

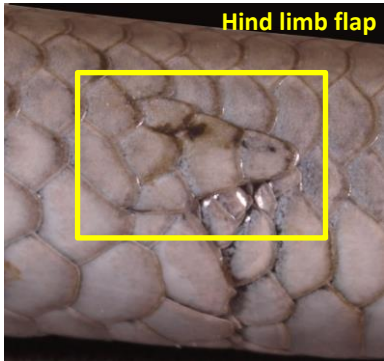
**Mid-lateral** – running along the middle of the side of the body

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## KEY TO THE MAIN GROUPS OF LIZARDS AND SNAKES OF SOUTH AUSTRALIA

### ORDER SQUAMATA

1. a. Hind legs and toes absent; if any rudiment of a hind limb is visible it looks like a small scaly flap or a single thorn-like claw . . . . . **2**
- b. Hind legs present and bearing toes (sometimes fewer than five); forelimbs also present in all but three species (these retain hind limbs with just two toes) . . . . . **3**



*Delma petersoni*  
**1a. Legless lizard**

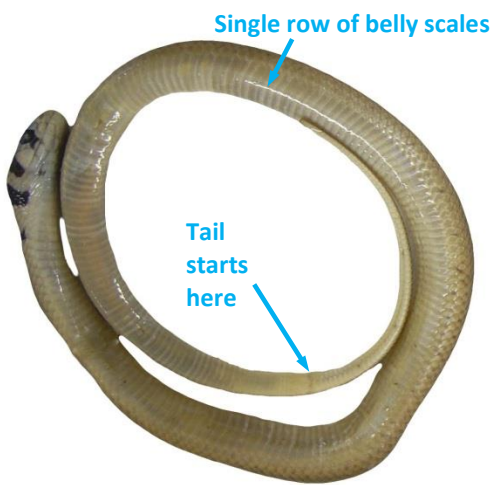


*Morelia spilota*  
**1a. Python**

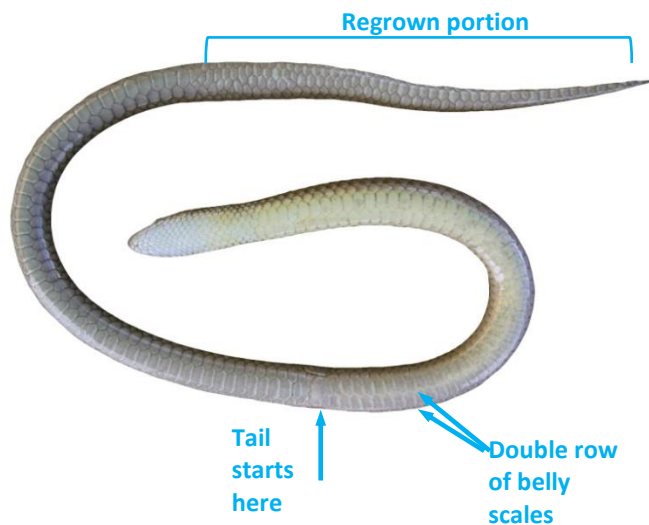


*Lerista punctatovittata*  
**1b. Skink**

2. a. Tail short, no more than about 25% of snout-vent length and may be much shorter; never shed and regrown; tongue thin and forked; in most (not blind snakes) a single row of enlarged scales runs down the middle of the belly; never an ear opening . . . . . **SNAKES**
- b. Tail length varying from about 40% to nearly 300% of snout-vent length, and may show signs of having been shed and regrown; no single row of enlarged belly scales; tongue broad and flat, not thin and forked; ear opening present in most species . . . . . **LEGLSS LIZARDS**



**2a. Snake**



**2b. Legless lizard**

- 3. a. Head scales are relatively large symmetrical plates; dorsal body scales moderate to large sized, fish-like and overlapping. . . . . **SKINKS**
- b. Head scales small, numerous, similar in size to adjacent body scales; dorsal body scales rather small, weakly overlapping or granular . . . . . **4**

Head scales large, plate-like



*Liopholis inornata*

3a. Skink

Head scales small, similar to body scales



*Diplodactylus galeatus*



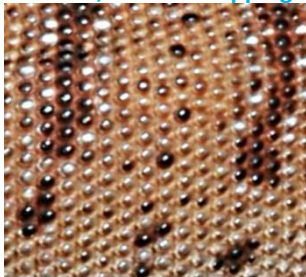
*Varanus eremius*

3b. Other lizards.

- 4. a. Belly scales rectangular, much larger than dorsal scales which are small and bead-like; tongue long and forked; neck long, usually longer than the head . . . . . **GOANNAS**
- b. Belly scales may be a little larger than dorsal scales but overlap and are not rectangular; tongue rounded; neck short. . . . . **5**

Bead-like, non-overlapping

B  
a  
c  
k



B  
e  
l  
l  
y



Rectangular, non-overlapping

4a. goanna

Pointed or keeled, overlapping



Tapering, overlapping

4b. dragon

Granular, non-overlapping



Rounded, overlapping

4b. gecko



*Varanus gouldii*

4a. Goanna



*Underwoodisaurus milii*



*Amphibolurus norrisi*

Blunt, rounded tongues

4b. Geckos and Dragons

- 5
- a. Eye relatively large, with a vertical pupil and no moveable lids; dorsal scales small and granular; tail usually not much longer than the head and body, may be shed if handled roughly. . . . . **GECKOS**
  - b. Eye small to rather large, with a round pupil and moveable eyelids; dorsal scales weakly overlapping and generally with some scales having a strong central keel; tail usually much longer than the head and body and very thin towards the tip; not able to shed the tail as a defence. . . . . **DRAGONS**



*Heteronotia binoei*

5a. Gecko eye



*Tympanocryptis tetraporophora*

5b. Dragon eye



*Gehyra variegata*

5a. Gecko tail



*Ctenophorus tjantjalka*

5b. Dragon tail