

A FEW OF THE HERPETOFAUNA IN THE COMMONWEALTH (ORIENTAL AND AUSTRALASIAN ZONES)

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This article is based on a talk given at the end of the A.G.M. on March 19th 1985.

The British Commonwealth and extant Colonies include over 50 countries, from Antigua and Barbuda to Zimbabwe, most of which (perhaps with the notable exception of the Falkland Is.) are in the tropics where the greatest number of herpetofauna occur. A full list of the countries can be found in the current (117th) edition of *Whitaker's Almanack*. Although arguably many now with little in common with Britain, there are nonetheless historical, linguistic (the U.S.A. excepted) and cultural ties that link us to this day. H.M. the Queen is, of course, head of the Commonwealth and the co-ordination of interests is undertaken by the Commonwealth Secretariat in London. The Commonwealth Foundation, also in London, promotes closer professional co-operation, and its mandate was extended in 1979 to include non-governmental organizations of a voluntary nature.* The President and I placed down a few ideas in *BHS Bulletin* No. 8, December 1983, following on from a list of herpetological societies in Commonwealth countries that was included with *BHS Bulletin* No. 7, June 1983, together with those of Europe of which the U.K., Gibraltar, Malta and Cyprus are a part. H.M.G.'s then Ministry of Overseas Development gave me the opportunity in 1969 and 1971/72 to work in Australia to investigate the flight behaviour of the plague locust, *Chortoicetes terminifera*. Based with the CSIRO Division of Entomology, Canberra, a joint team investigated the ecology of this serious migratory insect pest. Between London and Sydney (in either direction), there are land masses that include Commonwealth countries. The slides to be shown will hopefully highlight some of the fascinating and most common species of herpetofauna that one might casually observe during a cursory inspection and have the chance to photograph.

THE ORIENTAL ZOOGEOGRAPHICAL ZONE

India (September 1969)

Calotes versicolor, the Indian garden lizard is commonly seen on walls and bushes by many Indian homes. It was seen by the holy city of Benares (Varanasi) on the River Ganges.

Geomyda sp., a pair of terrapins probably of this genus was basking at the edge of a pond in the village of Firozpur, lower Punjab, through which the main Delhi-Jaipur road passes. Many Indian villages have ponds frequented by cattle or flood pools left from the monsoon. Many species of *Geomyda* are listed in the book on Indian reptiles by Malcolm Smith (1931).

Rana tigrina, the Indian bull-frog. An adult basked by the edge of the pond in Firozpur. This is a very common and often abundant frog, which, together with *R. hexadactyla*, has been collected in millions for export to frog-leg eating countries of the World. The huge trade (see also the Fauna & Flora Preservation Society's journal, *Oryx* 17: 201, October 1984) has recently been highlighted by Rene Honegger, Chairman of the IUCN Amphibia-Reptilia Group. Also publicized in *The Sunday Times* (31 March 1985), a conservative estimate of 200 million frogs (each averages 35g) has yearly been exported from Bangladesh, India and Indonesia.

Singapore (September 1969)

Mabuya multifasciata rudis, the many-lined skink is listed by Loveridge (1945) as a very common species occurring from Sumatra to Papua New Guinea in the NE Pacific area. It was observed basking on the pale-coloured leaning trunk of a mangrove tree by a swamp just outside the town of Singapore.

* This becomes particularly relevant now that the U.K. has been elected as the venue of the first World Congress of Herpetology (Canterbury, Univ. Kent; September 1989) and the participation of Commonwealth nationals from tropical developing countries is earnestly sought.

THE AUSTRALASIAN ZOOGEOGRAPHICAL ZONE

Canberra and central west New South Wales (October-December 1969)

Leiopismia g. guichenoti, common grass-skink. One of the commonest lizards, it was observed around Canberra itself and in the Tidbinbilla Reserve just outside. *Amphibolurus barbatus*, the bearded dragon. This is a very common lizard in central west NSW and elsewhere in eastern Australia and was found in scrub and by gum forests in the Bogan-Macquarie outbreak area of the plague locust. Bearded dragons defensively erect their frills or beards (Plate I) and the mechanism has recently been described by Throckmorton et al. (1985) in the *Journal of Morphology* (presently edited by Carl Gans). One of the CSIRO entomologists, Dr Roger Bartell, who, sadly, has died since, delighted in "dragon taming" and had several animals scampering about on the linoleum floor and sunny window sill of his laboratory to which he threw plague locusts and other laboratory-bred insect pest species that were snapped up as tit-bits rather as small dogs would do. Some were road casualties with small splints attached to allow the repair of broken limb bones.

Eastern Australia, including Tasmania (October 1971-April 1972)

At the time, Eric Worrell's *Reptiles of Australia* (2nd edition, 1970) was just about the only reference book. In December 1969, Dr Harold Cogger of the Department of Reptiles and Amphibians, the Australian Museum, Sydney, had kindly let me have a photocopy of the key to the herpetofauna (over 660 species) publication of his book (Cogger, 1975). I also used a small handbook for the frogs (Clyne, 1969).

Physignathus lesueurii howittii, Gippsland water dragon, has a greenish body. An adult was found quietly basking in the early summer sunshine of October on a branch overleaning a small stream flowing amongst scrub adjacent to one of the formal picnic spots at Brindabella in NSW just outside the A.C.T. This place is much frequented by the local populace of Canberra.

Trachydosaurus rugosus, the stump-tailed skink, shingle-back or bolgali (aboriginal). A short visit (2-3.xi) to the Riverina (another plague locust outbreak area) of south-west N.S.W. yielded several animals on or by the road "beyond the black stump" between Hillston and Goolgowi. With the species' characteristic pine-cone appearance, several were basking or active at 27°C or more (12.00-14.30 h E.S.T. Aust.), often on gum tree stumps. Vegetable matter is included in the diet and interestingly, the pineal eye is better developed even than in the tuatara (*Sphenodon punctatus*) of New Zealand. *A. barbatus* were also seen in the area, often basking on stumps amidst *Cassia-Callitris-Casuarina-Eucalyptus* (poplar box) scrub.

Litoria (formerly *Hyla*) *caerulea*, the green tree frog, is the best known of Australia's amphibia and achieves 100mm in length. Several individuals of varying sizes lurked during dry weather after earlier rains in the eaves of an outbuilding of the Mitchell Laboratory on the Agricultural Research Station, Trangie, central west N.S.W. (9.xi). The Research Station formed a base for the start of a sortie into the 'Channel Country' of central western Queensland, where invasions by the plague locust start in eastern Australia.

Pseudonaja t. textilis, common brown snake. This venomous species was seen "back of Bourke" on a grassy flood plain 50 miles (81km) west of Bourke (9.xi), no doubt feeding on plague locusts that abounded in the area. It is a common, widespread snake in eastern Australia. As one proceeded through the bush, rosy-pink and grey galah parrots flitted in the scrubland and screeched from tree-tops. Like most parrots, these birds achieve a great age. The saying goes that if in the bush you try and eat a galah, you place it in a pot with a stone and boil; when the stone is soft, you eat that!

Varanus varius, the lace monitor; a four-foot adult was found dead on the road, no doubt killed by some vehicle, near Windorah in central Queensland. These great monitor lizards or goannas are conspicuous and not infrequent in Australia's bush. It was very warm in this part of Australia, and the night before (13.xi), camp had been pitched by Lake Yamma Yamma with the relief of the air temperature dropping to 93°F (34°C) at sunset after very much higher temperatures earlier. Great green flocks of budgerigars visited the lake's edge at sunset and sunrise to drink, and chattered and screeched in the surrounding scrub. A huge individual lace monitor was also seen later (21.xi) where rather cooler at Wee Jasper, N.S.W., 46km NW of Canberra and just outside the A.C.T., quietly basking on a rock outcrop amidst eucalypt and

mulga scrub, and, confident in its size, not even trying to move from the photographer only 4m away. The colour of the adults dulls with age and a half-grown individual with splendid "laced" stippling dorsally was photographed while basking in the early morning sun (22.iii), in the Carnarvon National Park (whose gorge is renowned for aboriginal cave paintings) further east in Queensland between Rolleston and Injune.

Underwoodisaurus milii, the thick-tailed or barking gecko. A juvenile (adults achieve 150mm) was found under a pile of rotten logs amidst mulga scrub on the typical reddish lateritic soil, just 30 miles (48km) south of Quilpie, Queensland (15.xi). Not far from the Bulloo River, we had left behind the Thompson River into which Cooper's Creek flows at Windorah. It was on Cooper's Creek, which like the Bulloo River drains the Channel Country, that the ill-fated Bourke and Wills Expedition made its base at Nappa Merrie. This much publicised expedition of the late 19th century led to the opening up of central Australia.

Tiliqua scincoides, the blue-tongued skink, was seen basking in the late afternoon sun (15.xi) at the edge of the track. The dirt track at Hungerford had just crossed the state border into N.S.W. (through a rickety gate and by a chipped State Border Notice). Perhaps with the exception of the frilled lizard (*Chlamydosaurus kingii*) of tropical northern Australia, this is the best known of the Australian lizards with its characteristic blue-coloured tongue. Viviparous, it achieves about 450mm in length.

Pseudechis porphyriacus, the common black snake is venomous and occurs near dampish places. It is often seen crawling across roads, usually with fatal results, and was seen one late afternoon further south-west in the Riverina of N.S.W. near Darlington Point on the Murrumbidgee River. (9.ii). Unlikely to be fatal to humans (unless intravenously injected), the venom is principally haemorrhagic. Several *Pseudonaja t. textilis* were also seen on the road at this locality; one one occasion, a marsh harrier flew away with a squirming brown snake held in its talons.

Amphibolurus nuchalis, a small dragon was seen on a sheep farming property, Toobrac, on the west side of Thompson's River channels not far from the Tropic of Capricorn (lat. 23°27'30"S), 40 miles (64km) south-west of Longreach in central western Queensland. The small (100mm long) lizard was perched high on a short, prickly mimosa (*Acaciafarnesiana*) bush (19.ii) during the very warm (38°) late afternoon, probably seeking the cool of a 2-5 kph breeze.

Litoria rubella. Ten individuals of this medium-sized light brown or tan frog with well developed finger and toe discs were found adhering to the inside walls of an outbuilding on the Cunnamulla aerodrome in southern Queensland (19,20.iii). A camp was based here for radar observations on the flight activity of the plague locust.

Lymnodynastes dorsalis, banjo frog or pobblebonk. This leptodactylid burrowing frog of eastern Australia, named after its call (a single twanging note), burrows in the sand and emerges at night in damp weather. It was on the track, picked out by our vehicle's head lamps, and was included with the collection of frogs made one wet evening (9.iii) in the company of Prof. Nicolai Drozdov (on detachment from the Moscow State University to the Australian National University, Canberra) at the Tallaganda State Forest (part of the Great Dividing Range) at about 1000m near Captain's Flat, N.S.W. (42km SW of Canberra). The specimen is now in the Zoological Museum of the Moscow State University.

Litoria aurea, the green and golden bell frog. A large frog (up to 100mm) of splendid appearance with granular-sided body, the species is aquatic, floating on the water surface day and night, and is predatory upon other (smaller) frogs. It was found in a small sheep dip near Captain's Flat. An individual, probably of an endemic subspecies, had also been seen near Royal George township (1.i) in northern Tasmania. It was also green with a yellowish strip running from the nostril, over the top of the eye and back to the groin, bordered below by a narrower dark stripe. Primarily southern Australian, the species also occurs in Victoria, eastern South Australia and south-western Western Australia.

Litoria dentata, Keferstein's frog, a medium-sized brown frog resembling *L. rubella*, which occurs in the coast and mountains of N.S.W. Its range ends in northern N.S.W. and is taken over by *L. rubella* in southern Queensland. It has a long drawn-out, tremulous bleat for a call, which was very evident from several nocturnally calling individuals by the flooded sheep's dip near Captain's Flat.

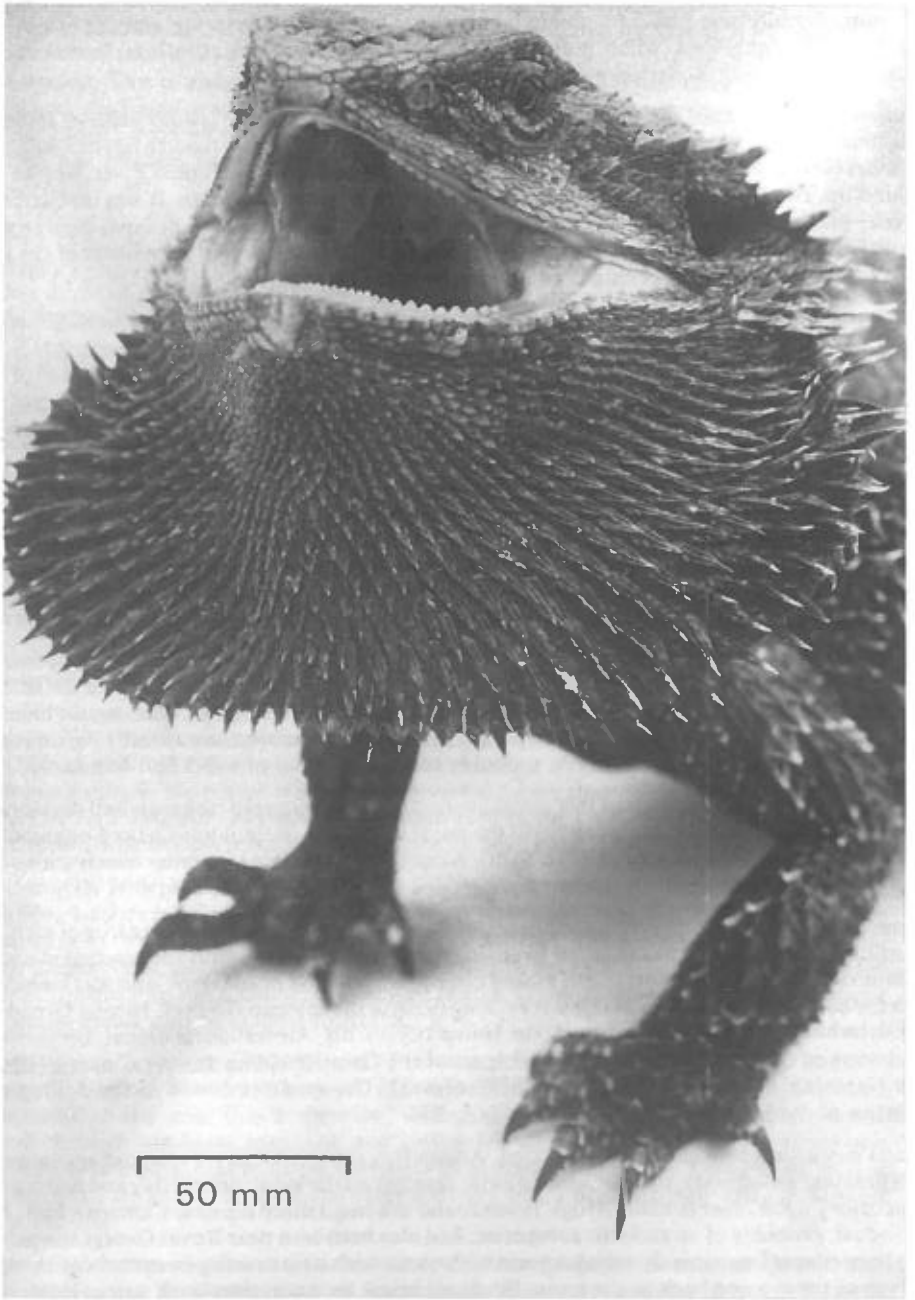


Plate I. *Amphibolurus barbatus*, the bearded dragon, with frill erected defensively.
By Macquarie River, 'Burroway', 19km N. of Narromine, central west New South Wales,
28 October 1969. *Photographer:* Brian Chatterton

Litoria citropa, Blue Mountain's tree frog, a variably patterned pale green and light brown frog of the coast and mountains of N.S.W. and mountains of Victoria completed the frog collection from around Captain's Flat.

Amphibolurus sp., a small dragon, possibly a half-grown *A. muricatus*, the Jacky lizard or tree dragon, was found in N.S.W. not far from Canberra. It occurs in eastern Australia and runs on its hind legs to the safety of trees, which are actively climbed, when the lizard is disturbed on the ground.

Leiopisma ocellata, green skink. This Tasmanian endemic was found at 1000m on Tower Hill (2.i) behind the sheep farming property, Malahide, near Fingal.

Leiopisma metallica, metallic skink. Two were found basking together on a log in a grey-gum forest also at around 1000m on Tower Hill, near Fingal (2.i). Returning to Malahide, a big (1.5m long) Tasmanian tiger snake, *Notechis ater* ssp., was crawling across the road. This highly venomous and fearsome creature inflated the sides of its body and neck and hissed menacingly when confronted. The venom is one of the most potent known and the tiger snake is responsible for most of the human snake-bite deaths in Australia.

Fiji (December 1969)

Laticauda colubrina, common banded sea snake. An individual with its vertically flattened tail was caught swimming in the light surf at the edge of a small sandy cove not far from overleaning mangrove trees on a small islet of the north-west coast of Viti Levu, the main Fijian island. This highly venomous Pacific Ocean species sometimes goes onto land to bask. It has been caught in seine nets in large numbers. The individual's colour between the black bands was a dirty ochre-yellow (often bluish-grey). The taxonomy of the sea snakes has recently been worked out by Dr Colin McCarthy (the B.M. (N.H.) Representative on BHS Council). The upper lip is yellow in *L. colubrina* as against brown in the closely related *L. laticaudata*.

Representative material of many of the species photographed have been included with the spirit collection of the Reptile and Amphibian Section. British Museum (Natural History), London.

REFERENCES

- Clyne, D. (1969). *Australian frogs*. Periwinkle books. Melbourne: Lansdowne Press. 112pp.
- Cogger, H.G. (1975). *Reptiles and amphibians of Australia*. Sydney: A.H. and R. W. Reed. 554pp.
- Loveridge, A. (1945). *Reptiles of the Pacific World*. New York: The Macmillan Company. 259pp.
- Smith, M.A. (1931). *Loricata, Testudines*. The fauna of British India, including Ceylon and Burma — Reptilia and Amphibia. Vol. 1. London: Taylor & Francis. xxxviii + 185pp.
- Throckmorton, G.S., De Baray, J., Chaffey, W., Merrotsky, B., Noske, S. & Noske, R. (1985). Mechanism of frill erection in the bearded dragon *Amphibolurus barbatus*, with comments on the Jacky lizard *A. muricatus* (Agamidae). *J. Morphology* 183: 285-292.
- Worrell, E. (1963). *Reptiles of Australia*. Sydney: Angus and Robertson (2nd edition, 1970. 169pp.)