

TAXONOMIC NOTES ON THE REPTILES OF THE SHARK BAY REGION, WESTERN AUSTRALIA

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ABSTRACT

Two new pygopodid lizards (*Pletholax gracilis edelensis* and *Aprasia haroldi*) and two new skinks (*Lerista planiventralis decora* and *Menetia amaura*) are described. *Ctenotus youngsoni*, *C. alleni* and *C. mimetes* are redescribed. Additional data are provided for *Amphibolurus maculatus badius*, *Lerista macropisthopus*, *L. lineopunctulata*, *L. nicholli* and *Vermicella littoralis*.

INTRODUCTION

A generous grant from Mr and Mrs W.H. Butler enabled the Western Australian Museum to send two collectors, Messrs G. Harold and M. Peterson to the Shark Bay region for four weeks in August and September 1976. The grant also covered Mr Harold's expenses in the laboratory during the registration of the collection.

Strangely, less was known of the fauna of the Shark Bay mainland than of the adjacent islands. Harold and Peterson therefore concentrated on sampling all major habitat types on Edel Land, the Peron Peninsula and the coastal plains south and east of Hamelin Pool. Their 751 specimens were distributed among 74 species and subspecies as follows:

Leptodactylidae — *Arenophryne rotunda* (1)

Hylidae — *Litoria rubella* (4)

Cheluidae — *Chelodina steindachneri* (2)

Gekkonidae — *Crenadactylus ocellatus* (28), *Diplodactylus alboguttatus* (40), *D. michaelsoni* (7), *D. pulcher* (2), *D. spinigerus* (29), *D. squarrosus*

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(5), *D. strophurus* (12), *D. ornatus* (9), *Gehyra variegata* (59), *Heteronotia binoei* (85), *Nephrurus levis occidentalis* (17), *Phyllurus milii* (12)

Pygopodidae — *Aprasia haroldi* (9), *A. smithi* (3), *Delma nasuta* (4), *D. tincta* (3), *Lialis burtonis* (11), *Pletholax gracilis edelensis* (5), *Pygopus lepidopodus* (4), *P. nigriceps* (2)

Agamidae — *Amphibolurus inermis* (5), *A. maculatus badius* (6), *A. m. maculatus* (23), *A. minor* (15), *A. parviceps butleri* (10), *A. reticulatus* (24), *A. scutulatus* (5), *Moloch horridus* (5), *Physignathus longirostris* (2)

Scincidae — *Cryptoblepharus carnabyi* (9), *Ctenotus fallens* (6), *C. lesueurii* (1), *C. mimetes* (3), *C. p. pantherinus* (2), *C. severus* (5), *C. youngsoni* (2), *Egernia depressa* (1), *Lerista connivens* (11), *L. elegans* (5), *L. lineopunctulata* (39), *L. macropisthopus* (26), *L. muelleri* (17), *L. nicholli* (13), *L. p. planiventralis* (6), *L. p. decora* (2), *L. praepedita* (52), *Menetia amaura* (1), *M. greyii* (9), *M. surda* (13), *Morethia butleri* (1), *M. lineoocellata* (12), *M. obscura* (4), *Omolepida branchialis* (23), *Sphenomorphus richardsonii* (3), *Tiliqua occipitalis* (3), *T. rugosa* (5)

Varanidae — *Varanus caudolineatus* (2), *V. eremius* (1)

Typhlopidae — *Typhlina leptosoma* (2), *T. nigroterminata* (1)

Boidae — *Liasis childreni* (1)

Elapidae — *Demansia olivacea calodera* (7), *D. r. reticulata* (1), *D. r. cupreiceps* (1), *Denisonia monachus* (3), *Pseudechis australis* (1), *Pseudonaja modesta* (2), *P. nuchalis* (1), *Vermicella bertholdi* (1), *V. bimaculata* (2), *V. littoralis* (3).

In a later paper ecological and distributional data from this collection will be combined with those of earlier collections, to give a picture of the rich herpetofauna of Shark Bay. Before this can be done certain taxonomic revisions are necessary. Some of these have already been published (Storr, 1977a and 1977b). In the present paper four new species and subspecies are described and eight species and subspecies are fully or partly redescribed.

I am grateful to Mr Harold for assistance in the preparation of this paper.

PYGOPODIDAE

PLETHOLAX GRACILIS EDELENSIS SUBSP. NOV.

Holotype

R54627 in Western Australian Museum, collected by Messrs G. Harold and M. Peterson on 24 August 1976 at 4 km S of Useless Loop, Western Australia, in 26° 10' S, 113° 25' E.

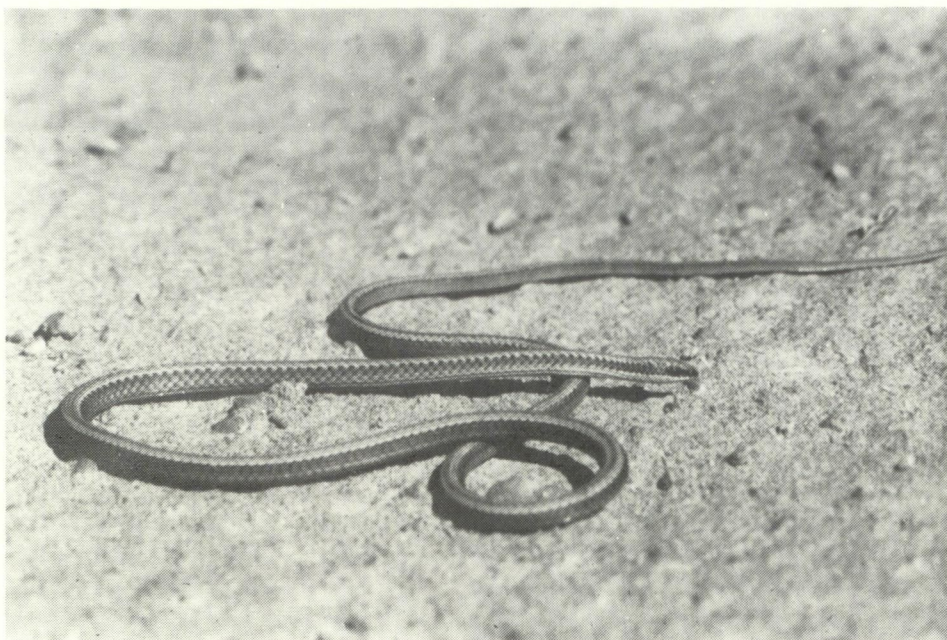


Fig. 1: Holotype of *Pletholax gracilis edelensis* photographed in life by G. Harold.

Diagnosis

Distinguishable from *P. g. gracilis* by its greater size, subequal supraoculars, small first supraciliary, more numerous postoculars and fewer anterior temporals.

Distribution

Edel Land, mid-west coast of Western Australia.

Description

Snout-vent length (mm): 69-90 (N 5, mean 81.2)[57-83 in *P. g. gracilis*, N 10, mean 65.5]. Length of tail (%SVL): 302-340 (N 4, mean 316) [258-346 in *P. g. gracilis*, N 8, mean 295].

Supraoculars 2, subequal in size [second much the larger in *P. g. gracilis*]. Supraciliaries 2, second much the larger [first much the larger in *P. g. gracilis*]. Anterior temporals 2, except in one specimen with 3/4 [3 in *P. g. gracilis*]. Midbody scale rows 16.

Upper and lateral surfaces pale grey except for dark grey upper lateral streak. Upper lateral streak most pronounced anteriorly, flecked with dark

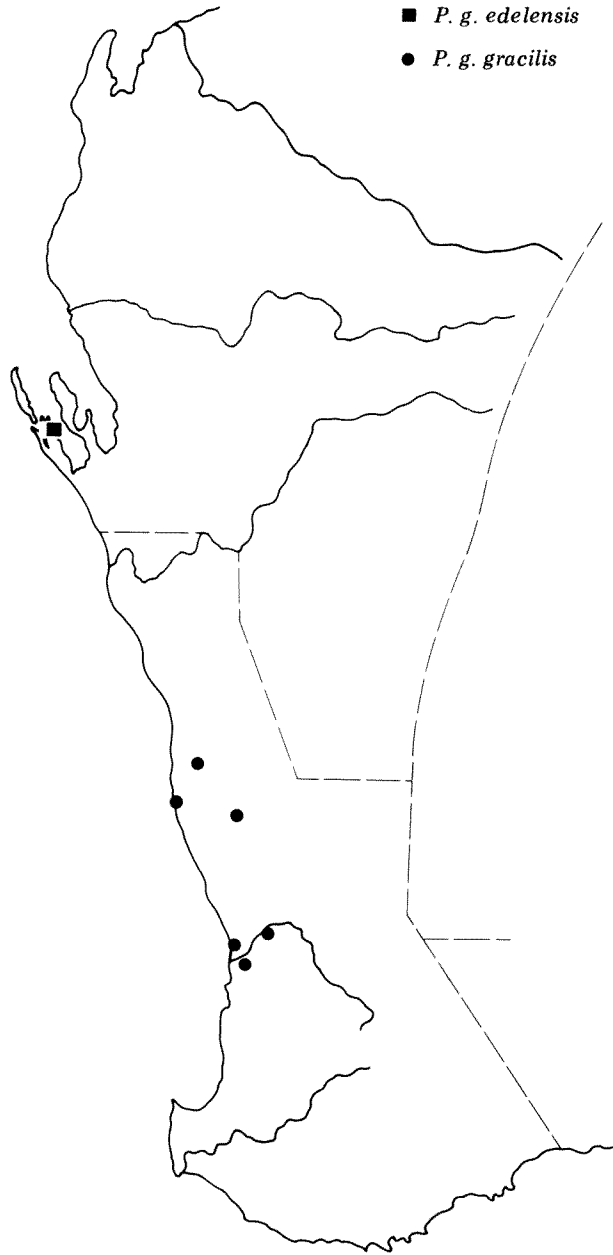


Fig. 2: Map of south-western Western Australia, showing location of specimens of *Pletholax gracilis edelensis* and *P. g. gracilis*.

brown and bordered above and below by a series of angular blackish spots. Chin, throat and upper labials pale yellow. Rest of under surface white.

Remarks

The nominate subspecies of *P. gracilis* occurs on the lower west coast of Western Australia from Eneabba south to Mandurah, inland to Coomberdale and Red Hill. Useless Loop is 450 km north of Eneabba. As much of the intervening country has been well worked by naturalists, it would seem that *P. g. edelensis* is really isolated from the rest of the species.

Paratypes

North-west Division: 10 km NW of Useless Loop (55085); 4 km S of Useless Loop (54814, 54863); 5 km S of Useless Loop (54755).

APRASIA HAROLDI SP. NOV.

Holotype

R54766 in Western Australian Museum, collected on 27 August 1976 by Messrs G. Harold and M. Peterson on Parrot Isle, 5 km N of Carrarang, Western Australia, in 26° 20' S, 113° 30' E.

Diagnosis

A narrow-headed, long-snouted member of the *Aprasia repens* super-species, distinguishable from *A. repens* by 14 (rather than 12) midbody scale rows, and from both *A. repens* and *A. rostrata* by 4 (rather than 5) upper labials. *A. haroldi* is the only *Aprasia* in which the prefrontal is in contact with the subocular labial.

Distribution

Edel Land, mid-west coast of Western Australia.

Description

Snout-vent length (mm): 56-106 (N 8, mean 85.5). Length of tail (% SVL): 55-65 (N 3, mean 60.7).

Head scutellation as in *A. repens* except that rostral (as seen from above) is slightly narrower than long (rather than slightly wider), and the second upper labial of *A. repens* is missing so that the prefrontal is in broad

contact with first labial and in narrow contact with second (subocular) labial.

Pale brownish grey above, obscurely marked with dark brownish grey; markings tending to take form of dark-edged longitudinal streaks of ground colour. Markings on head including a wavy streak from temples to snout. Streaks on back and sides short, one in middle of each scale. Lips and chin yellowish white; under tail creamy white; rest of under surface pale greyish brown.

Remarks

This lizard is named after Mr Gregory Harold, in appreciation of his skill as a collector of fossorial reptiles.

Paratypes

North-west Division: Parrot Isle, Carrarang Station (54765); False Entrance Well, Carrarang Station (54847, 54891-5).

AGAMIDAE

AMPHIBOLURUS MACULATUS BADIUS

Amphibolurus maculatus badius Storr, 1965, *J. Proc. R. Soc. West. Aust.* 48: 46. 25 km SE of Cardabia, W.A. (Storr & Clay).

Remarks

Harold and Peterson's six specimens from between Carnarvon and Wooramel have the rich coloration of typical *badius* (i.e. from north of the Gascoyne) but are a little larger (SVL of 2 males 52, 56; 3 females 49-54). They are still smaller than the Shark Bay specimens of the nominate subspecies, females of which have SVL ranging up to 60 mm.

SCINCIDAE

CTENOTUS YOUNGSONI

Ctenotus youngsoni Storr, 1975, *Rec. West. Aust. Mus.* 3: 227. Dirk Hartog I., W.A. (A.A. Burbidge).

Diagnosis

A large dark member of the *C. labillardieri* group with unbroken pale dorsolateral line; legs dark olive brown with or without blackish flecks or spots. Further distinguishable from *C. lanceolini* by more numerous midbody scale rows (28-30, *vs* 24).

Distribution

Mid-west coast of Western Australia: Dirk Hartog I. and adjacent mainland (Edel Land).

Description

Snout-vent length (mm): 48-84 (N 4, mean 66.0). Length of appendages (% SVL): foreleg 22-28 (N 4, mean 24.0); hindleg 37-45 (N 4, mean 40.8); tail 155-177 (N 2).

Nasals narrowly separated or in short contact. Prefrontals narrowly separated. Supraoculars 4, first 2 in contact with frontal. Supraciliaries 7, first much the largest. Palpebrals 9-11 (N 4, mean 10.0). Second loreal 1.4-1.9 (N 4, mean 1.65) times as wide as high. Presuboculars 3. Upper labials 8. Upper secondary temporal much larger than subequal primary and lower secondary. Ear lobules 3, acute or subacute, first or second largest. Nuchals 2-4 (N 4, mean 3.2). Lamellae under fourth toe 21-23 (N 4, mean 22.2), widely callose.

Dorsally olive grey. Very wide black laterodorsal stripe enclosing a series of pale dots (ground colour). Pale dorsolateral line from level of foreleg to level of hindleg, sometimes extending forward as a series of dots half way to brow. Upper lateral zone grey, flecked with black. Pale midlateral stripe poorly developed (indistinct and not reaching forward to foreleg) or absent. Lower lateral zone pale grey flecked with black. Lips barred (owing to dark sutures between labials). Tail almost patternless olive grey above, merging on sides with greyish white of subcaudals.

Additional material

North-west Division: False Entrance Well, Edel Land (54800, 54825).

CTENOTUS ALLENI

Ctenotus alleni Storr, 1974, *J. Proc. R. Soc. West. Aust.* 56: 89. 18 km N of Galena, W.A. (N.T. Allen).

Diagnosis

A large member of the *C. leonhardii* group with white midlateral stripe, unspotted black laterodorsal stripe, little or no trace of dark vertebral stripe, nasals separated, and prefrontals forming a median suture. Most like *C. mimetes*, from which it is distinguishable by its greenish back, midlateral stripe seldom extending forward beyond forelegs, streaked legs, and white upper lateral dots not clumping into large subrectangular spots.

Distribution

Northern interior of the South-west Division of Western Australia, in the Ajana and Yuna districts.

Description

SVL 46-93 (N 19, mean 79.7). Length of appendages (% SVL): foreleg 24-32 (N 19, mean 27.0), hindleg 44-57 (N 19, mean 50.0), tail 212-276 (N 15, mean 254.7).

Nasals separated from each other and from second labial; occasionally weakly grooved. Prefrontals forming a median suture. Supraoculars 4, first 3 in contact with frontal, first usually not much narrower than second. Supraciliaries 7 or 8 (N 17, mean 7.2). Upper labials 8-9 (mostly 8, N 18, mean 8.1). Ear lobules 4-7 (N 15, mean 6.0), long and acute in adults, obtuse or subacute in juveniles, third or fourth usually largest. Nuchals 3-5 (N 20, mean 3.8). Midbody scale rows 24-28 (N 18, mean 25.5). Lamellae under fourth toe 27-34 (N 17, mean 29.4), each with a narrow to moderately wide callus.

Dorsally olive, darkest on head, palest on tail. Occasionally a black vertebral line on nape. Black laterodorsal stripe unspotted, narrow to moderately wide. Conspicuous narrow white dorsolateral stripe from orbit to base of tail. Black upper lateral zone usually with two series of dots anteriorly and one series posteriorly. Legs brown, longitudinally streaked with black.

Remarks

Because of their greenish backs and rather wide subdigital calli, and despite their compressed toes and relatively large first supraocular, the type specimens of *C. alleni* were wrongly placed in the *lesueurii* group instead of the *leonhardii* group. The close relationship of *C. alleni* to *C. mimetes* was not appreciated, and the best characters for distinguishing them were not discerned, resulting in my later mistaking four specimens of *C. mimetes* for *C. alleni*, viz. 47699 from Hamelin, 47739 from 30 km SE of

Yuna, and 47736-7 from 29 km N of Tenindewa. The first of these mis-identifications wrongly extended the range of *C. alleni* northwards to the Shark Bay region, and all of them vitiated my redescription of *C. alleni* (Storr, 1975: 220), hence the need for the present redescription of *alleni* and a listing of all the material on which it is based.

C. alleni and *C. mimetes* are closely related to *C. regius* of eastern Australia, in which species the unusual tendency for the nasal to be grooved is more strongly developed. These three species could be informally associated as the *mimetes* sub-group.

Material

South-west Division: 18 km N of Galena (33602); 29, 32, 42 and 45 km NE of Yuna (26499, 56926-31, 56977-9); East Yuna Reserve, 30 km ESE of Yuna (47738, 47740-1, 48228, 48259, 55913-6).

CTENOTUS MIMETES

Ctenotus mimetes Storr, 1969, *J. Proc. R. Soc. West. Aust.* 51: 103. 20 km E of Paynes Find, W.A. (D.A. Richards).

Diagnosis

A moderately large member of the *C. leonhardii* group with white mid-lateral stripe, unspotted blackish laterodorsal stripe, little or no trace of dark vertebral stripe, nasals usually separated, prefrontals usually forming a median suture. Most like *C. alleni*, from which it is distinguishable by its brown back, midlateral stripe extending forward to lores, spotted legs, and pale upper lateral dots tending to clump into large subrectangular spots.

Distribution

Western arid and semiarid zones of Western Australia from the Ashburton drainage, south to the central Wheat Belt, west to Hamelin, Ajana and Carnamah, and east to Youanmi and Merredin.

Description

Snout-vent length (mm): 33-82 (N 26, mean 67.5). Length of appendages (% SVL): foreleg 22-30 (N 26, mean 25.4), hindleg 44-56 (N 26, mean 50.2), tail 174-280 (N 13, mean 228.2).

Nasals usually separated (touching in one specimen); in contact with

second labial or narrowly separated; occasionally weakly grooved. Prefrontals usually in contact (narrowly separated in three specimens). Supraoculars 4, first three in contact with frontal, first about as wide as second. Supraciliaries 5-8 (usually 7, N 22, mean 6.9). Second loreal 1.0-1.9 times as wide as high (N 24, mean 1.43). Upper labials 7-9 (mostly 8, N 24, mean 8.0). Ear lobules 3-6 (N 24, mean 4.4); acute, subacute or truncate in adults; obtuse in juveniles. Nuchals 3-5 (N 26, mean 3.5). Midbody scale rows 26-32 (N 26, mean 27.2). Lamellae under fourth toe 23-31 (N 25, mean 26.9), each with a narrow to moderately wide callus.

Dorsally pale to dark brown, duller on head, paler and redder on tail. Dark vertebral stripe usually absent, occasionally represented by a line on nape, less commonly extending to base of tail. Blackish, unspotted laterodorsal stripe usually narrow. Conspicuous narrow white dorsolateral stripe from orbit to middle of tail. Blackish upper lateral zone with a series of large, narrowly separated, pale subrectangular spots or 2 or 3 narrowly separated series of white dots or short dashes that tend to align vertically and form large, pale, narrow subrectangular spots. Legs pale brown; dark brown streaks breaking up into spots, short bars or a loose reticulum.

Material

North-west Division: Wyloo (13211); Callagiddy (40765); Hamelin (47699) and 7 km W (55053-4); 6 km N of Wannoo (52060-1) and 3 km N (54842); 68 km SW of Youanmi (19119); 70 km NE of Paynes Find (ERP 10006) and 20 km E (17991); Lochada (45692).

South-west Division: 3 km W of Ajana (30321); 'Bunya Bunya', 19 km ESE of Yuna (8303, 9027); East Yuna Reserve, 30 km ESE of Yuna (47739, 49924); Bindoo Hill Reserve, 29 km N of Tenindewa (47736-7); Carnamah (407); 40 km N of Beacon (48327, 48330-1); Merredin (1265-6) and 5 km E (52059).

LERISTA PLANIVENTRALIS PLANIVENTRALIS

Rhodona planiventralis Lucas & Frost, 1902, *Proc. R. Soc. Vict.* 15: 78.
Western Australia (B.H. Woodward).

Diagnosis

A medium-sized *Lerista* with ventrolateral keel, digits 2 + 3, eyelid movable, and temporals normally 1 + 1. Distinguishable from *L. p. decora* by more numerous midbody scale rows, darker head and narrower upper lateral stripe.

Distribution

Upper west coast of Western Australia from North West Cape south to Carnarvon; also Bernier I. and Edel Land.

Description

Snout-vent length (mm): 31-72 (N 21, mean 55.3). Length of appendages (% SVL): foreleg 6-10 (N 21, mean 7.8), hindleg 20-29 (N 21, mean 25.4), tail 77-106 (N 7, mean 87.9), snout to foreleg 24-31 (N 21, mean 27.0).

Nasals widely separated. Prefrontals widely separated. Frontoparietals forming a median suture (only touching in one specimen), usually much shorter than interparietal. Nuchals 0-4 (N 20, mean 1.8). Supraoculars 3, first two in contact with frontal. Supraciliaries 5; third and fourth moderately high and penetrating between supraoculars; second and fifth smallest. Upper labials 6. Occasionally a small lower secondary temporal. Midbody scale rows 22-24 (N 20, mean 22.2). Lamellae under longest toe 12-17 (N 18, mean 14.2).

Upper surface brownish grey (Edel Land) or olive grey (Bernier Island), becoming dark grey on head and buffy on tail. Hind part of head with or without obscure blackish bars or spots. Four series of small blackish brown or greyish brown spots on back; inner series extending on to tail; outer series ending on hind back. Narrow to moderately wide, ragged or sharp-edged greyish brown or blackish brown upper lateral stripe, usually much less than a scale wide, usually running through centre of one longitudinal series of scales, occasionally through contact between two adjacent series of scales; extending forward through orbit to nasal. Lower lateral and ventral surfaces white.

Geographic variation

The above colour description applies to southern specimens (12 from Edel Land and one from Bernier I.). Specimens from North West Cape south to at least Warroora have the back coppery brown, the stripes and lines of spots moderately dark brown, the head greyish and without dark spots, and the sides of body pink.

Material

North-west Division: Neds Creek, North West Cape (27916); 35 km SSE of Cardabia (51016); Warroora (8158); Carnarvon (360-1); Bernier I. (old series 11247-8, 11250; R20505); 10 km NW of Useless Loop (54711); Steep Point (54791); False Entrance Well, 22 km NW of Carrarang (39014-8, 55090-3).

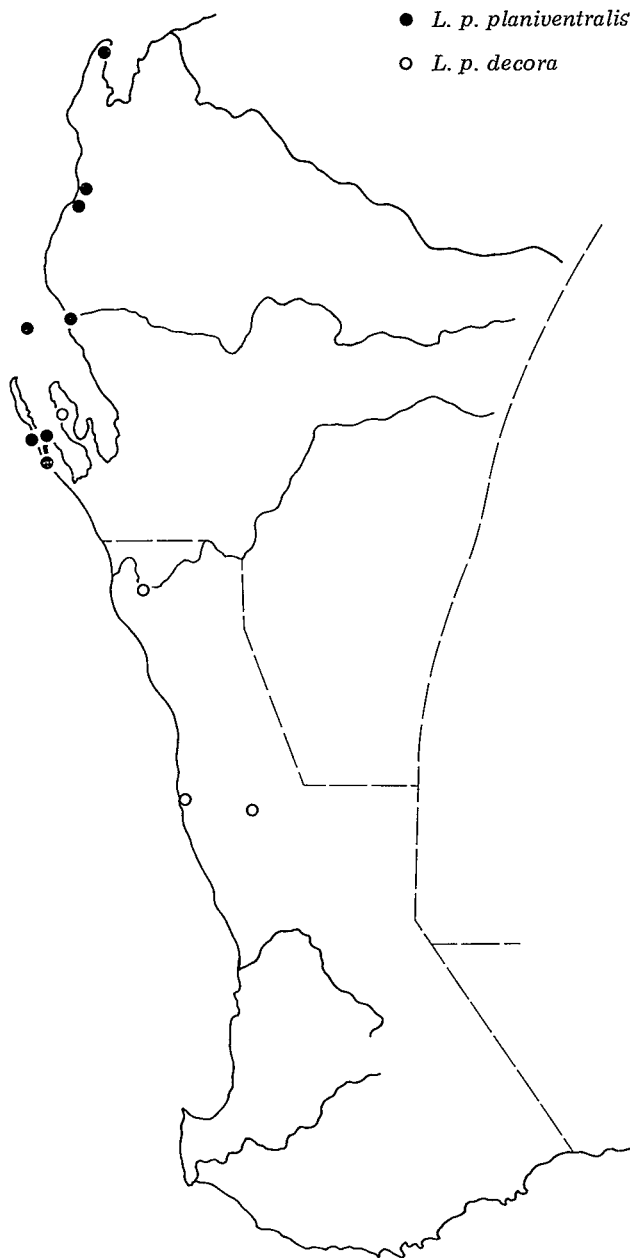


Fig. 3: Map of mid-western Western Australia, showing location of specimens of *Lerista p. planiventralis* and *L. p. decora*.

LERISTA PLANIVENTRALIS DECORA SUBSP. NOV.

Holotype

R54707 in Western Australian Museum, collected by Messrs G. Harold and M. Peterson on 1 September 1976 after digging beneath reptile tracks on white coastal dunes at Denham, Shark Bay, Western Australia, in 25° 55' S, 113° 22' E.

Diagnosis

Distinguishable from *L. p. planiventralis* by fewer midbody scale rows, ground colour of head same as back, and wider upper lateral stripe.

Distribution

Mid-west coast of Western Australia and near-coastal sandplains, from Peron Peninsula south nearly to Jurien Bay, inland to Lockwood Spring and Watheroo.

Description

Snout-vent length (mm): 41-62 (N 6, mean 53.1). Length of appendages (% SVL): foreleg 7-8 (N 5, mean 7.3), hindleg 21-28 (N 5, mean 24.2), tail 95-100 (N 2), snout to foreleg 26-28 (N 5, mean 27.1).

Nasals widely separated. Prefrontals widely separated. Frontoparietals forming a median suture in northern specimens, separated in Padbury specimen, and fused in Watheroo specimen; much shorter than interparietal. Nuchals 1-4 (N 6, mean 2.4). Supraoculars 3, first two in contact with frontal. Supraciliaries 5; third and fourth moderately high and penetrating between supraoculars; second and fifth smallest. Upper labials 6. Temporals 2, secondary much larger than primary. Midbody scale rows 20 (N 6). Lamellae under longest toe 12-18 (N 5, mean 14.8).

Head, back and tail very pale brown. Short blackish-brown bars and angular spots on middle and hind part of head. Four series of short dark brown bars or spots on back, running through centres of dorsal scales; inner (paravertebral) series largest and darkest, extending back to middle of tail; outer series fading out on hind back. Wide, sharp-edged, blackish brown upper lateral stripe, occupying half of scale of two adjacent series of scales; extending forward through orbit to nasal and back on to tail (where it breaks up into a series of spots). Lower lateral and ventral surfaces white.

Paratypes

North-west Division: Denham (54706).

South-west Division: Lockwood Spring, 32 km ESE of Kalbarri (33473-4); 5 km W of Padbury (48453); Watheroo (796).

LERISTA MACROPISTHOPUS

Lygosoma (Rhodona) macropisthopus Werner, 1903, *Zool. Anz.* 26: 246.

Remarks

During my revision of this species (Storr, 1972: 65), before any material was available from the Shark Bay region, specimens with 5 supraciliaries were rarely encountered. Harold and Peterson collected 26 specimens at Wooramel and Hamelin; 18 of them had 5 supraciliaries, seven had 1 + 3, and one had 0 + 3. Digits were 2 + 3 except for three specimens with a single finger on one side. In this population the head is blackish brown back to level of eyes and down to centre of upper labials; the rest of the upper surface is brown, with or without a purplish tinge.

LERISTA LINEOPUNCTULATA

Brachystopus lineo-punctulatus Duméril & Bibron, 1839, *Erpétologie générale* 5: 779.

Remarks

Harold and Peterson's collection from the Shark Bay mainland reveals a discordant mixture of northern and southern characters (cf. Storr, 1972: 67). All 16 specimens from Peron Peninsula have two toes, but in only one of them the back is spotted. All 17 specimens from Carrarang Station on Edel Land have only one toe, and five of them have a spotted back. Further south at Tamala all five specimens have one toe (except one with two toes on one side) and none of them is spotted. Only on Dirk Hartog Island is there correlation between these characters; our three unspotted specimens have a single toe and the single spotted specimen has two toes.

LERISTA NICHOLLSI

Rhodona nichollsi Loveridge, 1933, *Occ. Pap. Boston Soc. Nat. Hist.* 8: 87.
Dalgaranga, W.A. (G.E. Nicholls).

Remarks

Two of three specimens recently collected at 17 km S of Gascoyne Junction show some tendency towards *L. connivens petersoni* from Yinnietharra (120 km to north-east). One of them (55971) has snout-vent length 67 mm, well beyond the range (31-61 mm) previously recorded for *nichollsi*, and another specimen (55975) has the second loreal not fused to prefrontal, a condition that is rare in *nichollsi*. All three specimens have 20 midbody scale rows and immovable eyelids. It seems then that *petersoni* is closer to *nichollsi* than to *connivens*. Until more is learnt of the status of *petersoni*, it is best to treat *connivens* binomially.

MENETIA AMAURA SP. NOV.

Holotype

R54724 in Western Australian Museum, collected by Messrs Harold and Peterson on 20 August 1976 at False Entrance Well, Carrarang Station, Western Australia, in 26° 23' S, 113° 19' E.

Diagnosis

A dark *Menetia* with only one supraciliary. Further distinguishable from *M. greyii* by 5 (rather than 4) small scales in outer arc between largest supraciliary and penultimate labial, lack of ear aperture, and absence of lateral stripes, and from *M. surda* by single presubocular (rather than 2), longer first supraocular, and no enlarged upper circumocular granule.

Distribution

Edel Land, mid-west coast of Western Australia.

Description (based on holotype, the only available specimen)

Snout-vent length 25 mm. Tail 1.65 times as long as SVL.

Nasals separated. Prefrontals separated moderately narrowly. First supraocular much more than twice as long as wide. Parietal on one side divided. Supraciliary single (as if first and second of *M. greyii* were fused). Upper labials 6 (5 on one side owing to fusion of fourth and fifth). One nuchal on each side. Midbody scale rows 22, smooth. Subdigital lamellae 15.

Dorsally blackish brown, becoming paler on tail and sides owing to pale brown fleck on each scale. Lips pale, flecked dark brown. Under surface pale.

Remarks

Since my revision of *Menetia* (Storr, 1976), Mr P.R. Rankin of the Australian Museum has drawn my attention to the importance of presuboculars in this genus. Checking our material, I found that *M. surda* has two presuboculars and the other western species one.

ELAPIDAE

VERMICELLA LITTORALIS

Vermicella bertholdi littoralis Storr, 1967, *J. Proc. R. Soc. West. Aust.* 50: 84. 11 km S of Geraldton, W.A. (R. Vollprecht).

Remarks

Since my revision of *Vermicella 'bertholdi'* (Storr, *supra cit.*), many additional specimens have been received, but none of them can be considered intermediate between the three 'subspecies'. It has therefore become clear that these 'subspecies' are in fact three parapatric species, *V. bertholdi*, *V. littoralis* and *V. anomala*.

When describing *littoralis*, I mentioned the possibility of its proving divisible into northern and southern subspecies, mainly on the basis of number of body rings: 16-22 in the north and 24-34 in the south. Since then seven specimens have been collected in the geographically intermediate region (Edel Land and the Kalbarri National Park); predictably they have an intermediate number of rings (19-27). However, the count on Dirk Hartog Island is anomalously high (two specimens with 32 rings).

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