

FIVE NEW SPECIES OF SKINKS (GENUS *LAMPROPHOLIS*)
FROM QUEENSLAND AND NEW SOUTH WALES.

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ABSTRACT

Lampropholis basiliscus sp. nov. and *L. czechurai* sp. nov. are from the rainforests of northeastern and mid-eastern Queensland; *L. mirabilis* sp. nov. is a rock-dweller in northeastern Queensland; *L. amicula* sp. nov. is found in heath and open forest in southeastern Queensland; and *L. caligula* sp. nov. from mid-eastern New South Wales has not been collected in recent times.

INTRODUCTION

Four of the five species described here can be easily placed in the two subgroups of *Lampropholis* defined by Greer and Kluge (1980). *L. mirabilis* and *L. amicula* are members of the *L. delicata* complex, and *L. czechurai* and *L. basiliscus* are members of the *L. challengeri* complex. *L. caligula* may be an aberrant member of the *L. delicata* complex. The genus *Lampropholis* was recently resurrected and redefined by Greer (1974).

Abbreviations used in the text are: SVL — snout to vent length; HW — head width; FL — length of fore-limb; HL — length of hind-limb; TL — length of tail. Measurements are given in millimeters and all ratios are expressed as percentages. Register numbers prefixed by J are housed in the Queensland Museum, by R in the Australian Museum and by D in the National Museum of Victoria.

LAMPROPHOLIS MIRABILIS sp. nov.

Figs. 1, 6.

HOLOTYPE. J24439, Magnetic Island, northeastern Queensland (19° 08'S, 146° 50'E), collected by T. Low, July, 1974.

PARATYPES. Magnetic Island (J4404, 24339, 24416, 24424, 24435, 24437-8, 24440-1, 24528, R9453-7); Mt. Cleveland, Cape Cleveland (J27615, J32555, R95434-51); Mt. Elliot (J24340).

DIAGNOSIS. A large, long legged, chocolate and white speckled, rock-dwelling *Lampropholis* distinguished from all members of this genus by its high number of midbody scale rows (29-33) and its high number of lamellae under the fourth toe (27-32).

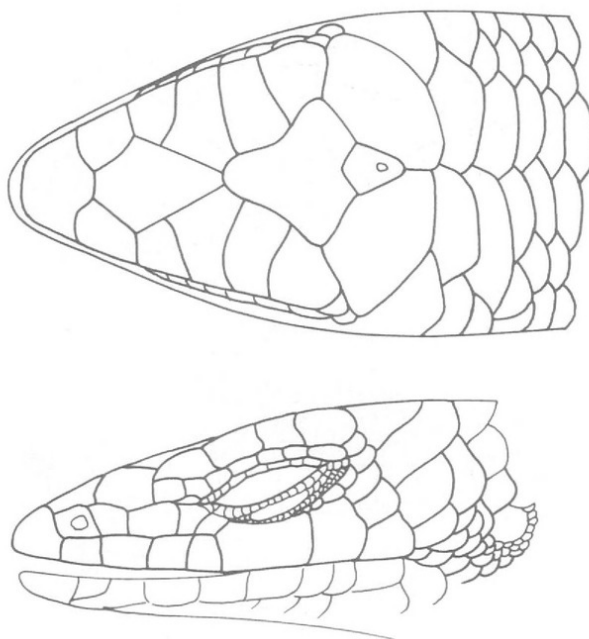


FIG. 1. Holotype (J24439), *L. mirabilis*
A. Dorsal view of head
B. Lateral view of head

DESCRIPTION. SVL: 27–51 (N=13, mean 40.9); HW/SVL: 13–16 (N=11, mean 14.2); FL/SVL: 28–34 (N=12, mean 32.0); HL/SVL: 45–51 (N=12, mean 47.7); TL/SVL: 151–165 (N=4, mean = 159). Four supraoculars. Supraciliaries 7 (counted on both sides), rarely 8 (N=24, mean 7.1). Upper labials 7, 5th below eye. A pair of enlarged nuchals contacting the parietals. Palpebral disc small. Ear aperture about equal to palpebral disc in size. No ear lobules. Midbody scale rows 29–33 (N=12, mean 30.9). Mid-dorsal scales smooth with 3–4 striations. Number of scales from chin shields to cloaca 58–64 (N=12, mean 60.3). Lamellae under fourth toe 27–32 (N=12, mean 28.7), smooth.

On upper parts of body the ground colour is olive, flecked with chocolate and white spots or blotches. Laterally, the colour and pattern is similar but the chocolate markings may coalesce to form barring. Head bronze. Underparts immaculate.

DISTRIBUTION: Known only from granite rocks on Magnetic Island, Cape Cleveland and Mt. Elliot, northeastern Queensland.

ETYMOLOGY: From the Latin *mirabilis*, wonderful.

REMARKS: Covacevich and Ingram (1978) have commented on the adaptations to saxatile habitats of six species of skinks (including this species as *L. sp. nov.*). Like other rock-dwelling skinks *L. mirabilis* has longer legs, a higher number of toe lamellae and midbody scale rows, and dark colouring with white flecking, when compared to its congeners.

LAMPROPHOLIS CZECHURAI sp. nov.

Figs. 2, 6.

HOLOTYPE: J34402 Charmillin Creek, via Ravenshoe, northeastern Queensland (17° 43'S, 145° 31'E), collected by G.V. Czechura, 28th August, 1978.

PARATYPES: Home Rule, near Shipton's Flat (J25227); Mt. Lewis (J27072–3); 5.1 km N of road around Tinaroo Lake via Forestry Road B (R89757); The Crater, Atherton Tableland (J12148–50); Mt. Fischer, via Millaa Millaa (J31201, 31204–6); Charmillin Creek, via Ravenshoe (J34403, 34405–7, R94472–81).

DIAGNOSIS: A small, dark, rainforest inhabiting *Lampropholis* distinguished from members of this genus other than *L. basiliscus* and *L. tetradactyla*, by the presence of four nuchal scales contacting the parietals. It is easily distinguished from *L. tetradactyla* in having 5 toes instead of 4. *L. czechurai* may be distinguished from *L. basiliscus* by its very concave canthus rostralis and pointed snout, and in colour and pattern of breeding male (side of head and body black speckled with white vs a dark stripe from nostril through eye and continuing backwards above forelimb to varying distances along the body). *L. challengerii* usually has two nuchals contacting the parietals but in some specimens it may be higher; *L. czechurai* may be distinguished from these by its smaller size (maximum SVL 34 vs 58) and lower number of toe lamellae (15–19 vs 22–28).

DESCRIPTION: SVL: 20–34 (N=12, mean 29); HW/SVL: 13–16 (N=12, mean 14.5); FL/SVL: 21–27 (N=12, mean 23.2); HL/SVL: 27–35 (N=12, mean 31.3); TL/SVL: 104–131 (N=5), mean 117.3. Four supraoculars. Supraciliaries 7, rarely 6 or 8 (N=32, mean 7). Upper labials 6, 4th below eye. Two pairs of nuchals contacting the parietals. Palpebral disc small. Ear aperture about half the size of the palpebral disc. No ear lobules. Midbody scale rows 22–24 (N=12, mean

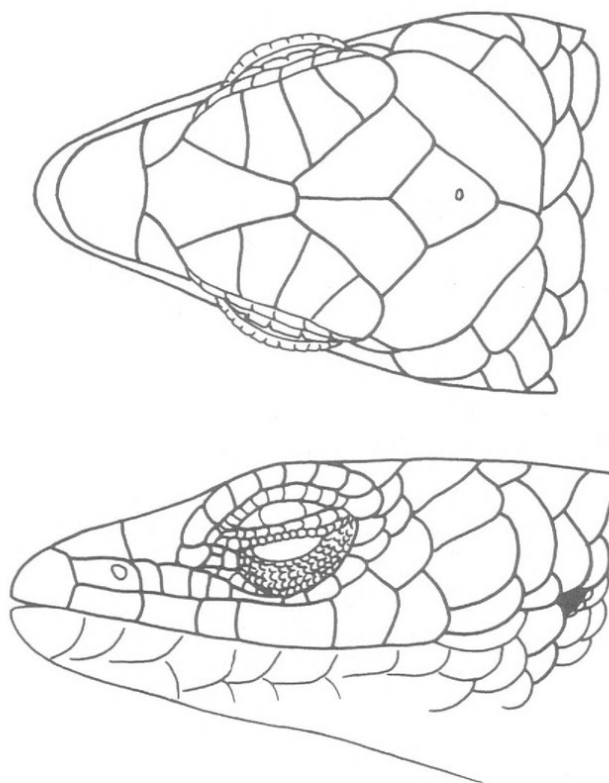


FIG. 2. Holotype (J34402), *L. czechurai*
A. Dorsal view of head
B. Lateral view of head

22-8). Mid-dorsal scales smooth with 3-4 striations. Number of scales from chin shields to cloaca 46-56 (N=10, mean 49.9). Lamellae under fourth toe 15-19 (N=12, mean 16.2), medially grooved.

On upper parts of body, the ground colour is fawn to dark reddish brown with dark and light speckling or dashes, sometimes coalescing into wavy lines. Laterally as above but in breeding males the side of the neck and head jet black with some lighter speckling; sides of the body dark heavily dotted in black with lighter speckling. There is a distinct light spot at the posterior base of the thigh. In some specimens there is light dorsolateral line edged in black. Ventrally cream with sporadic brown speckles.

DISTRIBUTION: Shipton's Flat, 30 km S of Cooktown, in the north to Charmillin Creek at the southern end of the Atherton Tableland in the south.

ETYMOLOGY: Named for Mr Gregory Czechura, Queensland Museum.

REMARKS: The closest relative of *L. czechurai* appears to be *L. tetradactyla*. These species are similar in head shape, in having a low number of toe lamellae and in the number of nuchals contacting the parietals (for details of *L. tetradactyla*, see Greer & Kluge, 1980).

Greer and Kluge (1980) listed four characters shared by *L. basiliscus* and *L. tetradactyla* and not shared with other members of the *L. challengerii* complex. *L. czechurai* exhibits these same four characters.

LAMPROPHOLIS BASILISCUS sp. nov.

Figs. 3, 7.

HOLOTYPE. J34409 Charmillin Creek, via Ravenshoe northeastern Queensland (17° 43'S, 145° 31'E), collected by G.V. Czechura, 28th August, 1978.

PARATYPES. Northeastern Queensland: Mt. Webb (J32354); Big Tableland (R26833); Mt. Hedley (J25265); Mt. Hartley (J24848); Gap Creek, 12 Mile Scrub (J25301, 27258); Track between Granite Creek and Cedar Bay (J25204); Home Rule (J24918, 25137-8, 25229, 25257, 25289, 25308, R26783); Shipton's Flat (J17902-3, 27135, 27141); 13 km S of Helenvale (J24648) Thornton Peak (R56563-4, 56571, 56573, 56589, 57129, 59329, 87080-1), 1.5 km E of Barron River Bridge via Kennedy Highway (R87071-2); 10.4 km N of Kennedy Highway via

Black Mountain Road (R87078-9); Kuranda (R67048-67058); Danbulla State Forest, via Atherton (R87066-70); Tinaroo Dam (J12145); 1.8 km S of Yungaburra (R63891-2); 2.2 km S of Yungaburra (R63871-5); near Cairns (R57766); 6.9 km S of Atherton (R87082-6); Crater, Atherton Tableland (J12146-7, 12158-9); (R18300); Bartle Frere (J30810); The Boulders, Babinda (R87075-7); Innisfail (J17435, R16167); Flying Fish Point (J25450); South Johnstone (R16334); Charmillin Creek, via Ravenshoe (J34408); 18.2 km S of Kennedy Highway at Ravenshoe via Tully Falls Road (R87073-4); Tully Falls (J11161); 13.5 km W junction to Mission Beach South via Tully - Mission Beach Road (R87061-4); just E of Stony Creek Bridge on Tully - Mission Beach Road (R87065); Mission Beach (J30811); Herbert Gorge (J25022-7, 25029-45, 25047-59, 25061); Kirrama Range, 13 km NW of Cardwell (R60507-8); Smoko Creek at Kirrama State Forest Road, W of Kennedy (R87057-9); 13 km W of Bruce Highway via Kirrama State Forest Road (R87060); Cardwell (J25825-75); Hinchinbrook Island (J26330-2, J26375-6); 3.4 km SE of Wallaman National Park (R87052); 5.8 km ESE of Wallaman National Park (R87053-6); Paluma Dam (R87051); Paluma (J29668).

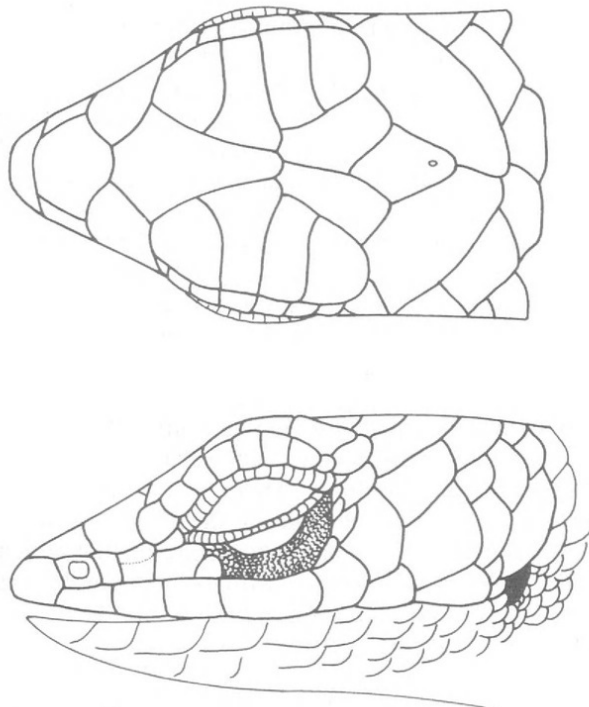


FIG. 3. Holotype (J34409), *L. basiliscus*
A. Dorsal view of head
B. Lateral view of head

Mid-eastern Queensland: Box Creek, Mt. Dryandra (R47868); Brandy Creek (J32758, 32760, 32766–71, 32780–3, 32794); 7.4 km E of junction of road to Mandalay via Airlie Beach - Shute Harbour Road (R87096); 9.2 km W of Cathu State Forest Office (R87087–87095); St. Helen's Gap, 3.7 km N of Mt. Charlton (R87097–103); Finch Hatton (J32602, 32605, J34000–6, 34036, 34038–40, 34042, 34047, 34062, 34066, 34069, 34092–3, 34095–100).

DIAGNOSIS. A large rainforest dwelling *Lampropholis* distinguished from members of this genus other than *L. tetradactyla* and *L. czechurai*, in having more than two nuchals contacting the parietals. It is easily distinguished from *L. tetradactyla* by having 5 fingers and for differences from *L. czechurai*, see the diagnosis of that species. Further distinguished from *L. challengerii* by its higher number of supraciliaries (usually 7 vs 6).

DESCRIPTION. SVL: 18–47 (N=100, mean 36.3); HW/SVL: 11–16 (N=82, mean 14.0); FL/SVL: 21–33 (N=88, mean 29.1); HL/SVL: 31–27 (N=86, mean 39.0); TL/SVL: 124–180 (N=16, mean 152.9). Four supraoculars. Supraciliaries 7, rarely 5 or 8, and uncommonly 6 (N=199, mean 6.9). Upper labials 6, 4th below eye. Nuchals contacting the parietals 3 or 4, rarely 2, 5 or 6 (N=100, mean 3.6). Palpebral disc small. Ear aperture about equal to palpebral disc in size. No ear lobules. Midbody scale rows 21–28 (N=96, mean 23.8). Mid-dorsal scales smooth with 2–4 striations. Number of scales from chin shields to cloaca 44–59 (N=83, mean 50.7). Lamellae under fourth toe 16–25 (N=95, mean 20.9), medially grooved.

On upper parts of body and head the ground colour is fawn to reddish brown with or without light and dark speckling. Upper lateral surface darker than lower lateral surface; the former often with a dark stripe beginning at nostril, continuing through eye, and going backwards for varying distances past forelimb. There is a distinct light spot at the posterior base of the thigh. In some specimens there is a light dorsolateral line edged darkly. Ventrally, cream with or without brown speckling (see Fig. 4 in Greer and Kluge, 1980).

DISTRIBUTION. Mt. Webb, 50 km N of Cooktown to the Paluma Range, near Townsville; also 290 km south of this area, from Proserpine to Eungella, via Mackay. This disjunct distribu-

tion conforms with the occurrence of major 'blocks' of rainforest.

ETYMOLOGY. From the Latin *Basiliscus*, a lizard.

REMARKS. Greer and Kluge (1980) discussed *L. basiliscus* under the name 'northern challengerii'.

L. basiliscus occurs in two widely separated 'blocks' of rainforest. Specimens from the southern 'block' (the Clarke Range, via Mackay) differ slightly from those from the northern rainforests from the Paluma Range to Mt. Webb. Southern specimens show a tendency to be slightly smaller and 'stubbier', and to have slightly lower midbody and toe lamellae counts than northern specimens. There are, however, 'overlaps' for these features in the two populations. In addition colour, pattern, and other scale counts for them are very similar, suggesting clinal rather than specific or subspecific differences.

LAMPROPHOLIS AMICULA sp. nov.

Figs. 4, 6.

HOLOTYPE. J24333, 3 km E. of Lake Coolamerra, Cooloola, southeastern Queensland (26°

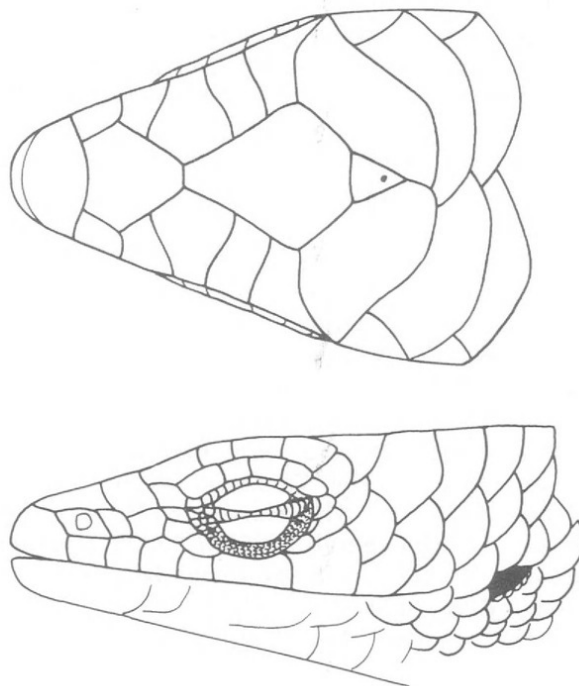


FIG. 4. Holotype (J24333), *L. amicula*
A. Dorsal view of head
B. Lateral view of head

02°S, 153° 05'E) collected by G.J. Ingram on 6th August, 1973.

PARATYPES. Burnett Range, via Tansey (J31308); 3 km E of Lake Coolamera, Cooloola (J24332); 1.6 km E of Lake Coolamera, Cooloola (J24496); Cooloola (J32519); Boroumba Dam, Conondale Range (D49367); near junction of Booloumba and Tragedy Creeks, Conondale Range (J24497); Gherulla Creek, Conondale Range (J30828); Marlaybrook, Bunya Mountains (J27523); Cunningham's Gap (J22729); Mt. Coot-tha (J37177-8, 37287-9); Daisy Hill State Forest (D49366, J34330-1); Upper Emu Creek, Mt. Superbus (J32090); 10.6 km SW of the Cambroon Bridge — Kenilworth road via Tragedy Creek Road, Kenilworth State Forest (R76126); junction Yabba Road and Jimna Range Road, Jimna Range (R76127-8).

DIAGNOSIS. A little, small limbed *Lampropholis* distinguished from all other members of this genus (except *L. caligula*) by its 5 supraciliaries. Further distinguishable from *L. caligula* by its higher number of supraoculars (4 vs 3) and upper labials (7 vs 6).

DESCRIPTION. SVL: 22-34 (N=19, mean 29.4); HW/SVL: 11-15 (N=19, mean 12.8); FL/SVL: 16-23 (N=14, mean 20.9); HL/SVL: 25-31 (N=14, mean 28.6); TL/SVL: 121-157 (N=8, mean 124.1). Four supraoculars. Supraciliaries 5, very rarely 6 (N=37, mean 5.0). Upper labials 7, 5th below eye. Two nuchals contacting the parietals. Palpebral disc small. Ear aperture about half the size of palpebral disc. No ear lobules. Midbody scale rows 19-23 (N=21, mean 21.4). Mid-dorsal scales smooth with 3-4 striations. Number of scales from chin shields to cloaca 50-60 (N=14, mean 53.7). Lamellae under fourth toe 17-21 (N=19, mean 18.9).

Colour drab, with a pattern resembling *Lampropholis delicata*. Dorsal surface of head brown. Dorsal surface of neck, trunk and tail darker brown. Dorsolateral scales on neck, trunk and anterior section of tail with a light yellow upper half and black lower half giving the impression of a light dorsolateral stripe bordered below by black. This 'stripe' extends from the eye onto the tail where it breaks up. Upper lateral surface from eye to anterior section of tail black. Lower lateral surface light grey with flecks of black and brown. Ventral surface light grey with some scattered black flecks especially under the tail. Dorsal and lateral surface of legs and arms black. Palms and subdigital lamellae black.

DISTRIBUTION. Southeastern Queensland from the Burnett Range in the north, to Daisy Hill, 13 km S of Brisbane in the south and west to the Great Dividing Range.

ETYMOLOGY. From the Latin *amica*, a friend.

REMARKS. *L. amica* occurs in open forest and heath. It resembles *L. delicata* and is often mistaken for a juvenile of that species, but it can be easily distinguished by its lower number of supraciliaries (5 vs 7).

LAMPROPHOLIS CALIGULA sp. nov.

Figs. 5, 6.

HOLOTYPE. R13313 Pol Blue, Barrington Tops, mid-eastern New South Wales (31° 59'S, 151° 30'E) collected by W. Barnes and party.

PARATYPES. Barrington Tops (R8758); Pol Blue, Barrington Tops (R13314, 94993); Tugbrabucca, Barrington Tops (R13329, 94994, J38704).

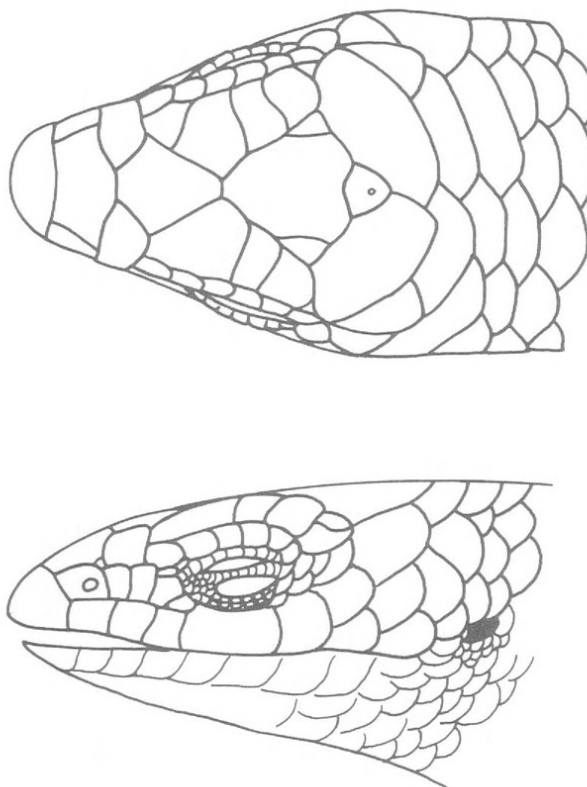


FIG. 5. Holotype (R13313), *L. caligula*
A. Dorsal view of head
B. Lateral view of head

DIAGNOSIS. A large, drab *Lampropholis* distinguished from all other members of this genus by its 5 supraciliaries and 3 supraoculars. Further distinguished from *L. amacula* by its low number of upper labials (5 vs 7).

DESCRIPTION: SVL: 35–48 (N=7, mean 40.1); HW/SVL 11–12 (N=7, mean 11.7); FL/SVL: 17–19 (N=7, mean 18.1); HL/SVL 27–30 (N=7, mean 28.6); TL/SVL: 109–133 (N=3, mean 119.7). Supraoculars (counted on both sides) 3, rarely 4 (N=19, mean 3.1). Supraciliaries 5, rarely 6 (N=14, mean 5.1). Upper labials 6, rarely 7 (N=7, mean 6.1), 4th (rarely 5th) below eye. Two nuchals contacting the parietals. Palpebral disc small. Ear aperture about half the size of palpebral disc. No ear lobules. Midbody scale rows 19–23 (N=7, mean 21.0). Mid-dorsal scales smooth with 3–4 striations. Number of scales from chin shields to cloaca 60–67 (N=7,

mean 63.4). Lamellae under fourth toe 17–22 (N=7, mean 19.6), smooth.

Colour drab with a pattern resembling *L. delicata* and *L. amacula*. Upper parts brown. Laterally black on upper half of surface becoming grey with flecks of black or brown on the lower surface. Sides of tail with 2–3 black stripes. Ventrally grey.

DISTRIBUTION: Known only from the Barrington Tops area in mid-eastern New South Wales.

ETYMOLOGY: From the Latin *caligula*, a small military boot.

REMARKS: *L. caligula* is unusual when compared to the other species of this genus. While appearing similar to *L. delicata* in colour pattern it has 6 upper labials like the *L. challengerii* complex. However it differs from both in usually having less than four supraoculars.

ACKNOWLEDGMENTS

We thank Ms Jeanette Covacevich, Ms Susan Sands, Mr G. Czechura, Mr J. Coventry, Mr E. Wixted and Dr A. Greer for their help with the work for this paper. Many of the specimens of *L. basiliscus* and *L. czechurai* used in these descriptions were collected on field trips funded by the Australian Biological Resources Study.

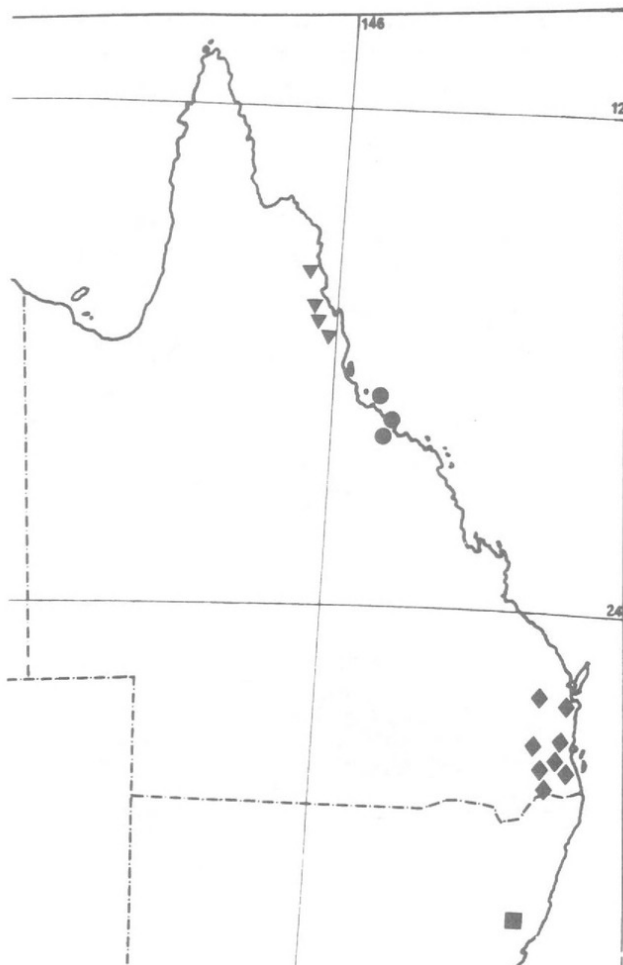


FIG. 6. Distribution of *Lampropholis mirabilis* ●, *L. czechurai* ▼, *L. amacula* ◆, *L. caligula* ■.

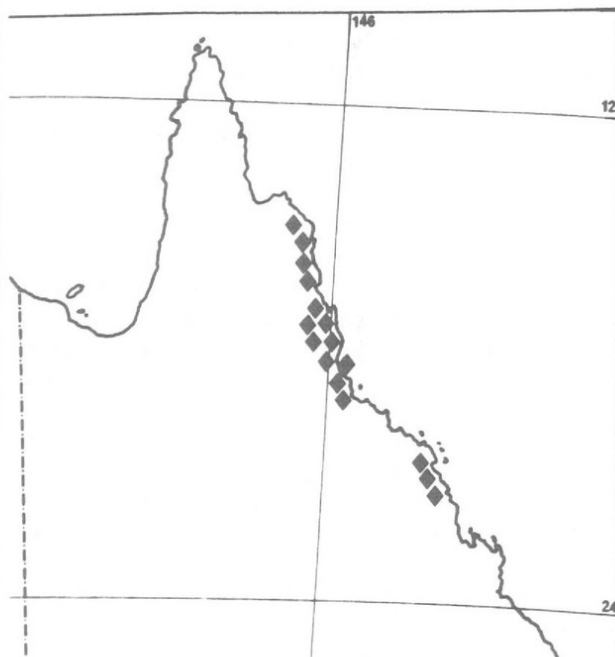


FIG. 7. Distribution of *Lampropholis basiliscus*

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