A NEW SPECIES OF HEMIERGIS (SCINCIDAE: LYGOSOMINAE) FROM VICTORIA

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Abstract

A new species of lygosomid skink (Hemiergis millewae) is described, from the Victorian Mallee Region.

Introduction

Field work in the Victorian Mallee since 1973, has revealed the presence of a small, pentadactyl, lygosomid skink, not previously known from this State. The species fits into the genus Hemiergis Wagler, 1830, as recognized by Greer (1967), but does not fit the only pentadactyl species (H. initi ale Werner, 1910). A thorough search of the National Museum of Victoria collections brought to light a further five specimens, which had previously been identified as Anotis maccoyi (Lucas and Frost).

The genus Hemiergis was first erected by Wagler in 1830, and has since been redefined by many authors, principally Gray (1845), Bou- lenger (1887), Mittleman (1952), Greer (1967), Cogger (1975) and Storr (in Press). Although Cogger and Storr provide the most recent definitions, Greer's concept of the genus is accepted here.

Gray provided the first detailed diagnosis of the genus, restricting it to skinks with transparent lower eyelids, and digits 3-3. He also considered the presence of paired frontoparietals to be diagnostic, a character which Storr has shown to be variable within the genus, even at the specific level. Mittleman restricted the genus to species having 4-4 or less digits, thus excluding Werner's 1910 pentadactyl species H. initi ale. Greer's diagnosis accepted H. initi ale as a true Hemiergis, thus expanding the genus to include pentadactyl species. Cogger's definition contradicted Greer's in that it included . . . 'ear opening usually absent, its position is usually indicated by a slight depression (a minute opening in one species)'. All other workers have agreed that the ear opening is in fact covered by scales. Cogger's move was made to allow the inclusion of Siaphos macc ooyi Lucas and Frost into Hemiergis, thus making Hemiergis polyphyletic, as Cogger recognized when he said . . . 'the genus as recognized here is almost certainly composite, but relationships are obscure.'

Storr's definition basically agrees with that of Greer, differing in that Storr said that all species have a complete series of suboculars, whereas Greer stated that the subocular row was 'complete, except in H. initi ale'. In addition to the above characters, Greer also separated Hemiergis from Lerista by the presence of four supraoculars as against 2-4, usually 3, paired rather than single supradigital scales on the fourth toe, and non-enlarged as against greatly enlarged nasal scales.

Genus Hemiergis Wagler, 1830

Hemiergis Wagler, 1830, Nat. syst. amphibia, p. 160. Type-species Zygnis de crese nensis Fitzinger, 1826.

Diagnosis: Small elongate, short-limbed skinks. Lower eyelid movable, with a transparent disc. Digits 5-5 to 2-2, normally equal numbers on fore and hind limbs. Supradigital lamellae less than 16. Subocular row complete in all non-pentadactyl species. Ear aperture absent, ear indicated by a depression. Supradigital scales paired.

Hemiergis millewae sp. nov.

Fig. 1


Description: Snout-Vent (S.V.) length 43·5 mm. Length of tail (intact) 75·3 mm, 173% of S.-V. length. Total length 118·8 mm. Length of hind limb 13·0 mm, 30% of S.-V. length. Length of fourth toe 4·7 mm, 36% of hind
limb length. No supra or postnasal scales. Rostral and frontonasal in fairly broad contact. Frontal and frontonasal in narrow contact. Pre-frontal large, just failing to meet: contacting the frontonasal, anterior and posterior loreals, first supraciliary and frontal. Two loculars, large and subequal. Frontoparietal entire, inter-parietal separate, large, almost half the size of the frontoparietal. Parietals large, barely contact along the midline. One pair of enlarged nuchals, followed by a second, single nuchal on the left hand side. Three enlarged temporals, the upper largest. Four supraoculars, the second the largest. Seven supraciliaries, seven upper ciliaries, the third to fifth largest. Nine lower ciliaries. Lower eyelid movable with an extremely large transparent palpebral disc bordered above by the lower ciliaries but otherwise surrounded by small granular scales.

Length of eye 1.6 mm, length of disc 1.1 mm, 69% of eye length. Seven upper labials, the fifth subocular and completely interrupting the subocular series, of which two are anterior to, and three posterior to the fifth upper labial. Seven lower ciliaries. Ear opening completely covered by scales, indicated by a depression. A pair of enlarged preanal scales. Limbs short, pendactyl, when adpressed, failing to meet by approximately 25% of the distance between the axilla and the groin. Subdigital lamellae dark coloured, undivided and smooth, 12 under the fourth toe. Midbody scales smooth, in 22 rows.

**Colour in Life:** Uniform dark olive brown dorsally, with no trace of spots, striations or lines. A burnt orange dorso-lateral stripe, approximately two scales wide, commencing above and behind the ear, and extending to the hind limbs. Lateral surfaces off-white, and ventral surfaces pale yellow. Dorsal and lateral surfaces of tail similar to mid-dorsal colour, ventral surfaces of tail off-white, with darker spots. Chin whitish, each scale bordered by dark brown.

**Colour in Alcohol:** Drab brown dorsally, whitish laterally, and light grey ventrally. There is almost no trace of the dorso-lateral stripe.

**Paratypes:** Fifteen specimens in the National Museum of Victoria as follows:

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**Description of Paratypes:** As for holotype excepting as follows: S.-V. lengths 41.7–58.6 mm (mean 50.2); hind limb length 11.1–13.7 mm (mean 12.3); percentage of S.-V. length 23.1–28.1 (mean 24.7); length of 4th toe 4.5–5.4 mm (mean 4.8) percentage of hind limb length 35.7–42.0 (mean 39.0). Upper
ciliaries 8–10 (mean 9·1), lamellae under 4th toe 12–14 mean (12·8).

Nuchals: one pair (4 specimens), two pairs (2 specimens), two pairs plus a third on right side (1 specimen), two pairs plus a third on left side (1 specimen). D33348 has a damaged first toe on the left hind foot; D40169 has the right fore foot missing; D47395 has the second and third fingers of the right fore limb damaged; D47397 has a damaged left fore foot, the second and third fingers, which arise from a common base, being truncated to appear as a single digit; D47398 has the third toe on the right hind foot truncated; D47418 has a damaged fourth toe on the left hind limb.

Colour of all these specimens, in alcohol, similar to the holotype, excepting that in many of them, the dorso-lateral stripe is completely missing.

OTHER SPECIMENS EXAMINED
D1552–3, D1556 from Purnong, S.A., D11767–8 from Nonning, S.A., and D47409, a juvenile, same data as for holotype.

Ecology: Little is known of the ecology of this species. It resides in porcupine grass (Triodia sp.) in sandy soil supporting a fairly heavy cover of mallee scrub. It never appears to emerge from the Triodia, and was only located either by burning or the ripping out of this grass. No activity was observed at any time of the day or night, although other species of reptiles (e.g. Ctenotus brachyonyx, Menetia greyi, Amphibolurus barbatus, Amphibolurus fordii, Delma inornata and Lialis burtoni) were active during the time spent collecting the type series. Obviously H. millewae is a thigmotherm, dependent upon Triodia, which one assumes supplies its food source in the many forms of invertebrates co-habiting with it.

Key to Hemiergis millewae and other southern short limbed skinks

1. Ear opening visible, not covered by scales ........................................ 2
   Ear covered by scales, indicated by a depression ............................ 3
2. Nasals enlarged, meet or almost meet behind rostral ............. Lerista species
   Nasals not enlarged ........... Anotis maccocyi
3. Digits 5–5 ........................................ 4
   Digits 4–4 or less ... all other known

   Hemiergis

4. Hind limb at least 20% of S.-V. length, subcaudals 12 or more ........ H. millewae
   Hind limb less than 20% of S.-V. length, subcaudals 11 or less ....... H. initiale

This species is named in recognition of the locality where the type series was collected.

TABLE 1

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>N</th>
<th>Hind Limb % S.-V. length</th>
<th>Lamellae under longest toe</th>
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<tr>
<td></td>
<td></td>
<td>Max.</td>
<td>Min.</td>
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<tr>
<td>H. millewae</td>
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<td>29·9</td>
<td>21·0</td>
</tr>
<tr>
<td>H. initiale</td>
<td>21</td>
<td>18·7</td>
<td>13·2</td>
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<td>18</td>
<td>23·6</td>
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<td>16·5</td>
<td>11·1</td>
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<tr>
<td>A. maccocyi</td>
<td>21</td>
<td>19·5</td>
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Addendum

Through the courtesy of Dr. T. F. Houston of the South Australian Museum, I have been able to examine an additional 119 South Australian specimens of this species, which are under his care. These are as follows:—


Of these specimens R3069B, R11284 & R13012B each have one foetus in utero, R3069M, R13012A & D each have two foetuses in utero, and R3069X, R10736 & R10748 are hatchlings. This confirms that the species is viviparous, having one or two young per litter, the young being born in late summer or early autumn. In these series the midbody scale rows vary from 22 — 24.

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