

A NOTE ON THE HERPETOFAUNA OF CENTRAL AUSTRALIA

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The reptile fauna of Australia is extraordinarily rich and varied. Cogger (1986) lists well over 700 species, and new discoveries are continually being made. Yet, in the central Australian desert, my wife and I saw far fewer snakes and lizards than we had expected: the object of this note is to explain the situation to other British herpetologists who may be misled as to the true situation if they have not actually visited the region.

In New South Wales and A.C.T., on two day-trips, we saw Murray turtles (*Emydura macquarii*), water dragons *Physignathus lesueurii*), a blue-tongued lizard *Tiliqua scincoides*), water skinks (*Sphenomorphus tympanum*), as well as a red-bellied black snake (*Pseudechis porphyriacus*) and a brown snake *Pseudonaja textilis*). The latter is dangerously poisonous to human beings, but not aggressive. Across the Mount Lofty Range from Adelaide, in quick succession one afternoon, we saw and photographed a stumpy-tailed or shingle back lizard *Trachydosaurus rugosus* (Fig. 1) and a mallee dragon (*Ctenophorus fordi*) (Fig. 2). Agamidae are known as 'dragons' in Australia, Varanidae as 'goanneas'.

The situation was different in the more arid country around Alice Springs on the fringe of the Simpson Desert, where my wife and I stayed from 6 November until 8 December 1987. At this point, I should explain that the Australian arid regions are quite unlike the deserts in Asia, Africa or America because they are richly vegetated. This applies even to the endless sand dunes of the Simpson Desert. On these grow xerophytic grasses, shrubs, and even trees, although it is the hottest and most arid part of Australia. The rainfall is exceedingly irregular and periods of drought may extend for years. Two or three times in a century, however, there may be years of extremely heavy precipitation and consequent flooding. Enough water is then trapped below ground to enable trees and shrubs to survive for decades until rain again falls in quantity. The vegetation at the time of our visit was still rich, following the heavy rainfall of 1972-73.

The region around Alice Springs and the MacDonnell Range is dominated by mulga (*Acacia* spp.) and other shrubs or by spinifex (*Triodia* and *Plectrachne* spp.). In South Australia, in the semi-arid Brookfield Conservation Park, east of the Mount Lofty Range, mallee is the dominant vegetation type. In mulgas, most leaves point upwards so that rain dribbles down the branches and trunks to soak the ground beside the trunks. Spinifexes are most of the world's hardest grasses. As the central roots and leaves of the original plant exhaust the soil and begin to die, the outer parts of the tussock take root in fresh soil, forming new plants so that a ring develops around the dead centre. Spinifex provides shade and protection for many animals, including reptiles, birds, mammals and insects.

The *Eucalyptus* species that comprise mallee present the branching aspect reminiscent of a pollarded willow. None of these vegetation types is exclusive, however. Spinifex may grow beneath mulga, and saltbush or bluebush (*Atriplex* and *Maireana* spp.), as well as mitchell grass (*Astrebla* spp.) beneath mallee. Soil nutrients are extremely low in these vegetation climaxes. Dead plant material is rapidly consumed by the ever-present termites and ants, upon which many of the lizards depend. For instance, the mallee dragon "appears to be confined to mallee and related arid scrubs, where it occurs only in the presence of porcupine grass (*Triodia* spp.). Feeds almost solely on ants" (Cogger, 1986).

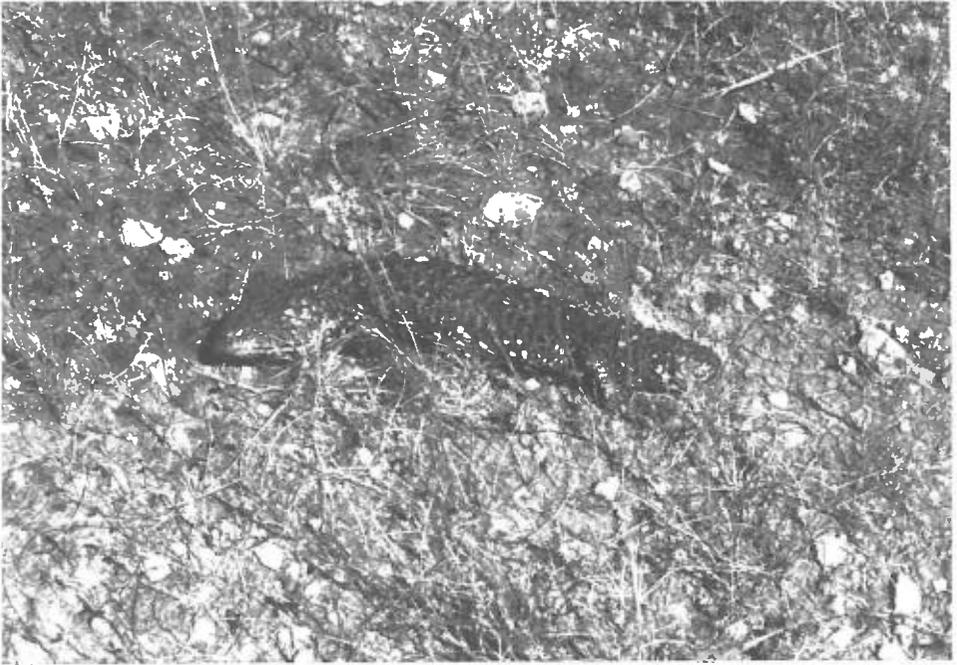


Plate 1. Shingleback lizard



Plate 2. Mallee dragon



Plate 3. Dorsal surface of juvenile perentie



Plate 4. Children's python.

There is a surprisingly rich assemblage of lizards in arid Australia (Pianka, 1986), especially in spinifex which grows on unusually infertile soils. Here, termites provide an abundant food resource suitable for lizards, many of which are arboreal, but for few other vertebrates. Trees grow sparsely throughout spinifex and *Acacia* shrublands, thereby adding to the complexity of the reptile fauna (Morton & James, 1988). Despite this, reptiles are extremely difficult to find, let alone to catch – except in pitfall traps. Most species are nocturnal, or hide in the spinifex where they are inaccessible and can seldom be seen.

Thus, we were fortunate to see and photograph central netted dragons (*Ctenophorus nuchalis*) near the Aboriginal rock carvings at Ewaninga, but we found neither military dragons (*C. isolepis*) which inhabit spinifex, nor the long-nosed dragon (*Lophognathus longirostris*), a swift arboreal species said to be common and conspicuous at Ormiston Gap in the Chewings Range. Neither did we find a thorny devil (*Moloch horridus*) nor a Gould's goanna (*Varanus gouldii*). [The frilled lizard (*Chlamydosaurus kingii*) only occurs further north.] We did not even see the common nocturnal gecko (*Diplodactylus stenodactylus*, although we managed tree dtellas (*Gehyra variegata*), the latter on buildings. [Surprisingly, we did not find any house geckoes in Tahiti or New Caledonia on the outward journey although, of course, there were plenty in Indonesia, Singapore, Sri Lanka and Oman on our return]. On a couple of occasions, too, we were fortunate in finding skinks (probably *Ctenopus pantherinus*), both on walls and in spinifex.

Once we came across the corpse of a young perentie (*Varanus giganteus*) which had been killed on the Stuart Highway 20 km north of Alice Springs. (This species is second in size only to the Komodo dragon, the world's largest lizard.) The perentie averages about 1.6m in total length, but specimens exceeding 2m have been found (Cogger, 1986). The suggestion has been made that traditional Aboriginal sand paintings are based on the pattern of spots on the dorsal surface of immature specimens of this formidable and impressive reptile (Fig. 3). The only snake we met with was a Children's python (*Liasis childreni*) which had entered a private house where it was not welcome. We were able to photograph it before its release two days later (Fig. 4).

All this amounts to very little really, when it is remembered we drove over 3,000 km, visiting places as far from Alice Springs as Ayres Rock and the Olgas (480 km SW), Finke National Park and Palm Valley (130 km WSW), Glen Helen (135 km W), Ross River (80 km E), Maryvale, and Chambers Pillar (180 km S).

Around Perth, skinks predominated. We saw several *Ctenopus* sp. in the John Forest National Park and *Lerista muelleri*, a species with reduced limbs, in King's Park.

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