

## THREE NEW AGAMID LIZARDS FROM WESTERN AUSTRALIA

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### ABSTRACT

Three recently discovered species are described as new: *Tympanocryptis aurita* from east Kimberley, *Amphibolurus yinnietharra* from the North-West and *A. mckenziei* from the western hinterland of the Great Australian Bight.

### INTRODUCTION

In a revision of *Tympanocryptis* I wrote 'the generic classification of Australian Agamidae has remained exactly as Boulenger left it in 1885, and a thorough and simultaneous revision of all Australian genera is long overdue' (Storr, 1964). Such a revision has become even more urgent since the discovery of a species of *Tympanocryptis* with an exposed ear aperture and numerous femoral pores. I have placed *aurita* in *Tympanocryptis* because I believe its closest relatives are *T. cephalo* and *T. intima*, species that have always been regarded as congeneric with *T. lineata*, the type species of the genus.

The genus *Amphibolurus* is equally ill-defined. However there can be no question but the new species described herein are closely related to species (*A. ornatus* and *scutulatus*) that have always been placed in that genus.

All specimens cited in this paper are lodged in the herpetological collection (R series) of the Western Australian Museum (WAM).

### SYSTEMATICS

*Tympanocryptis aurita* sp. nov.

(Fig. 2)

#### Holotype

WAM R66296, an adult male collected by M.C. Ellis on 4 September 1979 among small tussocks of *Triodia* on a stony hillside 27 km SSE of Halls Creek, Western Australia, in 18°27'S, 127°45'E.

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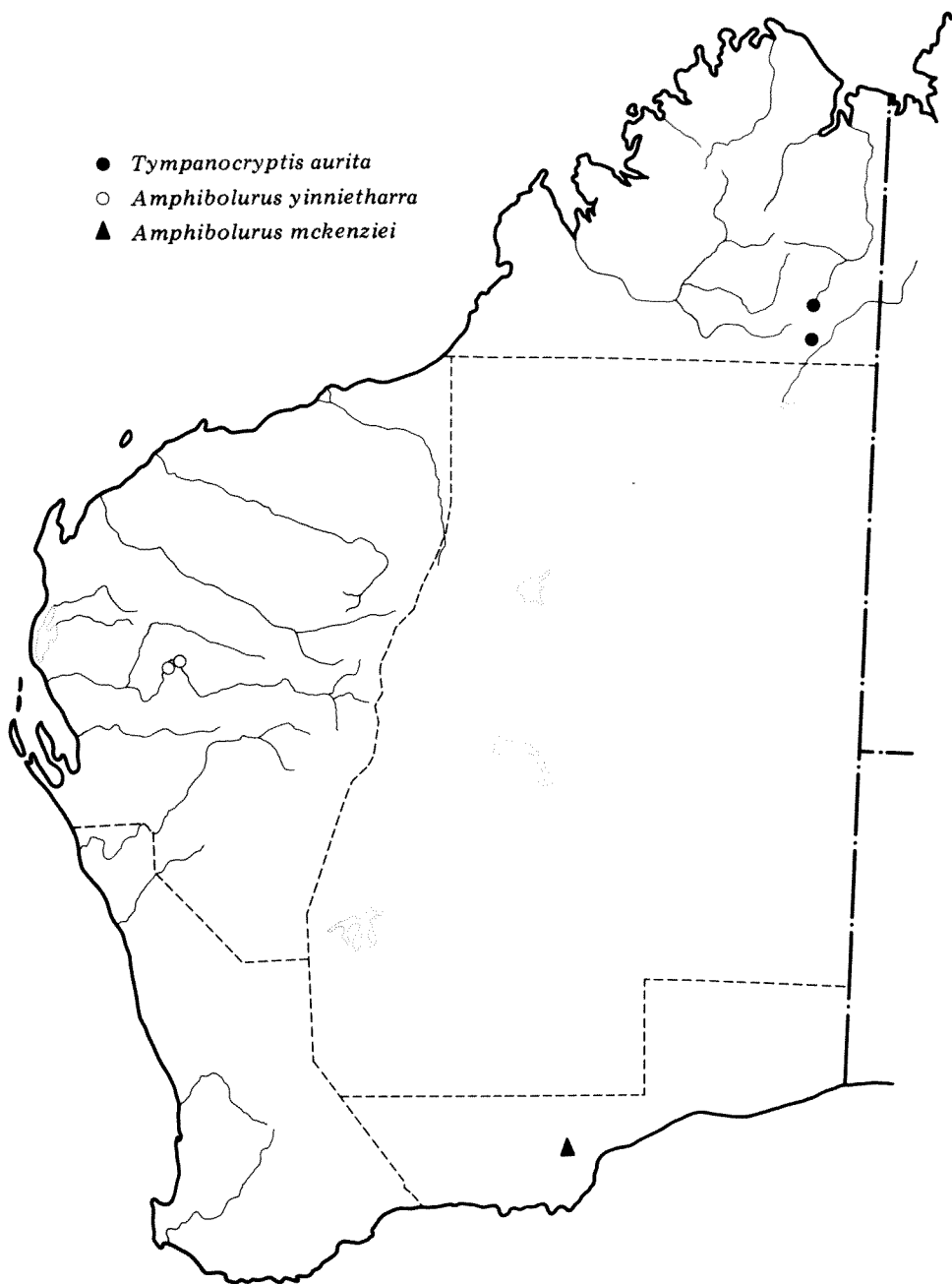


Fig. 1: Map of Western Australia showing location of specimens of *Tympanocryptis aurita*, *Amphibolurus yinnietharra* and *Amphibolurus mckenziei*.

## Diagnosis

Distinguishable from all other *Tympanocryptis* by exposed tympanum. Otherwise generally similar to *T. cephalo* but having much shorter tail, which ends abruptly rather than tapering to point; dorsal tubercles not arranged in clusters, distributed over whole of back (rather than leaving vertebral zone free) and extending to tip (rather than only base) of tail.

## Distribution

Arid north-eastern interior of Western Australia (Fig. 1).

## Description

Snout-vent length (mm): 29-46. Length of appendages (% SVL): foreleg 41-42, hindleg 61-63, tail 69-77. Nostril located on swollen canthus rostralis.

Scales on head feebly rugose or uncarinate (almost smooth). Scales on neck, back, flanks, tail and legs very small, densely intermixed with slightly to much larger keeled scales (though still not large by agamid standards); enlarged scales not arranged in any pattern and spreading right across back, i.e. not absent from vertebral zone as in *T. cephalo* and *intima*. Scales of under surface smooth or very weakly keeled. Upper labials 16-20. Lamellae

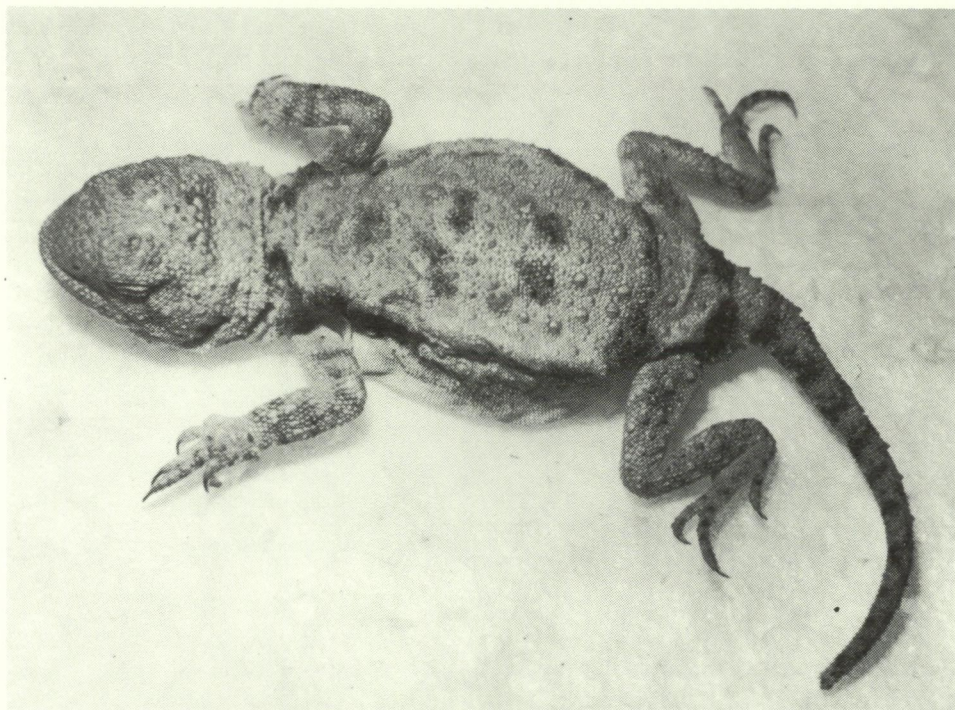


Fig. 2: Holotype of *Tympanocryptis aurita*.

under fourth toe 15-18. Femoral pores: 5/6 in holotype, 2/2 in larger of paratypes, and 0/0 in smaller paratype. Preanal pores: 3/3 in holotype, 0/0 in paratypes.

Dorsal and lateral surfaces pale reddish brown, suffused on head and back with pale brownish grey. Neck, back and rump with or without an irregular series of small dark brown blotches on each side of midline. Tail irregularly banded with dark brown or dark brownish grey; bands approximately transverse and about as wide as pale interspaces.

### Paratypes

Kimberley Division (W.A.): WAM R64051-2 (juveniles collected on 22 April 1979 by A.A. Burbidge *et al.* in bulldozed *Triodia* on lateritic plain 0.4 km W of Wolf Creek Meteorite Crater in 19°10'S, 127°48'E).

### *Amphibolurus yinnietharra* sp. nov. (Figs 3, 4)

### Holotype

WAM R51675, adult male, collected by M. Peterson on 3 October 1975 at 5 km E of Yinnietharra, Western Australia, in 24°41'S, 116°13'E.

### Diagnosis

A member of the *A. decresii* species-group (Houston, 1978), very like *A. ornatus* (Gray) but smaller, with head and body less strongly depressed, and having much less dark pigmentation (e.g. males lacking black blotches on back and black bands on proximal third of tail). Distinguishable from *A. caudicinctus* (Günther), with which it is sympatric, by the depressed head, body and tail, much weaker nuchal crest, stronger spines in vicinity of ear aperture and on side of neck, and in males the lack of a black pectoral patch and much wider and less numerous caudal bands.

### Distribution

Only known from two localities near Yinnietharra in arid western interior of Western Australia (Fig. 1).

### Description

Snout-vent length (mm): 34-87 (N 13, mean 71.5). Length of appendages (% SVL): foreleg 38-44 (N 13, mean 41.1), hindleg 79-92 (N 13, mean 84.9), tail 178-204 (N 9, mean 194). Depth of head (% length of head): 42-52 (N 11, mean 46.7). Nostril located on swollen canthus rostralis.





Fig. 3: Holotype male of *Amphibolurus yinnietharra* photographed in life by R.E. Johnstone.

Head scales small, rugosely keeled anteriorly, almost smooth posteriorly. Nuchal crest very low. Dorsal scales uniformly small, their keels converging on midline. Scales on legs and tail larger and more strongly keeled. Rows and clusters of strong spines below and behind ear aperture and on side of neck. Gular fold strong. Gular and ventral scales small and smooth. Scales under tail larger and weakly keeled. Femoral and preanal pores well developed in both sexes, 20-25 (N 12, mean 22.4) on each side; line of preanal pores curving forwards, well separated at midline from those of other side. Subdigital lamellae strongly bicarinate, 24-29 (N 13, mean 27.0) under fourth toe.

Adult male coloration: Upper surface mostly dull reddish brown suffused with grey (suffusion in life a bluish grey bloom that largely masks ground colour). Distal two-thirds of tail orange-brown, boldly banded with blackish brown; bands completely encircling tail, four in number and up to 2 cm wide. Eyelids brownish white. Blackish brown streak from below orbit to ear aperture. Blackish spot on side of neck, vertically elongate. Throat and sometimes breast buffy white or very pale orange-brown, stippled with brownish grey. Rest of under surface pale orange-brown.



Juvenile male: Coloration as in female except for four wide, dark brown bands around distal two-thirds of tail.

Female coloration: Upper surface mostly dull reddish brown marked with dark grey; markings on midline of back taking form of hollow blotches; markings on legs and proximal third of tail taking form of narrow irregular bands.

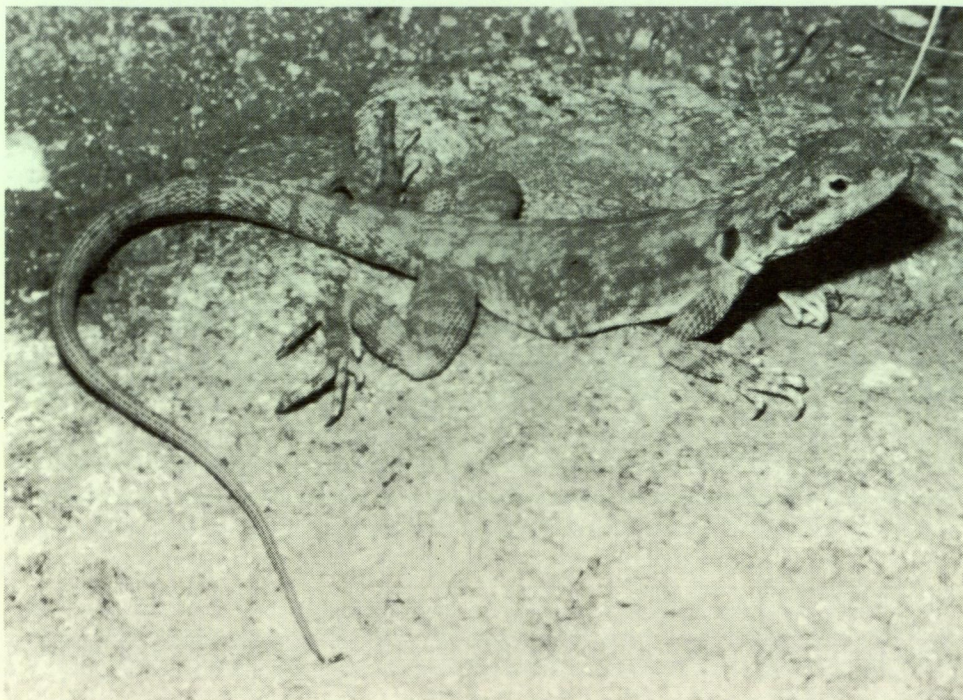


Fig. 4: A paratype female of *Amphibolurus yinnietharra* photographed in life by R.E. Johnstone.

### Remarks

To date this lizard has only been found in two localities, at both of which there are outcrops of granite. T.M.S. Hanlon has observed it running across gibber flats between granite outcrops and climbing stunted acacias, and he has taken it from beneath exfoliating granite and from burrows under granite boulders. Additionally M. Peterson has collected it in a hollow acacia log. Its close relative *A. ornatus* is much more dependent on exfoliating granite for shelter, with which is correlated its more strongly depressed head and body.

### Paratypes

North-West Division (W.A.): 5 km E Yinnietharra (51739-41, 51674); 25 km SW Yinnietharra (47704-6, 52042-5, 56860).

*Amphibolurus mckenziei* sp. nov.

(Fig. 5)

**Holotype**

WAM R59754, an adult male collected by N.L. McKenzie and P.J. Fuller on 1 March 1978 in bluebush-saltbush steppe with scattered eucalypts at 8 km SW of Ponier Rock, Western Australia, in 32°59'S, 123°26'E.

**Diagnosis**

A medium-sized *Amphibolurus*, very like *A. scutulatus* in scalation but differing markedly in coloration, e.g. back blackish brown with whitish vertebral stripe and transverse lines, rather than pale brown with paired dark brown blotches that merge on foreback to form crossbands; also smaller, with deeper head (depth 55-57% of length, *vs* 44-54) and fewer subdigital lamellae (25-27 under longest toe, *vs* 33-38).

**Distribution**

Only known from a small area in semiarid southeastern interior of Western Australia between Balladonia and Israelite Bay (Fig. 1).

**Description** (based on holotype and paratype female)

Snout-vent length (mm): 66 and 62 respectively. Length of appendages (% SVL): foreleg 40, 39.5; hindleg 88, 86.5; tail 238, 220. Nostril located below sharp canthus rostralis.

Head scales small and sharply keeled. Low nuchal crest of laterally compressed spinose scales. Dorsal scales sharply keeled, very small laterally but increasing slightly in size towards midline, which is marked by a series of slightly enlarged and raised scales (which continue on to proximal third of tail); keels of dorsals slightly and irregularly converging on midline. Scales on legs and tail keeled, larger than dorsals. Three clusters of small spines on dorsolateral fold of neck (spines much lower in female), and a low, oblique spinose ridge below and behind ear (much shorter in female). Scales on side of body very small, not keeled, but apices tending to be raised (as in dorsals). Scales on lower surface smooth except for bicarinate subdigital lamellae. Femoral and preanal pores 24 + 22 and gorged with wax in male; 18 + 18 and much smaller in female; each located in centre of cluster of small scales; line of preanal pores curving slightly forwards and well separated from those of other side.

Head brownish grey. Back and sides blackish brown marked with greyish white as follows: narrow irregular vertebral stripe, connected by several transverse lines to wide irregular dorsolateral stripe (which extends forward to eye and back to base of tail), upper lateral spots (mostly hollow in male);



and irregular midlateral stripe. Legs and tail brown, finely and faintly cross-banded with whitish colour. Under surface in male whitish except for dark grey narrow triangular patch on throat and kite-shaped patch on chest which extends narrowly to belly. Under surface in female whitish, the throat, chest and belly finely and densely stippled with dark grey.

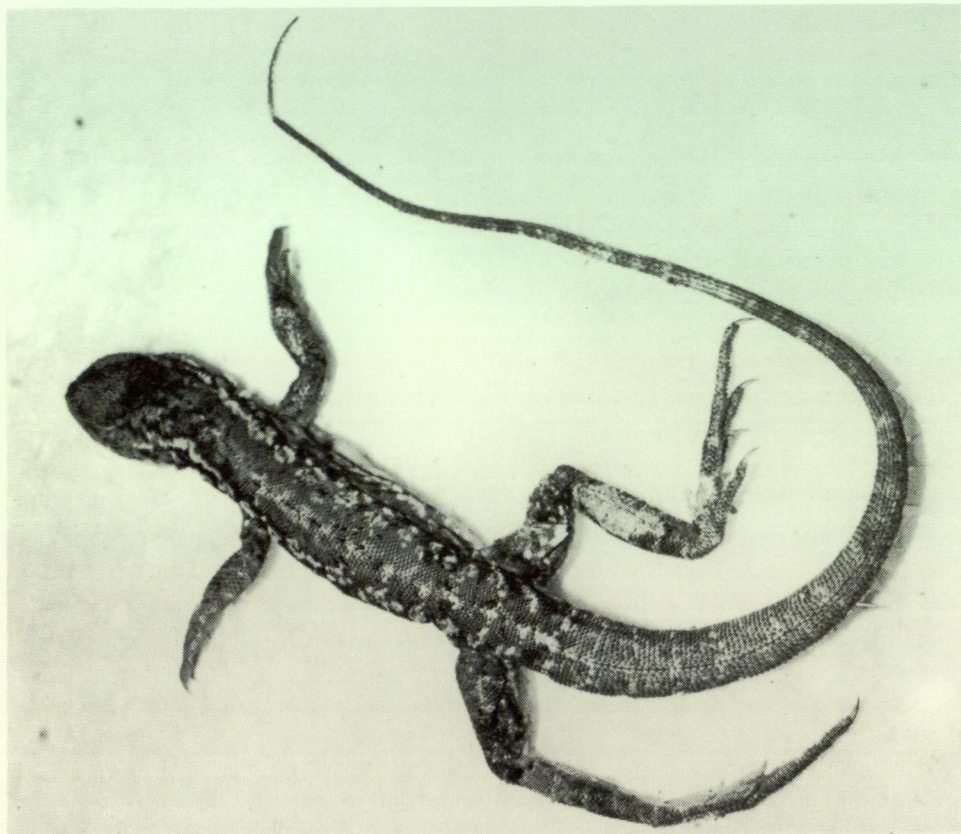


Fig. 5: Holotype of *Amphibolurus mckenziei*.

#### Remarks

Named after N.L. McKenzie of the Department of Fisheries and Wildlife, co-collector of the type specimens and donor of much other material in the Western Australian Museum.

#### Paratype

Eucla Division (W.A.): WAM R59753, collected by N.L. McKenzie and P.J. Fuller on 1 March 1978 in low open eucalypt woodland over low open shrubbery and leaf litter at 3 km NE of type locality.



## REFERENCES

- HOUSTON, T.F. (1978)—*Dragon lizards and goannas of South Australia*. South Australian Museum, Adelaide.
- STORR, G.M. (1964)—The agamid lizards of the genus *Tympanocryptis* in Western Australia. *J. Proc. R. Soc. West. Aust.* 47: 43-50.