



## Rediscovery of Vosmer's Writhing Skink *Lygosoma vosmaerii* (Gray, 1839) (Reptilia: Scincidae) with a note on its taxonomy

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Among lizards, family Scincidae is the largest family comprising more than 1600 species (Bauer 1998) with four subfamilies, of which the subfamily Lygosominae is the largest with 600 species in 45 genera (Griffith et al. 2000). The writhing skinks belonging to the genus *Lygosoma* (Gray 1839) including about 38 species of which 15 species occur in the Oriental region (Bisby et al. 2009). Among these, 11 species of skinks belonging to *Lygosoma* Gray, 1839 are known from India (Sharma 2002). So far, four species of *Lygosoma* – *L. punctata* (Gmelin, 1799); *L. albopunctata* (Gray, 1846); *L. guentheri* (Peters, 1879) and *L. ashwamedhi* (Sharma, 1969) have been recorded from Andhra Pradesh (Smith 1935; Sharma 1969, 2002; Srinivasulu & Das 2008; Javed et al. *in review*). In this paper a fifth species, *L. vosmaerii* (Gray, 1839), is added to the herpetofauna of Andhra Pradesh.

### Material and Methods

We have been conducting herpetofaunal surveys in disturbed habitats of Andhra Pradesh to study the effects of

habitat conversion on herpetofaunal assemblages since June, 2007. During one such study in areas adjacent to limestone quarries in the Krishna district of Andhra Pradesh, on 11 January, 2009, an adult specimen of lined supple skink was collected from the vicinity of Jaggayyapet (16°52'N & 80°05'E). The collected specimen (NHM.OU.REP.1-2009; Image 1) is preserved in 70% alcohol and deposited in the Natural History Museum, Osmania University, Hyderabad, Andhra Pradesh, India. Careful observation of the specimen revealed it to be Vosmer's Writhing Skink *Lygosoma vosmaerii* (Gray, 1839). The morphometric measurements were taken using digital calipers and are given to the nearest 0.1mm.

### Results

**Diagnosis:** The body of *Lygosoma vosmaerii* (Gray, 1839) is slender, much elongated with distinct 16 longitudinal lines on its dorsum (Image 1). Colour of the body is golden brown dorsally. The limbs are dark brownish above and paler below. The longitudinal lines are formed by the dark brown spots on the scales that are darker and prominent on the dorsum and faded on the venter. The four middle longitudinal lines form a spear-shaped marking anteriorly (Image 2), starting just behind the snout and continuing to the middle of the tail, which is red in colour (Image 1).

Snout obtusely pointed, supranasals entire, just touching one another behind the rostral; frontal smaller than the single large shield-like fronto-parietal. Lower eyelid with an undivided semitransparent disc. Seven upper labials, of which the fourth and fifth touch the eye. Ear opening is small and not covered by scales. Parietals touch each other behind the interparietal. Nuchals absent. Limbs very short with five fingers (Images 3 & 4) and four toes; the third toe being the largest. Digits with smooth subdigital lamellae. Preanals not enlarged. The morphometric and mensurative data of the specimen is provided in Table 1.

**Habits and habitat:** The habitat where the specimen was found is dry scrub forest interspersed with grass patches, termite mounds, ant hills and boulders. These conditions provide ample amounts of food source in the form of termites, ants and insects like grass-hoppers, stick-insects, etc. The specimen was found under a boulder. The surface of the soil under the rock had many cracks that allowed free movement and provided protection.

### Discussion & Conclusions

*Lygosoma vosmaerii* (Gray, 1839) can be distinguished from *L. lineata* (Gray, 1839) by its five fingers instead of four (Gray 1839; Boulenger 1890; Smith 1935; Vyas 2001). The Vosmer's

**Abbreviations:** Measurements and morphometry: TBL - Total body length; SVL - Snout to vent length; TL - Tail length (from cloaca to tail tip); A-G - Axilla to groin distance; HL - Distance between angle of jaw and snout tip; DFL-ST - Distance from forelimb to snout tip; IN - Distance between nostrils; E-N - Eye to nostril distance; E-S - Eye to snout-tip distance; E-E - Ear opening to eye distance; ED - Greatest eye diameter; EL - Greatest length of ear opening; HW - Head width at angle of jaw; IO - Minimum distance between upper eyelids; FLL - Forelimb length; HLL - Hindlimb length; DO-SR - Dorsal scale rows (between nuchal and hind limb); BE-SR - Ventral scale rows (between fore and hind limbs).

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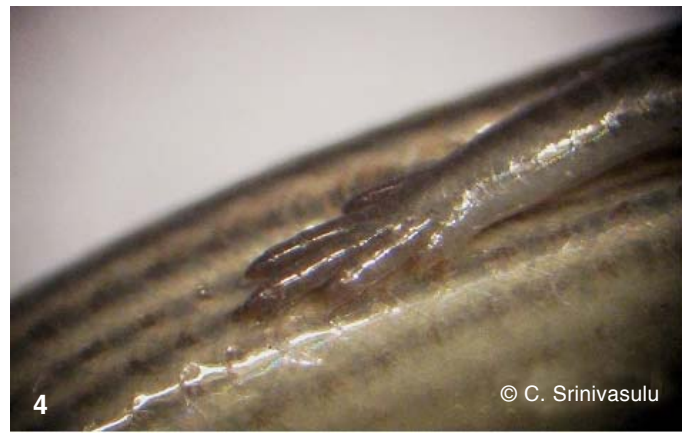
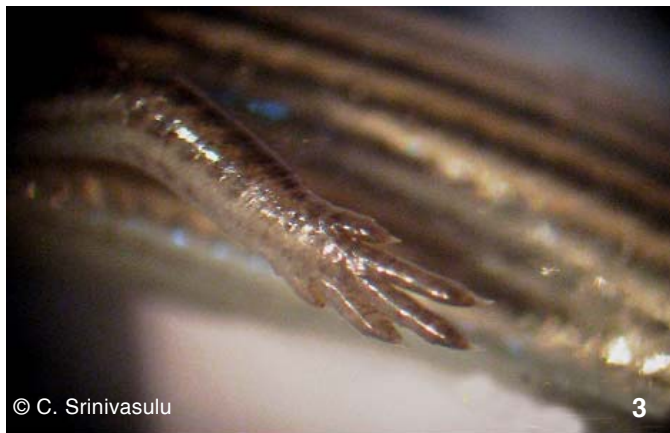
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**Images 1-4. 1 - *Lygosoma vosmaerii* (Gray, 1839) (live) entire; 2 - Close up of the head and trunk detailing dorsal marking pattern; 3 - Close up of the left forelimb showing five fingers; 4 - Close up of the right forelimb showing five fingers**

Writhing Skink *L. vosmaerii* was described as *Hagria vosmaerii* by Gray (1839), as is presently accepted, with Java as its type locality based on a specimen sent to him by Gabriel Bibron (Gray 1845). Duméril & Bibron (1839) provided a full description of the same specimen which was collected by M. Lamarre-Piquot from Bengal Province as *Campsodactylus lamarrei* (as a new species). This later publication (Duméril & Bibron 1839) clarifies the fact that Gray (1839) has misquoted the type locality and correctly assigns the same from Indian region. Later, Boulenger (1887) allocated it to the genus *Lygosoma* and assigned 'Bengal' as its locality. Boulenger (1890) considered the holotype (MNHN 777; ex-MNHN 3007; *vide* Brygoo 1985) of *L. vosmaerii* (Gray 1839) to be an apparently anomalous specimen of *L. lineata* (Gray, 1839), although Smith (1935) and Sharma (2002) treated both the taxa as distinct. The synonymy of *L. vosmaerii* (Gray, 1839) includes the following nomen – *Hagria vosmaerii* Gray, 1839, *Riopa vosmaerii* (Gray, 1839) and *Campsodactylus lamarrei* Duméril & Bibron, 1839 (Bisby et al. 2009; Uetz 2009).

Prior to the rediscovery of *L. vosmaerii* (Gray, 1839) in eastern peninsular India from Jaggayapet, Krishna District, Andhra Pradesh, this taxon was seldom included in literature (see Das 2003). Recently, Vyas (2001) noted that one specimen of *L. lineata* (Gray, 1839) from Gujarat had five fingers on right hand and in agreement to Boulenger (1890) treated *L. vosmaerii* (Gray, 1839) as anomalous specimen of *L. lineata* (Gray, 1839) and proposed the synonymy of the former with

the latter. The recent rediscovery clarifies the taxonomic status of *L. vosmaerii* (Gray, 1839) and future surveys in the Eastern Ghats and forests between the Godavari river basin and the Satpura-Maikal Hills might throw further light on the distribution and biology of Vosmer's Writhing Skink.

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**Table 1. Morphometric and meristic data on *Lygosoma vosmaerii* (Gray, 1839) (NHM.OU.REP.1-2009) from Jaggayapet, Krishna District, Andhra Pradesh (All morphometric measurements in mm)**

Character	NHM.OU.REP.1 (Female)
<b>Morphometric</b>	
TBL	121.6
SVL	57.0
TL	64.6
A-G	42.9
HL	3.5
DFL-ST	10.7
IN	0.85
E-N	1.3
E-S	1.7
E-E	2.7
ED	1.2
EL	0.55
HW	3.2
IO	0.5
FLL	4.78
HLL	8.25
<b>Meristic</b>	
DO-SR	22
BE-SR	90
Lamellae (divided; Fingers 1-5, Toes 1-4)	
Fingers Right side	3:6:6:4:2
Fingers Left side	3:7:7:4:2
Toes Right side	2:5:8:8
Toes Left side	3:7:8:9
Labials (Right side / Left side)	
Supralabials	7/7 (4,5 touch eye)
Infralabials	6/6

*The Zoology of the voyage of H.M.S. Erebus & Terror: under the command of Captain Sir James Clark Ross, during the years 1839 to 1843. Vol. IV. Reptiles, Fishes, Crustacea, Insects and Mollusca.* E.W. Janson, London. 221 pp.

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