THE GENUS EGERNIA (LACERTILIA, SCINCIDAE) IN WESTERN AUSTRALIA

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ABSTRACT

The 17 species and subspecies of Egernia occurring in Western Australia are described and keyed, viz. E. depressa ( Günther ), E. stokesii stokesii ( Gray ), E. stokesii aethiops nov ., E. stokesii badia nov ., E. kingii ( Gray ) [ syn. E. nitida ( Gray )], E. napoleonis ( Gray ) [ E. nitida of authors, not Gray ], E. carinata H.M. Smith, E. formosa Fry, E. douglasi Glauert, E. luctuosa ( Peters ) [ syn. E. lauta DeVis ], E. pilbaren sis nov ., E. pulchra pulchra Werner, E. pulchra longicauda Ford, E. multiscutata bos Storr, E. inornata Rosén, E. striata Sternfeld, E. kintorei Stirling & Zietz . A lectotype is designated for Tropidolepisma dumerilli Duméril & Bibron [= E. kingii]. The Victorian representative of E. luctuosa is described as a new species, E. coventryi.

INTRODUCTION

This paper brings up to date an earlier revision of the Egernia whitii group ( Storr, 1968 ) and deals for the first time since Mitchell ( 1950 ) with the other western members of the genus. It is based on specimens in the Western Australian Museum ( registered numbers cited without prefix ). I have also used some specimens in the National Museum of Victoria ( numbers prefixed with NMV ), Australian Museum ( AM ), Queensland Museum ( QM ), collection of the British Joint Services Expedition to Central Australia ( JSE ), and British Museum ( Natural History ), for the loan of which I am indebted to Mr A.J. Coventry, Dr H.G. Cogger, Miss J. Covacevich, Lt-Cdr A.Y. Norris and Mr A.F. Stimson.

I am grateful to Mrs Ariadna Neumann for translating Peters’ original descriptions of Cyclodus ( Omolepida ) luctuosus and Tropidolepisma richardi.

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GENUS EGERNIA


Tropidolopisma Duméril & Bibron, 1839, ‘Erpétologie génerale’ 5: 744. Type-species (by monotypy): Tropidolopisma dumerilii Duméril & Bibron [= E. kingii].

Liopholis Fitzinger, 1843, ‘Systema reptilium’, p. 22. Type-species (by monotypy): Lygosoma moniligera Duméril & Bibron [= E. whitii].


Diagnosis

Medium to very large skinks with strong pentadactyl limbs, lower eyelid moveable and without transparent disc, interparietal completely separating parietals, no supranasal, four supraoculars (first two in contact with frontal), normally two loreals, usually two presuboculars, normally three temporals (lower secondary usually largest, primary smallest), and prominent ear aperture bearing one or more large lobules. Distinguishable from Tiliqua by fragile tail (except in E. depressa and stokesii), unpigmented tongue, and absence of occipitals and large suboculars (when suboculars present in Egernia they are much smaller than presuboculars).

Distribution

Australia, Tasmania and New Guinea.

Species-groups

The Western Australian species of Egernia can be allotted to one or another of five groups*, viz.

* The sixth species-group of Egernia, viz. the major group (Horton, 1972), does not extend to Western Australia. The supposed occurrence of one of its members, E. richardi, in the Kimberley Division (Cogger, 1975), is based on the erroneous belief that richardi is an older name for E. douglassi.
(1) *cunninghami* group

These are moderately large to very large spiny skinks. The two western species, *E. depressa* and *stokesii*, have the tail very short, non-fragile, and heavily armed with recurved spines. They are consequently hard to extract from their hiding places — hollow logs or rock crevices in arid and semi-arid country. They are partly vegetarian.

(2) *kingii* group

This group is closest to the *striolata* group, from which its single member differs in its greater size and style of coloration. *E. kingii* is endemic to the wetter parts of southwestern Australia. A robber of seabird eggs, it flourishes on small islands.

(3) *striolata* group

These are medium-sized species with strong to weak postnarial groove and mostly with keeled dorsals. The upper lips (as in the *whitii* group) are usually paler than the rest of the face; there is a tendency to form a dark loreotemporal and pale dorsolateral stripe; the dark dorsal spots are often oblong in shape and laterally edged with white; and the venter may be pink or orange. Between them the four western species (*napoleoni*, *carinata*, *formosa* and *douglasi*) occupy much of the State but not sandy deserts. They do not burrow but shelter in hollow logs, behind the bark of fallen trees, among rocks or under the ‘skirts’ of blackboys (*Xanthorrhoea* spp).

(4) *luctuosa* group

This group comprises two medium to moderately large species. One of them (*luctuosa*) is found along swampy watercourses in the wetter parts of southwestern Australia, the other (*coventryi*) in similar habitats in Victoria. They are close to the *striolata* group, differing mainly in their highly glossy scales and complete series of suboculars. They are possibly nocturnal, for they are commonly collected in mammal traps.

(5) *whitii* group

This is a highly successful group and the only one represented in sandy deserts. It comprises small to large, slender to stout species with smooth scales (except in *E. pulchra*). As in other groups, wet-country species tend to be black and grey in coloration, and dry-country species red or yellow. The creamy-white edge to eyelids and lack of postnarial groove separate most of its members from the *striolata* group. In Western Australia it comprises *E. pulchra*, *multiscutata*, *inornata*, *striata* and *kintorei*. Perhaps the newly described *E. pilbarensis* belongs here; it
shares some traits with *E. margaretae* of Central Australia, likewise an inhabitant of rocks in arid mountain ranges.

**KEY**

1. Tail cylindrical, from almost as long to much longer than head plus body, fragile, not spiny ... ... ... ... ... ... ... ... 5
   Tail depressed, less than half as long as head plus body, spiny, not fragile ... ... ... ... ... ... ... ... 2

2. Dorsal spots darker than ground colour; scales of back with one large and two small spines (except in juveniles); no enlarged nuchals; nasals usually in contact; labials usually 6 ... ... ... ... ... ... ... ...  E. depressa
   Dorsal spots (if any) paler than ground colour; scales of back with one or two small spines; enlarged nuchals present; nasals separated; labials 7 or 8 ... ... ... ... ... ... ... ... 3

3. Dorsal ground colour blackish or very dark brown ... ... ... ... ... ... ... ... ... ... ... ... ... ... 4
   Dorsal ground colour reddish brown ... ... ... ... ... ... ... ... ... ... ... ... ... ...  E. stokesii badia

4. Back and sides usually with clusters of whitish spots; upper lips whitish; nasals usually widely separated; postnarial groove strong and usually extending to top of nasal ... ... ... ... ... ... ... ... ... ...  E. stokesii stokesii
   Back and sides usually unspotted; upper lips dark; nasals narrowly separated; postnarial groove weak and usually not extending to top of nasal ... ... ... ... ... ... ... ... ... ...  E. stokesii aethiops

5. Dorsal scales keeled ... ... ... ... ... ... ... ... ... ... ... ... ... ... 6
   Dorsal scales smooth or striate ... ... ... ... ... ... ... ... ... ... ... ... ... ... 10

6. Edge of eyelids dark or white; postnarial groove present ... ... ... ... ... ... ... ... ... ... ... ... ... 7
   Edge of eyelids white; no postnarial groove ... ... ... ... ... ... ... ... ... ... ... ... ... ... 9
7. Dorsal pattern (if any) consisting of whitish dots; upper lips dark; abdomen greyish ... ... ... ... ... ... ... ... ... E. kingii
   Dorsal pattern consisting mainly of black spots; upper lips pale; abdomen pink ... ... ... ... ... ... ... 8

8. Black dorsal spots rounded and not encroaching on laterodorsal strip of ground colour; dorsal keels strong ... ... ... E. napoleonis
   Black dorsal spots oblong and spread evenly across back; dorsal keels weak ... ... ... E. carinata

9. Nasals separated; tail 1.9 or less times as long as head plus body ... ... ... ... ... E. pulchra pulchra
   Nasals usually in contact; tail 1.8 or more times as long as head plus body ... ... ... E. pulchra longicauda

10. Black pigment present ... ... ... ... ... ... ... 11
    No black pigment ... ... ... ... ... ... ... 14

11. A complete series of suboculars; ear aperture nearly as wide as high ... ... ... ... E. luctuosa
    Subocular series incomplete; ear aperture narrow ... ... ... ... ... ... ... ... 12

12. Dorsals striate; postnarial groove present; SVL up to 170 ... ... ... ... ... E. douglasi
    Dorsals smooth; no postnarial groove; SVL up to 96 ... ... ... ... ... ... ... 13

13. Dorsal ground colour grey or brown; abdomen bluish grey; upper labials usually 8; pale-spotted, black laterodorsal stripe usually present ... ... ... E. multiscutata bos
    Dorsal ground colour reddish brown or yellowish brown; abdomen pinkish white or yellowish white; upper labials usually 7; no black laterodorsal stripe ... ... ... E. inornata

14. Broad dark brown upper lateral stripe extending forward to temples or beyond ... ... ... ... 15
    No dark brown upper lateral stripe ... ... ... ... 16
15. Back spotted with dark brown; SVL up to 107; upper labials 7 ... ... ... ... ... ... E. formosa
No dorsal spots; SVL up to 170; upper labials 6 or 7 ... ... ... ... ... ... E. douglasi

16. Head depressed (as in E. pulchra); back uniformly reddish brown; plantar scales tubercular; midbody scale rows 32-34; lamellae under fourth toe 13-16; living among rocks ... ... ... ... ... ... E. pilbarenensis
Head deep (as in E. m. bos); back reddish brown with faint to moderately strong reddish brown longitudinal stripes; plantars flat; midbody scale rows 36-52; lamellae under fourth toe 17-25; burrowing in sandy or clayey country ... ... ... ... ... ... 17

17. Pupil much narrower than high; greyish brown of sides gradually merging with reddish brown of back; upper labials usually 7; ear lobules usually triangular ... ... ... E. striata
Pupil slightly narrower than high; grey of sides sharply demarcated from pale reddish brown of back; upper labials usually 8; ear lobules usually rectangular ... ... ... E. kintorei

EGERNIA DEPRESSA

‘Swan River’ [= southern interior of Western Australia].

Diagnosis

A small, extremely spiny member of the Egernia cunninghami group with very short, depressed, non-fragile tail. Further distinguishable from E. stokesii by trispinose dorsals and supracaudals, nasals usually in contact, fewer upper labials (usually 6, vs usually 7 or 8), and no enlarged nuchals.

Distribution

Interior of Western Australia from the Pilbara and Great Sandy Desert south to the northeastern Wheat Belt and Eastern Goldfields, and west nearly
to Shark Bay. Extralimital in far southwest of Northern Territory (Petermann Ranges).

Description

Snout-vent length (mm): 54-117 (N 155, mean 89.4). Length of appendages (% SVL): foreleg 25-33 (N 139, mean 28.8), hindleg 25-36 (N 141, mean 31.2), tail 32-44 (N 141, mean 38.2).

Nasals in contact, usually forming a moderate to long median suture; rarely (4%) separated, and then vary narrowly; postnasal groove strong and usually completely dividing nasal. Prefrontals in contact, almost invariably (98%) forming a long median suture. Frontal wider than interparietal, except in juveniles (where usually slightly narrower). No enlarged nuchals. Supraciliaries 4-6 (N 104, mean 5.2). Second loreal usually higher than wide. Presuboculars normally 2, occasionally 1 (when first fused to second loreal). Upper labials 5-7 (N 107, mean 6.0). Temporals 3, primary smallest. Ear aperture moderately narrow and nearly vertical; lobules 1-6 (N 95, mean 3.3), acute or subacute in adults, obtuse or subacute in juveniles, first or second usually largest. Midbody scales in 28-38 rows (N 111, mean 33.4), mid-dorsals bearing 3 (occasionally 4 or 5) keels terminating in a spine, central spine much the largest (in juveniles central spine weak and usually not flanked by smaller spines). Central spines of median supracaudal scales larger than dorsal spines but much shorter than lateral and dorsolateral caudal spines, flanked (except in juveniles) by 1 or 2 small spines. Subdigital lamellae smooth or weakly uncarinate, 9-18 (N 113, mean 13.6) under fourth toe.

Dorsally pink, reddish brown, pale brown, brownish grey or olive grey, marked anteriorly (foreback, nape and sometimes head) with reddish-brown blotches, often arranged in irregular transverse bars; and marked posteriorly (tail, hindback, and often midback and flanks) with triangular blackish-brown spots (usually white-edged) clustering into short, irregular, transverse bars. Loreo-temporal streak dark reddish brown, occasionally extending forward to nostril and backward to beyond arm. Upper lips whitish. Chin shields often with dark sutures. Throat and breast occasionally spotted or streaked with greyish brown. Under tail spotted or flecked with blackish brown, dark grey or reddish brown, markings often extending to abdomen.

Geographic variation

The most distinctive population is that of the Pilbara. It is characterized by:

(1) ground colour pink, rather than brownish or greyish
(2) blackish dorsal spots small and tending to be isolated rather than to cluster, and they are not white-edged

(3) postnarial groove in 70% (vs 2%) of specimens incompletely dividing nasal, i.e. terminating at top of nostril

(4) fewer supraciliaries (4 or 5, N 13, mean 4.2; vs 4-6, N 91, mean 5.3)

(5) second loreal commonly wider than high (rarely so elsewhere)

(6) more numerous upper labials (6 or 7; vs almost invariably 6 elsewhere)

(7) fewer midbody scale rows (28-34, N 13, mean 31.3, vs 30-38, N 98, mean 33.7 elsewhere)

(8) fewer lamellae under fourth toe (9-15, N 14, mean 11.4; vs 11-18, N 99, mean 14.0 elsewhere)

(9) shorter limbs, especially hindleg (25-32% of SVL, N 14, mean 29.3; vs 26-36, N 126, mean 31.4 elsewhere).

Remarks

The Pilbara population has almost diverged to the extent of being a separate subspecies. However, it is connected to the main body of *E. depressa* by intermediate populations in the upper Ashburton-Jiggalong region. Moreover the isolated Central Australian population approaches it in some respects, especially coloration.

In the Pilbara this skink is apparently confined to exfoliating granite and other rocks. In the better-wooded country further south it is mostly found in hollow trees, especially mulgas.

Material

North-west Division: Silver Grass Peak, near source of Robe River (19222); Mt Herbert (29091); Abydos (10793-6); Comet Mine, Marble Bar (18588); Mt Edgar (16659-63); near Nullagine (12309); Jiggalong (26065-6); 32 km W of Mundiwindi (25155-6); Giles Point, 48 km W of Mt Newman (54214); Turee Creek (17690); Booloogooroo (27764); 34 km N of Carnarvon (47604); Carnarvon (34142, 40536); Callagiddy (40662-3); Yinnietharra (41059, 47248); Kumarina (22746); Landor (1690-1, 2700); 105 km N of Meekatharra (29090); 88 km N of Overlander Roadhouse (51746); 17 km SE of Gladstone (16664-5); Woodleigh (49929); Yaringa South (13033); Overlander Roadhouse (13123); Meekatharra (6009); Gabanintha, 35 km E of Nannine (4892); Quinns, near Nannine (325-7); Cue (731-2, 13229); Dalgaranga (24782); Mt Magnet (2112); Yalgoo (1744, 22867); 16 km S of Yalgoo (20540-1); 32 km SW of Yalgoo (29594); Muralgarra (7511-2); Gnows Nest and vicinity (4761-3, 22868, 22945, 23815-6, 25665-6, 53496-
7); 32 km S of Mt Magnet (29102); 29 km N of Paynes Find (48149-50); Fields Find (13644); Rothsay State Forest (27763).

South-west Division: Marloo, Wurarga (3819-22); 32 km E of Mullewa (29993-4); Tallering (54199); Pindar (3839-40); Gullewa (4594); Caron (7280-1); Marchagee (354-6); Wubin (32021); Pithara (4252); Bimbijy Station, via Beacon (43923-4).

Eastern Division: Well 46, Canning Stock Route (4059); Carnarvon Range (51878); Barrow Range (20725); 32 km E of Warburton Range (15697-701, 15728-34); Warburton Range and vicinity (14635-8, 17784-5, 22033-5, 22071, 22166-70, 31363); 70 km SW of Wiluna (21140-2); 80 km NNW of Sandstone (46229); Albion Downs (19788); Laverton (1200, 1358-9, 23906); Mt Margaret Mission (17677-8); Cundeelee Mission (12994-6); Kalin Rock (12992); Grants Patch, 50 km E of Kalgoorlie (7066, 8226); Kalgoorlie (5974, 9989, 46129); Kambalda (31550-1); ‘Goldfields’ (5-6).

Northern Territory: Shaw Creek (25° 03′ S, 129° 42′ E) (JSE 139); 6 km N of Mt Bowley (34201-2).

EGERNIA STOKESII STOKESII


Diagnosis

A moderately large member of the E. cunninghami group with tail very short, depressed, strongly spinose and non-fragile. Further distinguishable from E. depressa by dorsals with one or two weak spines and supracaudals with one strong spine, presence of enlarged nuchals, nasals separated, and more numerous upper labials (usually 7 or 8, vs usually 6).

Distribution

Wallabi and Pelsart Groups of the Houtman Abrolhos, off west coast of Western Australia.

Description

Nasals separated, usually widely; postnarial groove strong, usually (80%) completely dividing nasal. Prefrontals usually forming a long median suture; rarely (8%) narrowly separated. Frontal wider than interparietal (except in one juvenile). Enlarged nuchals 1-4 (N 68, mean 2.9) on each side. Supraciliaries 4-7 (mostly 5, N 55, mean 5.3), second usually largest and occasionally (14%) fused to first supraocular. Second loreal usually higher than wide. Presuboculars usually 2, occasionally 1 (when first fused to second loreal), rarely 3. Upper labials 7-9 (N 68, mean 7.7). Temporals 3, lower secondary largest, primary smallest. Ear aperture moderately narrow and nearly vertical; lobules 1-4 (N 66, mean 2.5), usually serrate, first usually (second occasionally) largest. Midbody scales in 32-36 rows (N 68, mean 33.8), paravertebrals with 2 keels terminating in short blunt spine; remaining dorsals with one spinose keel. Caudal spines, especially laterals and laterodorsals much longer. Subdigital lamellae weakly unicarinate, 12-18 (N 68, mean 14.7) under fourth toe.

Back and tail blackish brown, usually with clusters of 3-11 quadrilateral or triangular brownish white spots, each occupying whole or half of scale; clusters transversely elongate and tending to align transversely. Some head shields, especially on occiput and loreotemporal streak, wholly dark brown; remaining head shields pale with dark edges. Flanks and legs dark brown with clusters of 1-5 whitish scales. Upper lips whitish. Under surface greyish brown, darkest on chin and throat; spotted with greyish white, spots largest on chin and throat and tending to leave a coarse reticulum or bars of dark brown ground colour.

Geographic variation

The population on tiny Tattler Island (only a few metres off West Wallabi Island and connected by dry land at low water) is peculiar in the tendency for the frontonasal to divide longitudinally and in the high frequency of separated prefrontal (40%) and incomplete postnarial groove (80%).

Material

South-west Division: East Wallabi I. (16555-90, 19917-8, 28909-10, 29058-60, 47828); West Wallabi I. (16591-618, 16621-51, 21847, 29498); Tattler I. (16652-8); Middle I. (27186); Murray I. (30452).

EGERNIA STOKESII AETHIOPS subsp. nov.

Holotype

R25731 in Western Australian Museum, collected by G.M. Storr on 29
August 1965 on Baudin Island, Freycinet Estuary, Western Australia, in 26° 31’ S, 113° 39’ E.

Diagnosis

A dark, relatively small subspecies of *E. stokesii*, differing from *E. s. stokesii* in almost total lack of colour pattern, short snout, weak postnarial groove, narrowly separated nasals, and very small first supraocular (when not fused to very large second supraciliary).

Distribution

Only known from one small island (Baudin) in Shark Bay, west coast of Western Australia.

Description

Snout-vent length (mm): 63-161 (N 12, mean 120.0). Length of appendages (% SVL): foreleg 23-29 (N 12, mean 25.2), hindleg 28-35 (N 12, mean 31.0), tail 31-36 (N 11, mean 33.7).

Nasals narrowly separated; postnarial groove shallow and seldom (20%) completely dividing nasal. Prefrontals forming a moderate to long median suture, except in one specimen (where separated). Frontal short for an *Egernia*, usually much wider than interparietal. Enlarged nuchals 2-4 (N 12, mean 2.8) on each side. Supraciliaries 5, second very large and often (60%) fused to small first supraocular. Second loreal usually higher than wide. Pre-suboculars 2. Upper labials 7 or 8 (N 12, mean 7.4). Temporals 3, lower secondary usually largest, primary smallest. Ear aperture moderately narrow and nearly vertical; lobules 2-4 (N 11, mean 2.9), serrate, first usually largest. Midbody scales in 34 rows (N 12), paravertebrals with 2 keels terminating in weak spine, other dorsals with one keel and weak spine. Median supracaudals with a weak spine, laterals and laterodorsals with a strong spine. Subdigital lamellae smooth or weakly unicarinate, 14-16 (N 12, mean 15.0) under fourth toe.

Blackish brown above, usually without spots; occasionally small clusters of brownish white or greyish white, especially on flanks. Under surface moderately dark brownish grey, occasionally spotted paler.

Paratypes

North-west Division: Baudin I. (25723-30, 25732-4).
EGERNIA STOKESII BADIA subsp. nov.

Holotype

R29590 in Western Australian Museum, collected by Mr W.H. Butler in September 1967 at Rothsay, Western Australia, in 29° 18' S, 116° 54' E.

Diagnosis

A large reddish brown subspecies of E. stokesii with whitish ventral surfaces.

Distribution

Arid and semi-arid zones of southwestern Western Australia from the lower Gascoyne south to the northern and northeastern Wheat Belt. Also Dirk Hartog Island, Shark Bay.

Description

Snout-vent length (mm): 81-194 (N 32, mean 161.3). Relative length of appendages (% SVL): foreleg 23-30 (N 20, mean 26.2); hindleg 28-34 (N 20, mean 31.1); tail 34-45 (N 20, mean 39.6).

Nasals widely separated; postnarial groove strong and usually (84%) completely dividing nasal. Prefrontals in long median contact. Frontal usually wider than interparietal, occasionally (especially in juveniles) no wider. Enlarged nuchals 1-4 (N 19, mean 2.5) on each side. Supraciliaries 4-6 (N 19, mean 5.4), second often (60%), first or fourth occasionally, largest. Second loreal usually (70%) higher than wide. Presuboculars 1-3 (N 19, mean 2.1). Upper labials 7-9 (N 19, mean 8.1). Temporals 3, lower secondary largest (usually much larger than upper secondary), primary smallest. Ear aperture very narrow and nearly vertical; lobules 2-4 (N 19, mean 3.2), long and serrate, first (occasionally second) largest. Midbody scale rows 32-38 (N 21, mean 36.2), paravertebrals and occasionally adjacent dorsal series bicarinate (rarely tricarinate), remaining dorsals unicarinate; all keels terminating in short spine. Supracaudals strongly unispinose, lateral and laterodorsal spines longest. Subdigital lamellae smooth or unicarinate, 12-16 (N 19, mean 14.7) under fourth toe.

Dorsally brown or reddish brown, usually more reddish on head and tail, sometimes with little or no pattern, but usually back, sides, base of tail and legs with angular greyish-white spots which mostly occupy whole of scale and cluster into groups of 4-20 to form irregular transverse bars, a few blackish-brown spots margining some clusters in a few specimens. Upper lips, ear lobules and lower surfaces pale.
Fig. 1: Map of Western Australia, showing location of specimens of *Egernia depressa*, *E. s. stokesii*, *E. s. aethiops* and *E. s. badia*.
Paratypes

North-west Division: Callagiddy, 34 km SE of Carnarvon (34562); Dirk Hartog I. (42374); Rothsay State Forest (29591).

South-west Division: Mullewa (2776); Three Springs (8842); 7 km N of Carnamah (23833); 43 km SE of Perenjori (28911); Caron (4147-8, 23817, 27761-2); Bunjil (1117-8); Latham (3355-6); Coorow (1277); Buntine Reserve (43651); Pithara (2829); Kalannie (15816); 14 km E of Kalannie (21966); North Mollerin (2271); Miling (7932); Damboring (877); Ballidu (5230); Koorda (4556, 5278); 23 km N of Mukinbudin (22897); Kununoppin (44538); Benjabbering (37722); Kellerberrin (21210) [found in schoolyard, but possibly transported in firewood from well north of town].

**EGERNIA KINGII**


Diagnosis

A very large *Egernia* with keeled dorsal scales, fragile tail, strong postnarial groove, and dorsal and lateral coloration dark grey or black with or without small whitish spots or short streaks. Further distinguishable from members of *Egernia striolata* group by dark upper lip and absence of broad longitudinal stripes, especially dark upper lateral-temporal-oreal band and pale laterodorsal band.

Distribution

Southwestern Australia, north to the Hutt River, east to Duke of Orleans Bay, and inland to Gingin, Tutanning Reserve, Mooterdine, Katanning and Jerramungup; also numerous islands from the Houtman Abrolhos to the Archipelago of the Recherche.

Description

Snout-vent length (mm): 64-244 (N 109, mean 166). Length of appendages (% SVL): foreleg 22-34 (N 98, mean 26.7); hindleg 31-42 (N 98, mean 35.7); tail 94-157 (N 44, mean 127.7).
Nasals narrowly to moderately separated; occasionally (7%) just touching; postnarial groove usually strong, occasionally weak, seldom (3%) completely dividing nasal by continuing upwards from top of nostril. Prefrontals in contact or separated. Frontal slightly wider (juveniles) or much wider (adults) than interparietal. Enlarged nuchals 1-5 (N 85, mean 2.7) on each side. Supraciliaries 5-9 (N 89, mean 6.9), largest usually first, occasionally third, rarely second (when second and third fused). Presuboculars 2, rarely 3. Upper labials 7-10 (N 95, mean 8.8). Temporals 3, lower secondary much the largest, primary smallest (except in one specimen). Ear aperture moderately narrow and nearly vertical; lobules 4-6 (N 84, mean 5.0), obtuse or subacute, first usually very small, second or third usually largest. Midbody scales in 32-46 rows (N 89, mean 38.3); dorsals with 2 or 3 (occasionally 4) keels, moderately sharp in adults, weak in juveniles. Subdigital lamellae smooth, 22-29 under fourth toe (N 88, mean 25.0).

Upper surface black, dark grey, dark brown or dark olive, usually palest and brownest on head. Back and sides usually dotted white, cream, pale brown or pale grey; dots usually arranged in short longitudinal series of 2-4, often coalescing to form dashes. Under surface (especially throat and tail) usually spotted, streaked, variegated or clouded with greyish brown or black; rarely immaculate.

Geographic variation

Egernia kingii undergoes much individual variation, especially in coloration. However, there is considerable geographic variation.

Number of midbody scale rows increases from northwest to southeast; in the Abrolhos it ranges from 32-36 (N 22, mean 34.4); on the west coast and hinterland north of lat. 32° S, 34-40 (N 21, mean 36.4); west coast and hinterland south of 32° S, 36-42 (N 17, mean 39.6); south coast, 40-45 (N 23, mean 41.2); and Archipelago of the Recherche, 42-46 (N 6, mean 43.8). Number of lamellae under fourth toe increases slightly over the same area, averaging 24.1 in the Abrolhos and 25.7 in the Recherche. Upper labials average 8.4 in the Abrolhos, 8.7 on west coast and hinterland north of 32° S, and 9.0 elsewhere. Prefrontals are separated in 8% of specimens from the Abrolhos and west coast, 27% of specimens from the south coast and 72% of specimens from the Recherche. In the Abrolhos the second loreal is usually higher than wide; southwards and eastwards its relative height decreases, so that it is usually no higher than wide in the Recherche. Ear lobules average 4.3 in the Abrolhos, 4.8 in the northern sector of the west coast, and 5.5 further south.
Fig. 2: Map of Western Australia, showing location of specimens of *Egernia kingii* and *E. luctuosa*. 
Variation in other meristic characters is non-clinal, with the lowest counts in the Abrolhos and little or no variation elsewhere. For example, number of supraciliaries averages 6.4 in the Abrolhos and 7.1 elsewhere. Nuchals average 2.3 in the Abrolhos and 2.8 elsewhere.

Remarks

The original description of *T. dumerilii* is a composite of *E. kingii* and *E. napoleonis*. In order to stabilize their name, I hereby designate the specimen measured by Duméril & Bibron as lectotype of *T. dumerilii*; its great size (SVL 217) identifies it with *E. kingii*.

The presumed holotype of *T. nitida* Gray (43.5.11.2, stuffed specimen in British Museum) agrees well with specimens of *E. kingii* from the vicinity of Perth. It has SVL 240, nasals separated moderately widely, prefrontals forming a median suture, frontal wider than interparietal, 3 enlarged nuchals on each side, ca 7 supraciliaries (first largest), 2 loreals (second much higher than wide), 2 presuboculars, 8 and 9 upper labials, lower secondary temporal much the largest, 4 ear lobules, 37 midbody scale rows (mid-dorsals moderately cuspidate and bearing 3, occasionally 4 or 2, keels) and 25 lamellae under fourth toe. It is olive brown above without pale spots; it is pale below.

Material

South-west Division: North I., Houtman Abrolhos (16666, 47819-20); East Wallabi I., H.A. (28907-8, 46553); West Wallabi I., H.A. (16698); Seagull I., H.A. (25850); Long I., H.A. (37504); No. 3, south of Gun I., H.A. (30450); Pelsart I., H.A. (22949-56, 27171, 43596); 11 km E of mouth of Hutt River (27775, 53726); 65 km S of Dongara (19760-1); Boulanger I. (16678); Cervantes Is (16680, 19921); Gingin (3787); Yanchep National Park (47660); Marmion Beach (24086); Morley (51782); West Leederville (4348); Rottnest I. (16684-5, 51754); Carnac I. (4977, 25363-6); Garden I. (29786, 34651); North Lake (21850); Carmel (36176); Churchmans Brook (16701); Armadale (835); North Jarrahdale (30945); Jarrahdale (9347-8); Tutanning Reserve (39955); Mooterdine (27770-1); Contine (53617); Yunderup (21555, 36447); mouth of Capel River (26556-7); Ludlow (45755); Nannup (45756); Kojonup (2727); Katanning (12080-3); Jerramungup (12961); Tambellup (2102-3); Margaret River (49815-6); Mammoth Cave (88); Scott River (36041); St Alouarn I. (39686); Chatham I. (49817-20); Walpole (51444); Eclipse I. (4789, 49278); 3 km W of Bald Head (25076); Michaelmas I. (52166); Breaksea I. (51046); Coffin I. (22751); Two Peoples Bay (36374, 36376-8, 36381, 53158); King Creek (27769, 53618); Waychinicup River (53619); Bald Island (19966-7, 22596, 29693, 53138); Cape Riche (29823); Pallinup River (7879); Phillips River (22533).
Eucla Division: Oldfield River (22571); Gull I. (39083); Sandy Hook I. (41918); Wilson I. (53152-3); Mondrain I. (53111, 53115).

EGERNIA NAPOLEONIS


Egernia nitida, auctt., especially Loveridge (1934: 339) and Mitchell (1950: 287), nec Gray.

Diagnosis

A member of the E. striolata group with dorsal scales strongly keeled and proximal upper caudals not enlarged. Further distinguishable from E. carinata by presence of broad pale dorsolateral stripe and rounded (not rectangular) black dorsal spots, and from E. kingii by whitish (not dark) upper lips and pink (not greyish) abdomen.

Distribution

Western populations: Southwest of Western Australia from Jurien Bay south and east to Cheyne Beach and inland to Mt Peron, Bullsbrook, Mundaring, Wandering, Tambellup and the Stirling Range; also Rottnest, Hamelin, Eclipse and Bald Islands.

Eastern populations: South and southeast coasts and coastal hills of Western Australia from Bremer Bay east to Twilight Cove; also many islands in the Archipelago of the Recherche.

Description of western populations

Snout-vent length (mm): 42-111 (N 276, mean 77.8). Length of appendages (% SVL): foreleg 24-34 (N 232, mean 28.0), hindleg 30-47 (N 233, mean 38.5), tail 108-163 (N 140, mean 135.8).

Nasals separated, usually narrowly; occasionally (6%) in short contact; postnarial groove strong. Prefrontals in contact, usually forming a long median suture; occasionally (7%) narrowly separated. Frontal wider than interparietal in adults; slightly wider or slightly narrower in juveniles. Enlarged nuchals 0-6 (N 186, mean 2.5) on each side. Supracaillaries 4-8 (N 198, mean 5.5); second usually, first or third occasionally, largest. Second loreal usually wider than high. Presuboculars 2, rarely 3. Upper labials 7-10 (8 in 80% of specimens, N 185, mean 8.1). Temporals 3, lower secondary largest, primary smallest. Ear aperture moderately narrow and nearly
vertical; lobules 2-6 (usually 4, N 173, mean 4.2), usually subacute in adults and obtuse in juveniles; first usually very small, second usually largest. Midbody scales in 32-42 rows (N 170, mean 36.2), dorsals tending to be tricuspidate in adults and bearing 3, 2 or 4 strong, acute keels; dorsals not cuspidate in juveniles and bearing 2 or 3 (occasionally 4) weak, obtuse keels. Subdigital lamellae broadly callose; 19-28 (N 167, mean 23.4) under fourth toe.

Dorsally dark olive or brown, back with black spots of variable size and shape and tending to align in 3 longitudinal series and leaving unspotted a broad paler laterodorsal stripe. Upper lateral zone usually black anteriorly and extending forward as an irregular stripe through temples and orbit to lores. Upper labials white or pale brown or olive, or pale-centred, more or less sharply differentiated from scales above them. Back occasionally and sides often dotted with white. Under tail and occasionally throat grey. Abdomen salmon-pink in life. Subdigital lamellae and sometimes plantar tubercles dark brown.

Description of eastern populations

Snout-vent length (mm): 48-133 (N 50, mean 100.7). Length of appendages (% SVL): foreleg 23-35 (N 49, mean 28.5), hindleg 32-46 (N 50, mean 38.9), tail 117-172 (N 30, mean 144.0).

Nasals separated, usually narrowly (in very short contact in one specimen). Prefrontals in contact, usually forming a long median suture. Frontal much wider than interparietal in adults, slightly wider in juveniles. Enlarged nuchals 1-4 (N 42, mean 2.4) on each side. Supraciliaries 5-7 (N 48, mean 6.0), second usually, first or third occasionally, largest. Second loreal wider or narrower than high. Presuboculars 2 (80%) or 3. Upper labials 8 or 9 (N 48, mean 8.4). Temporals 3, lower secondary largest, primary smallest. Ear aperture moderately narrow and nearly vertical; lobules 3-7 (N 46, mean 4.6), subacute or acute in adults, obtuse in juveniles, first very small, second or third largest. Midbody scales in 36-46 rows (N 46, mean 40.1), dorsals bearing 3 or 2 (occasionally 4) moderately sharp and strong keels in adults and 2 or 3 weak obtuse keels in juveniles. Subdigital lamellae broadly callose, 21-28 (N 46, mean 24.4) under fourth toe.

Dorsally dark olive or brown; head shields black-edged; back with black spots of variable shape and size; median spots tending to align and form a vertebral stripe; lateral spots tending to arrange in transverse or oblique series and sometimes coalescing into an irregular zigzagging stripe; broad laterodorsal stripe of ground colour. Upper lateral zone usually black anteriorly

Geographic variation

The populations west of long. 119° E are fairly uniform. Those from islands off the south coast are the most distinctive in coloration; on Eclipse Island, and to a lesser extent on Bald Island, the black dorsal spots tend to coalesce into three stripes. In other respects the populations north of Yanchep are the most distinctive. Here the limbs are somewhat shorter than further south (mean length of foreleg 26.4 vs 28.2, and hindleg 35.9 vs 38.8). Subdigital lamellae are fewer (mean 22.0 vs 23.6); ear lobules are fewer (2-5, mean 3.5; vs 3-6, mean 4.2); and the frequency of individuals with contiguous nasals is higher (25 vs 4%). Other variation in the west is clinal, e.g. relative length of tail increases and number of supraciliaries decreases from north to south.

The eastern populations differ from the western in their colour pattern, greater size and more numerous midbody scale rows, supraciliaries and upper labials. Coming from several islands and from widely separated sectors of the mainland coast, they are understandably less uniform than the western populations. In the Cape Le Grand National Park, for example, the number of midbody scale rows (40-46, N 13, mean 42.1), number of ear lobules (4-6, N 13, mean 4.7) and frequency of 9 upper labials (40%) are considerably higher than on nearby North Twin Peak Island (where the corresponding counts are 36-40, N 9, mean 38.1; 3-4, N 9, mean 3.8; and 9%).

Material

South-west Division, west of 119° E: 2 km W of Mt Peron (49127); 5 km W of Padbury HS (48466); Mt Lesueur (49119-20); 12 km S of Padbury HS (22227-9); 10 km NE of Jurien Bay (29208, 46561); 12 km SE of Jurien Bay (46555-60); 17 km N of Lancelin (16699); 13 km N of Yanchep (12842); Bullsbrook (29166); Wanneroo (31552); Mussel Pool (51546, 51548); Gidgiegannup (37715, 46611); Mundaring (26449, 30393-4); 10 km E of Kalamunda (17311, 19159); Guildford (26035); Rottnest I. (2009-10, 2359, 2557, 2856, 3733, 22335); Bibra Lake (16700); Bickley (6467); E of Pickering Brook (51158); Kelmscott (51396, 51404); Mt Randall (40210); Wungong Gorge (47658); Wandering (4366); Dwellingup (39965-9); 5 km E of Dwellingup (40122, 40124); Boddington (6058);
Dryandra (31941, 40836, 47790); Contine (27781-2); Mooterdine (29816); Waroona (41241); Mt William (16702); Collie and district (22832, 24826, 46391); Meelup (near Cape Naturaliste) (16703); Dunsborough (12324-7); Busselton (26220, 47379-81, 47383); 12 km SW of Boyup Brook (31122-4); Bridgetown (1163-6, 8374); 17 km E of Nannup (21893); Nannup (47378, 47382, 47384); Margaret River (4604); Witchcliffe (6816); Karridale (13464); Hamelin I. (16705-6); Hamelin Bay (16704); Deepdene (12773-5); 8 km NW of Augusta (16707, 37805-6, 39013); Cape Leeuwin (16708); Scott River (14179, 36046); Carey Brook (22783-4); 10 km WNW of Manjimup (39730); Meerup (47879-83); between upper reaches of Perup and Tone Rivers (42569-73, 42578); Tambellup (1533-6); Mt Toolbrunup (818, 21818, 51788); Bluff Knoll (51787); Tolls Pass, Stirling Range (1998); 17 km S of Rocky Gully (46305); Yeagerup (47924-5); Mt Chudalup (49708); East Broke Inlet (47960-7); Walpole (51436, 51443, 51459, 51463, 51477-8); Valley of the Giants, Normanup (26036-41); Kent River (265, 44673-5, 46539-40); Denmark and district (24952-3, 24970, 40975); Mitchell River (43829-35); Chorkerup (4486); West Cape Howe (21816-7); Torbay Head (51792); Torbay Inlet (16709-10); Eclipse I. (6802, 11279, 45771, 49678-84); Albany (6788); Two Peoples Bay (36352-3, 36380, 37833, 53157); Gidley Creek (27778-9); King Creek (27780); Cheyne Beach (16711-4, 31166, 36020-8); Bald Island (16715-60, 19968-71, 40818-21, 53175, 53205-16).

South-west Division, east of 119° E: Hunter River, 8 km E of Bremer Bay (36201); Boondardup River (34° 13' S, 119° 31' E) (37197, 37207); West Mt Barren (36886-7); East Mt Barren (16761, 39001).

Eucla Division: Cape Le Grand National Park, including Mt Le Grand, Frenchmans Peak, Lucky Bay, Rossiter Bay and Duke of Orleans Bay (22525, 41987-98); Boxer I. (10116); Sandy Hook I. (41917); Corbett I. (53147-9); Wilson I. (53154-5); Mondrain I. (10114); North Twin Peak I. (16762-3, 53086-7, 53097-102, 53104-5); Middle I. (47657); “Archipelago of the Recherche” (11382); Toolinna Rockhole (32° 46' S, 124° 57' E) (45350), Point Dover (53759); Twilight Cove (44976).

EGERNIA CARINATA


Diagnosis

A member of the E. striolata group with dorsal scales very weakly keeled, proximal supracaudals not enlarged, and no pale laterodorsal stripe. Further
distinguishable from *E. napoleonis* by oblong (rather than round) black dorsal spots, and from *E. formosa* by black (rather than dark brown) dorsal spots and anterior upper lateral stripe.

**Distribution**

Southern interior of Western Australia, north to the Southern Cross district, west to the eastern and southern Wheat Belt, south nearly to the Stirling Ranges, and east nearly to the Great Australian Bight.

**Description**

Snout-vent length (mm): 47-105 (N 48, mean 87.5). Length of appendages (% SVL): foreleg 24-30 (N 47, mean 26.6), hindleg 30-40 (N 47, mean 35.5), tail 89-129 (N 33, mean 112.4).

Nasals separated (usually narrowly) or just touching (6%); postnarial groove moderately strong. Prefrontals in contact, usually forming a long median suture (very narrowly separated in one specimen). Frontal wider than interparietal. Enlarged nuchals 2-4 (N 44, mean 2.8) on each side. Supraciliaries 5-7 (N 45, mean 6.1); first (46%), third (42%), fourth (10%) or fifth (2%) largest, never second. Second loreal wider than high. Presuboculars 2 (3 in one specimen). Upper labials 7-9 (N 47, mean 7.8). Temporals 3, lower secondary largest, primary smallest. Ear aperture moderately narrow and nearly vertical; lobules 2-4 (N 46, mean 3.2), obtuse in juveniles, usually subacute in adults, first or second largest. Midbody scales in 29-34 rows (N 48, mean 31.4) with 2-5 (mostly 4 or 3) low wide keels (actually the troughs between the keels are more conspicuous than the keels themselves, so that the scales would be better described as striate). Subdigital lamellae broadly callose, 19-24 (N 43, mean 21.2) under fourth toe.

Dorsally olive grey or olive brown, with or without a broad rufous band across neck. Back evenly covered with about 8 longitudinal series of black spots (leaving no broad pale unspotted laterodorsal stripe), spots usually oblong in shape and often laterally edged with white. Upper lateral zone black with white dots, extending forward as a stripe to orbit, not always extending back on to rear of body. Upper labials pale, more or less sharply differentiated from darker scales above them. Chin and throat with or without a pale grey wash, scales with or without dark sutures.

**Geographic variation**

This species has a small compact distribution, and there is consequently little geographic variation. Number of upper labials increases from west to
east (7 or 8 in the Wheat Belt, i.e. east to the longitude of Yellowdine; 8 from Karalee to Norseman; and 8 or 9 in far east). Rufous-necked individuals seem to be confined to the northernmost part of range, i.e. from Southern Cross east to Boorabbin and south to Split Rock.

Remarks

_Egernia carinata_ is geographically intermediate between _E. napoleonis_ and _E. formosa_, and in many respects it is morphologically intermediate, e.g. number of midbody scale rows, subdigital lamellae, supraciliaries and upper labials, and in the strength of dorsal keels.

_E. carinata_ agrees with _napoleonis_, and not with _formosa_, in the possession of black pigment. It agrees with _formosa_ rather than _napoleonis_ in usually having the dorsal spots oblong in shape and pale-edged. It differs from both species in the shortness of its tail and in having no pale laterodorsal stripe.

One of the southern populations of _E. napoleonis_, viz. that from the Stirling Ranges, approaches within 40 km of the range of _E. carinata_, whereas the northern populations (north of Yanchep) are separated by more than 250 km. Yet it is these northern populations of _napoleonis_ that most resemble _carinata_. Relative length of limbs, for example, is almost identical in northern _napoleonis_ and _carinata_ (and _formosa_).

Material

South-west Division: 65 km E of Narembeen (25829); Lake Varley (18477, 27259); Dragon Rocks Reserve (43733-4); North Tarin Rock Reserve (40080, 44440); Kukerin (6103-4, 6109); Chinocup Reserve (41076); Lake Magenta Reserve (39887-9, 39933, 45927, 47334); Ongerup (2535, 2537).

Eastern Division: 21 km W of Boorabbin (25954); 37 km S of Karalee (33982); 45 km S of Karalee (33980-1); 47 km S of Karalee (33959-61, 33964-6); 24 km S of Yellowdine (37936); 29 km S of Yellowdine (37921-8); “fork leading to Yellowdine-Marvel Loch road” (33983); 48 km S of Southern Cross (25217); Cheritons Find (23326).

Eucla Division: Split Rock, 30 km N of Mt Holland (37829); Norseman (8014); Pine Hill (36227-8); Junana Rock, 11 km NW of Mt Ragged (17606-7, 36246).

Diagnosis

A member of the E. striolata group with smooth dorsals and unenlarged supracaudals. Further distinguishable from E. carinata by absence of black pigment and presence of broad pale laterodorsal stripe. Distinguishable from E. douglasi by spotted back, lesser size and more numerous upper labials, midbody scale rows and subdigital lamellae.

Distribution

Arid interior of Western Australia from the southern highlands of the Pilbara (Roebourne Tableland, Hamersley Ranges and Ophthalmia Range) south nearly to Norseman, and east to the western edge of the Great Victoria Desert and the Nullarbor Plain.

Description (excluding Pilbara specimens)

Snout-vent length (mm): 57-96 (N 37, mean 79.0). Length of appendages (% SVL): foreleg 22-30 (N 37, mean 26.7), hindleg 30-40 (N 37, mean 35.7), tail 108-150 (N 15, mean 136.1).

Nasals separated, usually narrowly; occasionally (9%) in short contact; postnarial groove weak. Prefrontals forming a median suture (77%) or just touching or very narrowly separated. Frontal slightly wider (juveniles) or much wider (adults) than interparietal. Enlarged nuchals 1-5 (N 35, mean 3.1) on each side. Supraciliaries 6 or 7 (N 37, mean 6.8), first (57%) or third largest. Second loreal usually wider than high. Presuboculars 2. Temporals 3, lower secondary largest, primary smallest. Upper labials 7 (N 35). Ear aperture moderately narrow and nearly vertical; lobules 3 or 4 (N 32, mean 3.7), usually obtuse, occasionally truncate or subacute; first usually very small, second usually largest. Midbody scales in 28-30 rows (N 37, mean 28.9), dorsals usually smooth, rarely faintly striate. Subdigital lamellae usually smooth or callose, occasionally distal lamellae obtusely keeled; 17-22 (N 34, mean 19.1) under fourth toe.

Dorsally pale brown or olive. Back with dark brown oblong spots (lateral edges occasionally pale), not extending to laterodorsal region and occasionally arranged anteriorly into two paravertebral stripes. Broad pale laterodorsal stripe. Broad dark brown upper lateral stripe extending forward to temples or lores. Back and sides (except on laterodorsal and upper lateral stripes)
occasionally dotted or flecked with brownish white. Lips, chin and throat barred with brown.

**Geographic variation**

The five specimens from the Pilbara are excluded from the above description, for they could prove to be subspecifically distinct. They differ in their greater size (SVL 84-107, mean 100.6), more numerous scale rows (30), more numerous lamellae under fourth toe (21-23, mean 22.0), more numerous supraciliaries (7 or 8, mean 7.2) with first invariably largest, more numerous ear lobules (3-6, mean 4.6), and in three of the specimens the dorsal spots are paler and less numerous than in central and southern specimens.

Specimens from the central zone (Carnarvon Range to Laverton) are to a small extent intermediate between Pilbara and southern specimens. They are slightly larger than southern specimens and have slightly more numerous midbody scale rows, subdigital lamellae, supraciliaries and ear lobules.

**Material**

North-west Division: Python Pool, Mt Herbert (33423); Tambrey (20016); Wittenoom Gorge (12126); Marandoo Mine, Mt Bruce (52702); 7 km SW of Mt Newman (23994).

Eastern Division: Carnarvon Range (40233); Mt Fisher, 175 km E of Wiluna (13712a-b); White Cliffs (20659, 51069, 51666-9, 53262-3); 40 km NE of Laverton (16765); Linden (46626); Yarri (46615-6); 12 km W of Callion (22540-6); 16 km N of Bardoc (20609); Dedari (19140); “Goldfields” (16-7); Bulong (4299); 13 km W of Karonie (41573-4); 7 km E of Chifley (21655-6); 10 km N of Coonana (16766); Queen Victoria Spring (13029); Zanthus (26426); “Loongana” (29172).

Eucla Division: 24 km N of Norseman (45669).

**EGERNIA DOUGLASI**


**Diagnosis**

A large member of the *E. striolata* group with striate dorsals and unenlarged supracaudals. Distinguishable from *E. formosa* by its unspotted
colour pattern, greater size, and fewer upper labials, midbody scale rows and subdigital lamellae.

Distribution

Only known from two localities in subhumid northwest Kimberley.

Description

Snout-vent length (mm): 140-170 (N 4, mean 153.5). Length of appendages (% SVL): foreleg 23-25 (N 4, mean 23.7), hindleg 30-34 (N 4, mean 32.0), tail 81-101 (N 2).

Nasals separated; postnarial groove extending to top of scale. Prefrontals in median contact. Frontal about as wide as interparietal. Enlarged nuchals 2-5 (N 4, mean 3.9). Supraciliaries 6 or 7 (N 3, mean 6.7), first or last largest. Second loreal wider or narrower than high. Presuboculars 2. Temporals 3, lower secondary largest. Upper labials 6 or 7 (N 3, mean 6.5). Ear aperture moderately narrow and nearly vertical; lobules 3 or 4 (N 3, mean 3.7), subacute or obtuse, second largest. Midbody scales in 26 or 28 rows (N 3, mean 26.5), dorsals with 3-7 striations. Subdigital lamellae smooth, 16-19 (N 4, mean 17.1) under fourth toe.

Dorsal and lateral surfaces reddish brown (Wotjulum) or dark olive brown (Mt Hart), marked on each side with dark brown (Wotjulum) or black (Mt Hart) as follows: (1) broad anterior dorsal stripe beginning a little behind foreleg and continuing forward on to head (where it becomes narrower) and converging on snout, posterior section of stripe angularly wavy and in one specimen continuing back to tail as two series of obscure spots; (2) upper lateral stripe angularly wavy, beginning a little behind foreleg and continuing narrowly forward through temples and orbit to lores; (3) transverse bars on lips and at Mt Hart also on throat and side of neck.

Remarks

Glauert compared this skink with E. striolata of eastern Australia. However, it is still nearer to E. formosa, which it resembles in habit and coloration. Moreover it is clearly the northern representative of a western group of closely related allopatric or parapatric species, in which there is unidirectional change in several characters, e.g. a steady decrease in number of midbody scale rows, subdigital lamellae and upper labials from E. napoleonis through carinata and formosa to douglasi.

Material

Kimberley Division: Wotjulum (11793-4); Mt Hart (57074-5).
Fig. 3: Map of Western Australia, showing location of specimens of *Egernia napoleonis*, *E. carinata*, *E. formosa* and *E. douglasi*. 

**KEY**

- ● *E. napoleonis*
- ○ *E. carinata*
- △ *E. formosa*
- ❌ *E. douglasi*
**EGERNIA LUCTUOSA**

*Cyclodus* (*Omolepida*) *luctuosus* Peters, 1866, Mber. k. preuss. Akad. Wiss. 1866: 90. King George Sound, W.A.


**Diagnosis**

A large member of the *E. luctuosa* species-group with spotted back and subnarial groove.

**Distribution**

Humid zone of southwestern Western Australia from Perth south and east to Cheyne Beach, and inland to Dwellingup, Jarrahwood, Pemberton and Chorkerup.

**Description**

Snout-vent length (mm): 59-129 (N 47, mean 110.3). Length of appendages (% SVL): foreleg 21-28 (N 44, mean 23.9), hindleg 28-40 (N 46, mean 33.7), tail 156-214 (N 19, mean 173.4).

Nasals in contact, usually forming a long median suture; occasionally (4%) very narrowly separated; postnarial groove very short, usually extending from bottom of nasal up to central-bottom of nostril, then occasionally curving up around posterior edge of nostril (but for never more than half way to top of nostril). Prefrontals in contact, usually forming a long median suture; occasionally (6%) very narrowly separated. Frontal wider than interparietal. Enlarged nuchals 0-4 (N 42, mean 2.9) on each side. Supraciliaries 6-9 (usually 8, N 37, mean 8.0), first largest (rarely second, when narrow second fused to third), last often higher than low fourth to penultimate. Second loreal usually (95%) wider than high. Presuboculars usually 3, occasionally (10%) 2, rarely (2%) 4. Upper labials 7 or 8 (N 47, mean 7.4). Temporals 3, lower secondary largest, primary smallest. Ear aperture nearly as wide as high; lobules 2, usually subacute in adults and obtuse in juveniles; first usually larger. Midbody scales in 22-28 rows (N 47, mean 24.9), dorsals striate, central 2-5 striae orientated longitudinally, lateral striae much shorter and obliquely orientated (at right angles to anterolateral facet of scale). Subdigital lamellae broadly callose, 21-28 (N 38, mean 24.1) under fourth toe.

Dorsal ground colour varying from greenish yellow through yellowish brown to very dark brown. Six longitudinal series of oblong or square black
dorsal spots, occasionally pale-edged; innermost spots covering inner half of most paravertebral scales, outer spots confined to median strip of dorsal scales. Head shields irregularly edged with black. Black spots on side of body densely clustered in upper lateral zone, much less dense in lower lateral zone. Centres of upper labials pale, resulting in a narrow labial streak. Under surface washed with grey and often spotted with black.

Material

South-west Division: Herdsman Lake (31955); Mongers Lake (12910, 30044-5); Leederville (758); Dwellingup (39970); Jarrahwood (45752); Carey Brook (27793); Pemberton (12300); Yeagerup (47859-61, 47927); Walpole (51439, 51454, 51457); 44 km S of Rocky Gully (46258); Kent River (46543); 8 km W of Denmark (27794-5); Denmark (8476); Chorkerup (4419); Albany (53738-41); Two Peoples Bay (16767-8, 36351, 36368-9, 36373, 36379); Gidley Brook (27791); King Creek (27788-90); Mt Many Peaks (27792); Waychinicup River (27785-7, 53758); Cheyne Beach (23327, 36018-9); “Queensland” (QM J249, holotype of E. lauta).

EGERNIA COVENTRYI sp. nov.

Holotype

D18284 in the National Museum of Victoria, collected by P.A. Rawlinson and K.C. Norris on 5 March 1971 at Shipwreck Creek, ca 20 km SW of Mallacoota, Victoria, in 37° 37' S, 149° 39' E.

Diagnosis

A small member of the E. luctuosa group, distinguishable from E. luctuosa by its striped rather than spotted back and long postnarial groove; it is also smaller, with relatively shorter appendages, smaller ear aperture, nasals and prefrontals, and fewer midbody scale rows, subdigital lamellae, supraciliaries and upper labials.

Distribution

Southern Victoria.

Description

Snout-vent length (mm): 32-102 (N 27, mean 80.4). Length of appendages (% SVL): foreleg 19-26 (N 26, mean 22.0), hindleg 29-37 (N 26, mean 32.3), tail 129-171 (N 13, mean 149.1).
Nasals narrowly separated (63%) or in short contact; postnarial groove extending to top of nostril. Prefrontals separated (64%), usually narrowly, or forming a short to long median suture. Frontal wider than interparietal. Enlarged nuchals 2-4 (N 27, mean 3.1) on each side. Supraciliaries 5-7 (N 27, mean 6.5), first largest when 7, second largest when 5 or 6 (owing to fusion of wide third with narrow second). Second loreal usually (78%) wider than high. Presuboculars usually 2, occasionally (22%) 3, rarely (7%) 1. Upper labials 6 or 7 (N 27, mean 6.9). Temporals 3, lower secondary usually largest, primary smallest. Ear aperture small, nearly as wide as high; lobules 2, subacute in adults, obtuse in juveniles, first larger. Midbody scale rows 21-24 (N 25, mean 23.2), mid-dorsals faintly striate, central striae longitudinally orientated, anterolateral striae (when present) short and obliquely orientated (i.e. at right angles to anterolateral facets of scales). Subdigital lamellae broadly callose, 17-21 (N 23, mean 18.6) under fourth toe.

Dorsally yellowish brown, grey or olive. Usually a wide ragged-edged blackish-brown laterodorsal stripe from nape to base of tail, leaving a pale to moderately dark dorsolateral stripe and vertebral band of ground colour. Sides with many blackish-brown scales, especially in upper lateral zone; in
most specimens many dark scales bearing a central whitish dot or dash. Head and face of dorsal ground colour, with or without irregular blackish-brown spots. Usually a whitish streak through centre of upper labials. Under surface greyish white, darkest under tail.

Remarks

Named after Mr A.J. Coventry of the National Museum of Victoria in appreciation of his services to Australian herpetology.

Paratypes

Victoria: Grampians (NMV D17299); Johnstones Creek, W of Portland (NMV D14740); Dennington, 10 km NW of Warrnambool (28715; NMV D18282); Healesville (AM R8871, 9496-7); Bayswater (NMV D17169); French I. (NMV D38510); Cape Liptrap (NMV D42220, 47895); Rosedale (NMV D989, 2501-2); near Bemm River P.O. (NMV D34217-23, 34237); 1 mile N of Sandpatch Point (NMV D34240-1); Shipwreck Creek (NMV D18283, 18285); "Victoria" (NMV D1307).

EGERNIA PILBARENSIS sp. nov.

Holotype

R31117 in Western Australian Museum, caught by Mr A.M. Douglas at 1730 hr on 10 September 1967 in a break-back trap on a rocky ridge 6 km NW of Pyramid, Western Australia, in 21° 01' S, 117° 24' E.

Diagnosis

A moderately large, reddish brown, almost patternless Egernia with smooth scales, very short toes and tuberculate palms and soles.

Distribution

Rocky hills of the Pilbara region of northwestern Western Australia, including the Dampier Archipelago.

Description

Snout-vent length (mm): 100-121 (N 5, mean 111.6). Length of appendages (% SVL): foreleg 22-27 (N 5, mean 24.3), hindleg 29-36 (N 5, mean 32.0), tail 117-167 (N 5, mean 132).
Nasals separated (4 specimens) or in very short contact (one specimen). Prefrontals in medium to long contact (4 specimens); very narrowly separated (1 specimen). Frontal as wide as (one specimen) or wider than interparietal (4 specimens). Enlarged nuchals 3 or 4 (N 5, mean 3.4) on each side. Supraciliaries 7 (4 specimens) or 8 (1 specimen); first largest. Second loreal wider than high. Upper labials 8 or 9 (N 5, mean 8.6). Temporals 3, lower secondary largest, primary smallest. Ear aperture narrow rectangular, almost vertical; lobules 4-6 (N 5, mean 5.0), subacute, second to fourth largest. Midbody scales in 32 or 34 rows (N 5, mean 33.6), mid-dorsals smooth or very faintly striate. Lamellae under fourth toe 13-16 (N 5, mean 14.5); proximal lamellae broadly callose, distal lamellae smooth (i.e. thin-scaled). Plantar tubercles brown, becoming large towards heel (as in *Ctenotus pantherinus calx*).

Back and sides reddish brown, darkest on lores and temples and anteriorly in upper lateral zone. Sides unmarked or dotted with white or indistinctly marked with pale obliquely vertical lines. Upper labials pale brown or brownish white, slightly to sharply differentiated from scales above them. Lower labials and chin shields with or without dark sutures. Gulars with or without brown spots or edges.
Paratypes

North-west Division: Cape Lambert (AM R37481); Python Pool, Mt Herbert (33424); Rosemary I. (37379-80).

EGERNIA PULCHRA PULCHRA


Diagnosis

A slender, moderately large, flat-headed member of the *E. whitii* group with keeled dorsals and much black and grey in coloration. Further distinguishable from *E. multiscutata* by smooth subdigital lamellae.

Distribution

Humid southwest corner of Western Australia, north along the Darling Range to Dwellingup, and east along the south coast to Cheyne Beach; also in the Stirling Ranges and on Eclipse Island.

Partial redescription


Nasals separated. Prefrontals forming a long median suture (separated in one specimen). Frontal much wider than interparietal in adults, slightly wider in juveniles. Enlarged nuchals 1 (rarely 2) on each side. Supraciliaries 6-10 (N 42, mean 7.7), first usually (88%) largest. Second loreal usually wider than high, occasionally (26%) no wider. Presuboculars 2 (N 38). Upper labials 7 or 8 (N 47, mean 7.2). Temporals 3, lower secondary much the largest, primary smallest. Ear aperture narrow to moderately wide; lobules 2-6 (N 38, mean 3.4), obtuse or acute, third from bottom usually largest. Midbody scales in 34-40 rows (N 46, mean 36.6), dorsals with 2-4 (mostly 3) keels (weak in adults, very weak in juveniles). Subdigital lamellae divided, 22-30 (N 39, mean 25.4) under fourth toe.

Coloration and geographic variation

See Ford (1963, 1965) and Storr (1968).
Additional material

South-west Division: Dwellingup (39962-4); Nannup (47385-8); Cowaramup (34001); Canebrake Road, 23 km N of the Scott River (36049-51); Pemberton (33437); Yeagerup (47926); Meerup, east Warren River (47888); 43 km S of Rocky Gully (46260-1); small islet S of Signal Point, Broke Inlet (45751); Walpole (51433-5, 51441, 51458, 51460-1, 51470); Kent River area (46541); Cheyne Beach (31167, 36031-2, 36316-7).

EGERNIA PULCHRA LONGICAUDA


Diagnosis

Distinguishable from E. pulchra pulchra by orange abdomen, nasals usually in contact, and very long tail.

Distribution

Jurien Bay islands (Favourite, Boullanger, Whitlock and Escape) off lower west coast of Western Australia.

Description and geographic variation

See Storr (1968).

Additional material

None.

EGERNIA MULTISCUTATA BOS


Diagnosis

A small deep-headed member of the E. whitii group with smooth dorsals and usually much black and grey in coloration. Further distinguishable from E. pulchra by bicarinate subdigital lamellae.
Distribution

Semi-arid and subhumid sandplains and coastal dunes of southern Western Australia: Shark Bay (Bernier Island); lower west coast from Stockyard Gully south to Lancelin Island, including islands in Jurien Bay (Sandland, Favourite, Boullanger, Essex); and from the south coast (west to Cheyne Beach) north to York, Corrigin, Bendering, Kambalda, Coonana and Madura. Extralimital in southern South Australia.

Description

Snout-vent length (mm): 34-96 (N 139, mean 70.4). Length of appendages (% SVL): foreleg 25-36 (N 124, mean 31.0), hindleg 34-51 (N 124, mean 41.2), tail 126-179 (N 62, mean 151.0).

Nasals separated, usually widely or moderately widely, seldom narrowly. Prefrontals usually forming a long median suture, very rarely separated. Frontal usually a little wider than interparietal, except in juveniles (where occasionally narrower). One enlarged nuchal on each side. Supraciliaries 6-10 (N 102, mean 7.6), first almost invariably (97%) largest. Second loreal usually wider than high. Presuboculars usually 2, rarely (7%) 3. Upper labials 7-8 (N 123, mean 7.7). Temporals normally 3, lower secondary much the largest, primary smallest. Ear aperture very narrow to moderately narrow, nearly vertical; lobules 3-6 (N 115, mean 4.0), usually obtuse, occasionally subacute or truncate, first usually largest. Midbody scale rows 37-46 (N 105, mean 41.6). Subdigital lamellae bicarinate, 21-30 (N 109, mean 24.1) under fourth toe.

Coloration and geographic variation

The only thing to add to the analysis in Storr (1968) is that three of seven specimens from near Cocklebiddy in the southeast of Western Australia are almost patternless. Such variants were previously known only from Eyre Peninsula, South Australia.

Additional W.A. material

South-west Division: Mt Peron (48435, 49131-5, 49215); Cockleshell Gully (48465, 48516, 49296); Mt Lesueur (52037); 16 km NE of Jurien Bay (31282, 31558, 46566-71, 46585); Jurien Bay (31533-6); Boullanger I. (31286-7); lower Hill River (40487); York (39103); Boyagin Reserve (41012-3); Tutanning Reserve (40562); Bendering Reserve (43406-7, 43444, 43675); Lake Varley (28949-50); Dragon Rocks Reserve (43721, 43776); Greenshield Soak, 27 km E of Pingrup (39804); Lake Chinocup Reserve
(43476, 43484); lower Fitzgerald River (36783, 36929); Cheyne Beach (36029-30).

Eastern Division: Kambalda (47249).

Eucla Division: 32 km WNW of Norseman (31283-5); 14 km N of Norseman (47250); 6 km N of Norseman (51070-1); Rossiter Bay (42589); 19 km W of Israelite Bay (31091); 8 km W of Israelite Bay (31092-100); 17-26 km SE of Cocklebiddy (34481-4, 53405-7); 32 km N of Madura (29423).

**EGERNIA INORNATA**


**Diagnosis**

A small, deep-headed, smooth-scaled member of the *E. whitii* group with dorsal coloration varying from pale brownish yellow to dark coppery red. Further distinguishable from *E. multiscutata* by subdigital lamellae narrowly callose or obtusely uncarinate (seldom bicarinate) and upper labials seldom more than 7, and from *E. striata* by presence of black or blackish brown pigment.

**Distribution**

Arid and semi-arid interior of Western Australia, north nearly to lat. 24° S, and south to the northern and eastern Wheat Belt, Eastern Goldfields and southern edge of Great Victoria Desert. Extralimital in Northern Territory, South Australia and New South Wales.

**Description**


Nasals separated. Prefrontals usually forming a median suture, occasionally just touching or narrowly separated. Frontal usually wider than interparietal in adults, narrower in juveniles. One enlarged nuchal on each side. Supraciliaries 5-8 (N 60, mean 7.5), first largest. Second loreal wider or narrower than high. Presuboculars 2 (rarely 1 or 3). Upper labials usually (95%) 7, rarely 8, very rarely 6 (N 93, mean 7.0). Ear aperture usually narrow; lobules 3-6 (N 86, mean 3.8), subacute or obtuse, first usually largest. Temporals 3,
lower secondary much the largest, primary smallest. Midbody scales in 34-42 rows (N 84, mean 37.8), dorsals smooth, occasionally with very faint striae. Subdigital lamellae slightly compressed with an apical series of grey to dark brown obtuse keels or narrow calli (occasionally an additional keel on slope of lamella), 21-27 (N 85, mean 24.0) under fourth toe.

Coloration and geographic variation

See Storr (1968).

Additional W.A. material

North-west Division: Marloo (30854).

South-west Division: East Yuna Reserve (48189); Lochada, E of Morawa (45704); Buntine Reserve (43655).

Eastern Division: 50 km S of Warburton Range (41581); Lake Throssell (39700); Wanjarri (37784-5, 48037); 30 km N of Neale Junction (48758); 29 km W of Laverton (53286-7); Plumridge Lakes (48706, 48726); 75 km N of Kalgoorlie (52086-7); 3 km W of Dedari (51732); Yellowdine (36180); 29 km S of Yellowdine (37929).

EGERNIA STRIATA


Diagnosis

A moderately large, deep-headed member of the E. whitii group with pupil vertically narrow and back reddish brown longitudinally striped with dark brown. Further distinguishable from E. inornata by lack of black pigment, and from E. kintorei by fewer labials and presuboculars and more pointed ear lobules.

Distribution

Arid zone of Western Australia from the Pilbara and Great Sandy Desert south to Carnarvon and the Great Victoria Desert. Extralimital in southern Northern Territory and northwestern South Australia.
Description


Nasals separated moderately to very widely, rarely (2%) narrowly. Prefrontals usually forming a median suture; rarely (8%) separated. Frontal usually a little wider than interparietal in adults and a little narrower in juveniles. Enlarged nuchals 1 (rarely 2) per side. Supraciliaries 7-10 (N 92, mean 8.5), first largest. Second loreal higher or narrower than wide. Presuboculars 2 (very rarely 3). A complete series of small suboculars present. Upper labials usually 7, rarely (5%) 8 (N 97, mean 7.1). Temporals 3, lower secondary much the largest, primary smallest (not counting a postocular that could be construed as a small upper primary temporal, especially as it usually precludes contact between upper secondary and lower [if not only] primary). Ear aperture narrow to moderately narrow, nearly vertical; lobules 4-6 (N 96, mean 4.7), obtuse or subacute, usually slightly decreasing in size downwards. Midbody scales in 39-46 rows (N 93, mean 42.1). Subdigital lamellae with an apical series of narrow calli, proximal lamellae often divided or notched, 18-24 (N 94, mean 21.4) under fourth toe.

Coloration and geographic variation

See Storr (1968).

Additional W.A. material

Eastern Division: 8 km S of Charlies Knob (53614); Ngaral Soak, 58 km NW of Carnegie (33394); Carnarvon Range (40212-5, 51383); Dunes S of Carnarvon Range (39783); Winduldarra RH (26° 31' S, 126° 01' E) (48741); 29 km E of Terhan RH (34303); 5 km E of Point Sunday, Laverton-Emu track (53555, 53583); Ivor Rocks, White Cliffs (53259); 20 km S of Neale Junction (48791).

EGERNIA KINTOREI

Lectotype locality: 95 km S of Barrow Range, W.A. (Elder Expedition).
Fig. 4: Map of Western Australia, showing location of specimens of *Egernia p. pulchra*, *E. p. longicauda*, *E. multiscutata bos*, *E. inornata*, *E. striata*, *E. kintorei* and *E. pilbrensis*. 
Diagnosis

A very large, robust, deep-headed member of the *E. whitii* group with short thick appendages and pale reddish brown back sharply demarcated from grey sides. Further distinguishable from *E. striata* by much wider pupil, more numerous upper labials and presuboculars, and more obtuse ear lobules.

Distribution

Great Sandy, Gibson and Great Victoria Deserts of Western Australia. Extralimital in the Tanami Desert of Northern Territory.

Description

Snout-vent length (mm): 111-187 (N 10, mean 141.2). Length of appendages (% SVL): foreleg 25-31 (N 10, mean 27.0), hindleg 29-37 (N 10, mean 33.5), tail 106-130 (N.7, mean 118.3).

Nasals widely separated. Prefrontals forming a median suture. Frontal usually wider than interparietal. One enlarged nuchal on each side. Supraciliaries 7 or 8 (N 9, mean 7.8). Second loreal much higher than wide. Presuboculars usually 3. A complete series of small suboculars. Upper labials 8 or 9 (N 10, mean 8.1). Ear aperture narrow; lobules 4 or 5 (N 10, mean 4.6), obtuse or rectangular. Midbody scale rows 43-52 (N 10, mean 47.0), smooth or striate. Subdigital lamellae smooth or weakly callose, proximal lamellae usually divided or notched, 19-23 (N 9, mean 20.3) under fourth toe.

Coloration

See Storr (1968).

Additional material

None.

REFERENCES


