JoTT Paper 3(8): 1961–1974

Taxonomic status of the arboreal Skink Lizard *Dasia halianus* (Haly & Nevill, 1887) in Sri Lanka and the redescription of *Dasia subcaeruleum* (Boulenger, 1891) from India

L.J. Mendis Wickramasinghe [1], Nethu Wickramasinghe [2] & Lalith Kariyawasam [3]

[1,2] Herpetological Foundation of Sri Lanka, Thalarukkarama Road, Kudawaskaduwa, Waskaduwa, Sri Lanka
[3] Department of National Museums, Sir Marcus Fernando Mawatha, Colombo 7, Sri Lanka
Email: [1] boiga2000@gmail.com (corresponding author), [2] nemzy821@gmail.com, [3] kglalith4@gmail.com

Date of publication (online): 26 August 2011
Date of publication (print): 26 August 2011
ISSN 0974-7907 (online) | 0974-7893 (print)

Editor: Aaron Bauer

Manuscript details:
Ms # o2300
Received 28 August 2009
Final received 18 June 2011
Finally accepted 20 July 2011

Citation: Wickramasinghe, L.J.M., N. Wickramasinghe & L. Kariyawasam (2011). Taxonomic status of the arboreal Skink Lizard *Dasia halianus* (Haly & Nevill, 1887) in Sri Lanka and the redescription of *Dasia subcaeruleum* (Boulenger, 1891) from India. *Journal of Threatened Taxa* 3(8): 1961–1974.

For **Author Details** and **Acknowledgemet** see end of this article

Author Contribution: The first author designed and carried out the study, while the co-authors, contributed with the preparation of the manuscript, literature survey and reference works in the corresponding museums.

Abstract: A comparative study of *Dasia halianus* in India and Sri Lanka is discussed. Indian specimens of "*D. halianus*" are in fact referable to *D. subcaeruleum*. *D. halianus* is again considered a Sri Lankan endemic.

Keywords: *Dasia, Dasia halianus, Dasia subcaeruleum,* India, Scincidae, Sri Lanka.

Sinhala Abstract: ඉන්දියාව සහ ශ්‍රී ලංකාව තුල හමුවන *Dasia halianus* නම් හිකනල් විශේෂය පිළිබඳව සිදුකෙරුී සංසන්දනාත්මක අධ්‍යයනයක් මෙම ලිපිය මගින් සාකච්ජා කෙරේ. ඉන්දියාව තුල හමුවන විශේෂය *D. halianus* නොව එරටට ආවේනික *D. subcaeruleum* විශේෂය බවත් ශ්‍රී ලංකාව තුල හමුවන *D. halianus* විශේෂය ශ්‍රී ලංකාවට ආවේනික විශේෂයක් බවත් මෙම ලිපිය තුලින් සනාථ කර දී ඇත.

INTRODUCTION

By 2001 a total of 84 species of scincid lizards belonging to 19 genera were recognized in South Asia, 62 in India and 27 in Sri Lanka, with seven species common to both (Das 2001). Since then four new species have been described, a new range extension of *Chalcides* cf. *ocellatus* from Sri Lanka and a new genus described from India, increasing the total number of species to 89 (Batuwita & Pethiyagoda 2007; Wickramasinghe et al. 2007; Das et al. 2008; Karunarathna et al. 2008), and the genera to 20 (Eremchenko & Das 2004). Also, the genus *Mabuya* in the region was changed to *Eutropis,* keeping the genus and species count without any change (Mausfeld & Schmitz 2003). Two species from Sri Lanka, *Sphenomorphus rufogularis* Taylor, 1950, and *S. striatopunktatus* Ahei, 1856, were synonymised with *Lankaskincus fallax* (Peters, 1860), and *L. taprobanensis* (Kelaart, 1854), respectively, reducing the total number of species to 86 (Greer 1991; Wickramasinghe et al. 2007).

Skinks found in both countries are as follows, *Dasia halianus* (Haly & Nevill in Nevill 1887), *Lygosoma punctata* (Gmelin, 1799), *Eutropis bedomi* (Jerdon, 1870), *E. bibroni* (Gray, 1839), *E. carinata* (Schneider, 1801), *E. macularia* (Blyth, 1835), and *Sphenomorphus dussumieri* (Duméril & Bibron, 1839). Of these the last six species were recorded in both countries before 1980 (Deraniyagala 1931, 1953; Smith 1935; Taylor 1950, 1953; Greer 1970; Inger 1980). *Dasia halianus* on the other hand was considered endemic to Sri Lanka until as recently as 1984, when it was reported for the first time from India by Joshua & Sekar (1984). Meanwhile, without any evidence, Das & de Silva (2005) provided a list where they

stated that *D. halianus* is endemic to Sri Lanka, but again in later publications *D. halianus* was considered as a non endemic species (de Silva et al. 2005a,b; de Silva 2006; IUCN & MENR 2007). Currently there are four *Dasia* species *D. halianus*, *D. olivacea* Gray, 1839, *D. nicobarensis* Biswas & Sanyal, 1977, and *D. subcaeruleum* (Boulenger, 1891) found in India (Das 1994, 1997, 2001) and a single species, *D. halianus*, found in Sri Lanka (Das 2001; Deraniyagala 1931; Smith 1935, 1937; Taylor 1950; Deraniyagala 1953; Taylor 1953; Greer 1970; Inger 1980; de Silva 1994, 1995, 1996; IUCN 2000; Bambaradeniya 2001; Das & de Silva 2005; de Silva et al. 2005a,b; MFE 2005; de Silva 2006; IUCN & MENR 2007; DWC 2008a,b; Somaweera & Somaweera 2009). *D. nicobarensis* is endemic to the Nicobars (Das 1994, 1999, 2002). *D. olivacea* ranges from southern Thailand, Malaysia and Singapore to Borneo, and Java (Cox et al. 1998; Das, 2002). The Indian endemic species *D. subcaeruleum* on the other hand was not mentioned from India for nearly a century until the description was repeated by Murthy (1990).

Although there are seven species said to be found in both these countries there has not been a proper comparative study done so far, amongst these species. In our present study we have provided a comparison between *D. halianus* found in India and Sri Lanka.

MATERIAL AND METHODS

The following 22 measurements were taken with a Mitutoyo digital Vernier calliper (to the nearest 0.01mm) axilla to groin (AG, distance between axilla and groin), distance between back of eye (DBE, measured between the posterior edge of eyes), distance between front of eye (DFE, measured between the anterior edges of eyes), ear length (EL, the greatest vertical length of ear), ear width (EaW, the widest horizontal distance of ear), ear to ear distance (EE, distance between ears), eye to nostril distance (EN, distance between the anterior most point of eyes and nostrils), eye width (EW, measured between the anterior and posterior edges of eye), forearm length (FL, distance between the palm and elbow), head depth (HD, the maximum height of head, from the occiput to throat), head length (HL, distance between posterior edge of the last supralabial and the snout tip), head width (HW, measured at angle of jaws), internarial distance (IN, distance between nares), nostril to ear distance (NE, the distance between the posterior point of nostril and the anterior point of ear), snout to ear distance (SED, distance between the tip of snout and the anterior point of ear), snout to eye distance (SE, distance between the tip of snout and the anterior most point of eyes), snout to nostril (SN, distance between the tip of snout and the anterior point of nostril), snout to vent length (SVL, from the tip of snout to vent), tibia length (TBL, the greatest length of tibia, between knee and sole), tail depth (TD, the highest depth of tail base), tail length (TL, from vent to the tip of tail end), and tail width (TW, measured at the base of tail), Infralabials at end of gape (IL), Lamellae of Finger 1 (LF1), Lamellae of Finger 2 (LF2), Lamellae of Finger 3 (LF3), Lamellae of Finger 4 (LF4), Lamellae of Finger 5 (LF5), Lamellae of toe 1 (LT1), Lamellae of toe 2 (LT2), Lamellae of toe 3 (LT3), Lamellae of toe 4 (LT4), Lamellae of toe 5 (LT5), Paravertibral (PV), Scale around mid body (SMB), Subcaudals (SC), Supralabials at end of gape (SLG), Supralabials at mid orbit (SLO), Ventrals (V).

Preserved specimens were examined in the Colombo National Museum of Sri Lanka (NMSL), (The specimen in the best condition was selected for the description), Bombay Natural History Society collection (BNHS) and The Natural History Museum, London, UK (BMNH), as part of a study carried out, by the Sri Lankan Herpetological Foundation, for the non-endemic Saurian species in Sri Lanka.

The locations pertaining to the collection points of specimens according to previous literature were obtained using a Garmin E-trex venture GPS.

Guidelines to evaluate the conservation status of species were taken from the IUCN Red List Categories and Criteria (version 3.1; IUCN 2001)

RESULTS

Systematics

Dasia halianus (Haly & Nevill, 1887)

Euprepes halianus Haly & Nevill in Nevill 1887: 2: 56.

Lygosoma halianus—Haly, 1893: 4: 13.

Theconyx halianus—Annandale, 1906: 191.

Lygosoma (*Keneuxia*) *halianus*—Deraniyagala, 1931:

174.

Dasia haliana—Smith, 1935: 278; Taylor, 1950: 33; Taylor, 1953: 35; Deraniyagala, 1953: 69; Das, 1996: 4; Somaweera & Somaweera, 2009.

Dasia halianus—Das, 2001: 23.

Description of uncatalogued NMSL specimen (Images 1 & 2): Snout to vent length (SVL) 59.13 mm, body moderately elongate. Head depressed and narrow (HD/HW ratio 0.59 and HD/HL ratio 0.37); elongated and (HD/NE ratio 0.47 and HL/SVL ratio 0.24); distinct from the neck; snout long (SE/HW ratio 0.60); longer than the eye width (EW/SE ratio 0.56); eye relatively lager than the ear (EW/EL ratio 6.30 and EW/EaW ratio 9.55); ear opening small (EL/HL ratio 0.03); snout to eye distance greater than the width of eye (SE/EW ratio 1.80); body length greater than tail length (SVL/TL ratio 0.95), and round in cross section (TD/TW ratio 0.87).

Rostral concave; supranasal present; no postnasal; frontonasal larger than the prefrontals along the longitudinal axis, lateral border touching first loreal and supranasal; prefrontals is slightly separated, lower border touching both loreal scales, but touching the posterior loreal more than half, the posterior border touching the first supraocular, and frontal; frontal slightly longer or equal in its distance to tip of snout, and approximately shorter or slightly equal in frontoparietals and interparietal combined; seven or eight supraciliaris; four supraoculars, first one longer than wide, second wider than long, first three in contact with frontal, third in contact with frontal and frontoparietal, fourth in contact with frontoparietal, parietal and upper pretemporal; frontoparietals distinct, slightly smaller than interparietal length; posterior tip of interparietal barely in point-contact with primary nuchal scales, parietal touching upper and lower pretemporal scales laterally, primary nuchal and three small scales touching parietal post laterally (Image 2A); non fused nasal and in contact with 1st supralabial; two loreal scales, anterior loreal touching nasal, supranasal, frontonasal, prefrontal, 1st and 2nd supralabials or 1st, 2nd, and 3rd supralabial scales. Posterior loreal longer, and wider than the anterior loreal, posterior loreal

Image 1. The dorsolateral view of uncatalogued specimen of *Dasia halianus* in NMSL collection

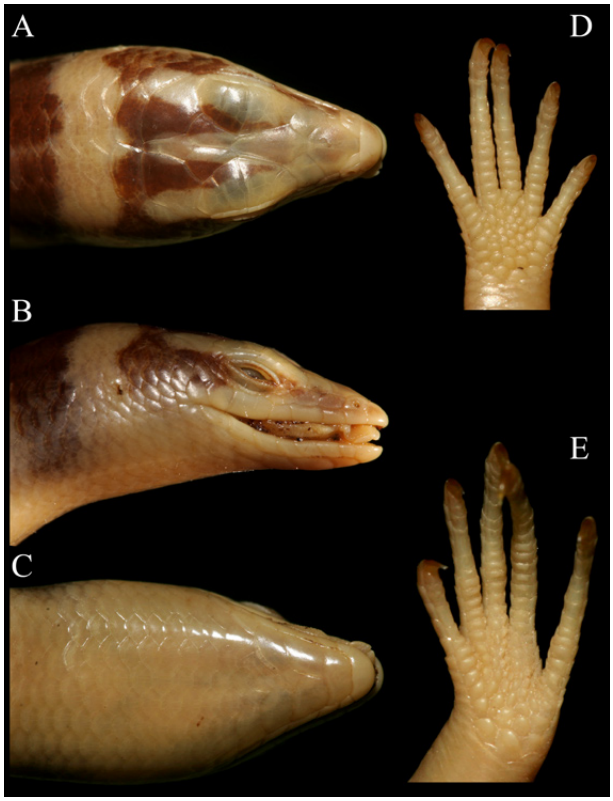

Image 2. NMSL uncatalogued specimen of *Dasia halianus* A - dorsal aspect, B - lateral aspect, and C - ventral aspect of head; D - lamellae on right fore limb, and E - lamellae on left hind limb.

touching prefrontal, 1st supraciliaries, upper and lower preocular scales. Lower border touching 2nd and 3rd supralabials or third; two preocular scales, lower ones lager than the others; eight supraciliaries, in a row, the first one is lager than the others; seven supralabials, the last supralabial single, 5th at the mid orbit point; 12 subocular scales, smaller than the supraciliaries scales; the subocular row touching 5th to the 6th supralabial scales and primary temporal scale, the first subocular scale touching the presubocular, and 5th supralabial scale, the last subocular scale touching the primary temporal scale; presubocular scale touching lower preocular, 4th and 5th supralabial scales; Lower eye lid scaly, six large scales on window eye lid touching the upper edge of window, two scales on either side smaller than the once in the centre, and small scales filling the gaps at the upper edge between larger scales, lower edge has two scale rows; two small scale rows between window eyelid and subocular scales; four anterior and three posterior postocular scales, anterior postoculars smaller than the posterior postocular scales; two pretemporal scale, smaller than the primary temporal scale, upper pretemporal scale touched by parietal, lower pretemporal scale, upper and lower postoculars and last supraciliaries scale; single primary temporal, primary temporal touching 6th and 7th supralabial scales; tow secondary temporal scales, the lower secondary temporal touching 7th supralabial and primary temporal scale, the upper secondary temporal touching parietal, lower pretemporal, and primary temporal scale, the secondary temporal larger than the primary temporal scale; seven infralabials, the sixth one being the largest (Image 2B); mental wider than postmental, transverse axis but shorter than longitudinal axis, postmental touching first and second infralabial only; two pairs of chinshields behind postmental, the first pair meeting in midline, the first chinshield in contact with second and third infralabial scales, the second pair in contact with third and forth infralabials, the second pair of chinshields separated by a single scale (Image 2C); dorsal body scales with three to five obtuse ridges, and lateral and ventral mid body scales smooth, the two vertebral series of scales feebly widened, 24 rows around body; 46 paravertebral scales; 54 scales between the mental and vent; the median preanals enlarged, outer preanals overlap with inner; dorsal tail scales with three obtuse ridges but some scales with four or five obtuse ridges, 67 smooth subcaudals scale; three ridges on each dorsal scale on fore and hind limbs, ridges more prominent on hind limbs, scales on underside of limbs smooth; the fourth finger and fourth toe longer than others; the fourth finger having 14 smooth lamellae; the fourth toe having 16 smooth lamellae; the lamellar formulae for fingers and toes, respectively: 4>3>2>5>1 (Image 2D) and 4>3>5>2>1 (Image 2E). Digits having single row of scales dorsolaterally; scales of palm and sole elevated, six large, prominent "heel" scales, which can easily be separated from those of sole.

Colour in alcohol: Six dark brown cross bands from neck to base of tail, fourth bifurcated; there are twelve dark brown bands upon the tail; simultaneously rows of dark brown bands seen upon limbs. Four, broad, dark brown longitudinal bands upon head, starting from close to the ear. Band interspaces and venter off white (Image 1).

Colour in life: The colour pattern is the same with brighter colours. Colour changes from dark brown to black and off white to white.

Variation: The following differences were observed apart from the general description for *D. halianus*. Specimen NMSL R.S.K II has a small interparietal; frontoparietals larger than the interparietal length; parietals touching each other behind interparietal. A specimen deposited in 1906, collected from Elehara (North Central Province) has the first two supraoculars in contact with frontal and the third supraocular in contact with frontoparietals.

Dasia subcaeruleum (Boulenger, 1891)
Lygosoma subcaeruleum Boulenger, 1891: 289
Dasia subcaerulea—Smith, 1935: 278
Dasia subcoerulea [sic]—Smith, 1937: 226
Dasia haliana—Joshua & Sekar, 1984: 82; Karthikeyan, 1991: 88

Description of BNHS 1391: (Images 3 & 4) 28.xi.1984, snout to vent length (SVL) 89.54mm, Kalakkad Hills, Tirunelveli, Tamil Nadu. Coll. by A.J.T. Johnsingh and party.

Body moderately elongate. Head depressed and narrow (HD/HW ratio 0.53 and HD/HL ratio 0.37); elongated and (HD/NE ratio 0.47 and HL/SVL ratio 0.22); distinct from the neck; snout long (SE/HW ratio 0.58); longer than the eye width (EW/SE ratio 0.48); eye relatively lager than the ear (EW/EL ratio 3.22 and

Image 3. The dorsolateral view of *Dasia subcaeruleum* BNHS 1391 (voucher specimen)

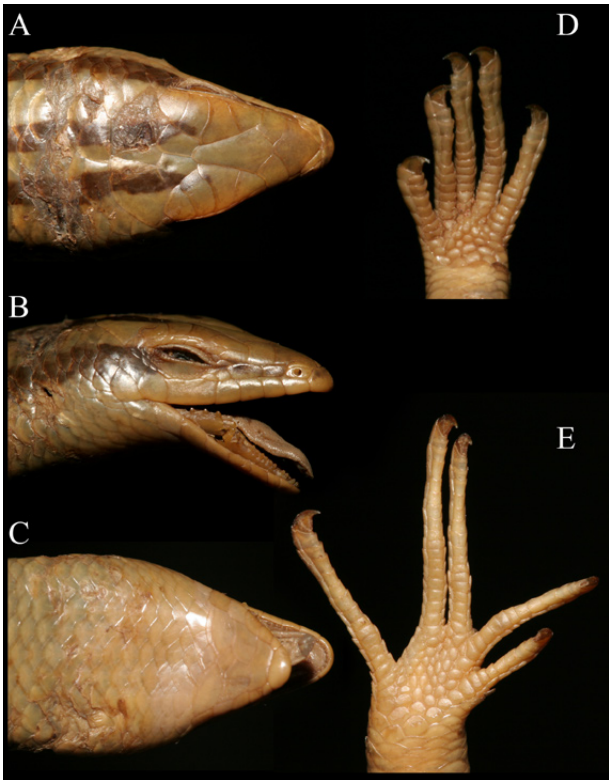

Image 4. *Dasia subcaeruleum* BNHS 1391 A - dorsal aspect, B - lateral aspect, and C - ventral aspect of head; D - lamellae on left fore limb, and E - lamellae on right hind limb.

EW/EaW ratio 9.67); ear opening small (EL/HL ratio 0.06); snout to eye distance greater than the width of eye (SE/EW ratio 2.09). Body length equal in tail length (SVL/TL ratio 1.00), and round in cross section (TD/TW ratio 0.97).

Rostral slightly concave; supranasal present; no postnasal; frontonasal larger than the prefrontals along the longitudinal axis, lateral border touching first loreal and supranasal; prefrontals is separated, lower border touching both loreal scales, but touching the posterior loreal more than half, the posterior border touching the first supraocular, and frontal; frontal longer than its distance to tip of snout, and shorter than frontoparietals and interparietal combined; seven supraciliaris; four supraoculars, first one longer than wide, second one wider than long, first two in contact with frontal, third in contact with frontoparietal, fourth in contact with frontoparietal, parietal and upper pretemporal; frontoparietals distinct, its equal in interparietal length; parietals touching each other behind interparietal, parietal touching upper and lower pretemporal scales laterally, primary nuchal and two small scales touching parietal post laterally (Image 4A); non fused nasal and in contact with 1st supralabial; two loreal scales, anterior loreal touching nasal, supranasal, frontonasal, prefrontal, 1st and 2nd supralabial scales. Posterior loreal longer, and wider than the anterior loreal, posterior loreal touching prefrontal, 1st supraciliaries, upper and lower preocular scales. Lower border touching 2nd, 3rd, and 4th supralabials; two preocular scales, lower ones lager than the others; seven supraciliaries, in a row, the first one is lager than the others; seven supralabials, the last supralabial single, 5th at the mid orbit point; 10 subocular scales, smaller than the supraciliaries scales; the subocular row touching 5th to the 6th supralabial scales and primary temporal scale, the first subocular scale touching the presubocular and 5th supralabial scale, the last subocular scale touching the primary temporal scale; presubocular scale touching lower preocular, 4th and 5th supralabial scales; Lower eye lid scaly, four large scales on window eye lid, lower edge has two scale rows; two small scale rows between window of eyelid and subocular scales; five anterior and four posterior postocular scales, anterior postoculars smaller than the posterior postocular

scales; two pretemporal scales, smaller than the primary temporal scale; upper pretemporal scale touched by parietal lower pretemporal scale, upper and lower postoculars and last supraciliaries scale; single primary temporal, primary temporal touching 6th and 7th supralabial scales; two secondary temporal scales, the lower secondary temporal touching 7th supralabial and primary temporal scale, the upper secondary temporal touching parietal, lower pretemporal, and primary temporal scale, the secondary temporal larger than the primary temporal scale; seven infralabials, the fifth one being the largest (Image 4B); mental shorter than postmental in transverse axis but wider in longitudinal axis, touching first, second and third infralabials; two pairs of chinshields behind postmental, the first pair meeting in midline, the first chinshield in contact with third and forth infralabial scales, the second pair in contact with forth and fifth infralabials, the second pair of chinshields separated by a single scale (Image 4C); dorsal mid body scales smooth but dorsal back body scales with three obtuse ridges, lateral and ventral body scales smooth, the two vertebral series of scales feebly widened, 24 rows around mid body; 52 paravertebral scales; 56 scales between the mental and vent; the median preanals enlarged, outer preanals overlap with inner; dorsal tail scales with three obtuse ridges, 71 smooth subcaudals scale; three ridges on each dorsal scale on fore and hind limbs, ridges more prominent on hind limbs, scales on underside of limbs smooth; the fourth finger and fourth toe longer than others; the fourth finger having 15 smooth lamellae; the fourth toe having 18 smooth lamellae; the lamellar formulae for fingers and toes, respectively: 4>3>2>5>1 (Image 4D) and 4>3>5>2>1 (Image 4E). Digits having single row of scales dorsolaterally; scales of palm and sole elevated, eight pallets which look much the same as those of sole around heel.

Colour in alcohol: thin irregular dark brown cross bands with intermittent white spots from forelimbs to end of tail. Dark brown spots, seen on limbs. Four, thin, dark brown longitudinal bands beginning close to forelimbs moving towards head. Band interspaces and venter off white (Image 3).

DISCUSSION

Dasia halianus was introduced to science as *Euprepes halianus* Haly & Nevill, 1887 (in Nevill 1887), from the type localities Henarathgoda and Anuradhapura, Ceylon (Sri Lanka) and type material deposited in the NMSL (Haly & Nevill 1887) (Appendix 1). But the types are suspected to have been lost or misplaced during the upheavals of World War II (Kandamby 1997; Das et al. 1998). From its initial discovery till the year 1984, this species was considered to be endemic to the island (Haly 1893; Annandale 1906; Deraniyagala 1931; Smith 1935 and 1937; Taylor 1950; Deraniyagala 1953; Taylor 1953; Greer 1970; Inger 1980), until Joshua & Sekar on the 18th August 1984 reported *D. halianus* for the first time from the Thambiraparani River, Mundanthurai Wild Life Sanctuary, Tirunelveli District, Tamil Nadu, India. Joshua & Sekar (1984) provided a text figure (black and white) of the specimen they found, but no mention of the specimen being deposited in a Museum or a relevant Institute. Although there were three species of *Dasia* described from India by that time, Joshua & Sekar mention that "The skink was strikingly different in colour and pattern from species so far known in India and was identified as *D. halianus*." Also in this short discussion they do not provide any comparison between other congeners in the country. After this publication, however, there had been quite a number of sightings of this same species from the country (Karthikeyan 1991; Das 1994, 1997, 2001; Kumar et al. 2001). Such a specimen from the BNHS 1391, was critically examined, and compared with the Sri Lankan *D. halianus* specimens from NMSL, and from our results the following combination of characters clearly distinguished the Indian "*D. halianus"*, from that of the Sri Lankan *D. halianus*.

Sri Lankan *D. halianus* differs from the Indian specimen by the following combination of characters (the characters within brackets are of Indian *D. halianus*): primary nuchal and three small scales touching parietal post laterally (primary nuchal and two small scales touching parietal post laterally); Lower border of posterior loreal touching 2nd and 3rd supralabials or third (Lower border of posterior loreal touching 2nd, 3rd, and 4th supralabials); eight supraciliaries (seven supraciliaries); 12 subocular scales (10 subocular scales); six large scales on window

Image 5. The dorsal view of type specimen of *Dasia subcaeruleum* BMNH 1946[1].8.15.55 011.

of eyelid (four large scales on window of eyelid); and small scales filling the gaps at the upper edge between larger scales (no small scales filing the gaps); four anterior postoculars (five anterior postoculars); three posterior postoculars (four posterior postoculars); sixth infralabial is largest (fifth infralabial is largest); mental wider than postmental in transverse axis (mental shorter than postmental in transverse axis); mental shorter than longitudinal axis (mental wider in longitudinal axis); postmental touching first and second infralabial (postmental touching first, second and third infralabials); first chinshield pair in contact with second and third infralabial scales (first chinshield pair in contact with third and forth infralabial scales); second chinshield pair in contact with third and forth infralabials (the second chinshield pair in contact with forth and fifth infralabials); dorsal body scales with three to five obtuse ridges (dorsal mid body scales smooth but dorsal back body scales with three obtuse ridges); six large, prominent "heel" scales (eight "heel" scales which look much the same as those of sole).

The Sri Lankan *D. halianus* can also be clearly separated from its Indian congener by the following combination of colour pattern features. Four broad, dark brown longitudinal bands upon head, starting from close to the ear (vs Four thin, dark brown longitudinal bands beginning close to forelimbs moving towards head); six dark brown cross bands from neck to base of tail; there are twelve dark brown bands upon the tail (vs thin irregular dark brown cross bands with intermittent white spots from forelimbs to end of tail).

From the above results, we were able to conclude that the Indian *D. halianus,* in fact, matches the morphological characters of *D. subcaeruleum*. Type specimens of *D. subcaeruleum,* are found at the BMNH, under the following numbers 1946.8.15.55 (Image 5), and 1949.1.8.51 (Greer, 1970). Due to the incorrect identification in 1984, the mistake had been repeated until now that the species in India is *D. halianus.* As the Indian species can be confidently placed as *D. subcaeruleum, D. halianus* is indeed endemic to Sri Lanka.

Since there are quite a lot of recorded sightings of *D. halianus* from India after 1984, these sightings can now be considered as sightings of *D. subcaeruleum,* and thereby a distribution pattern of this species can be derived from earlier publications [(Kalakkad Hills, Tirunelveli, Tamil Nadu, Thambiraparani River, Mundanthurai Wildlife Sanctuary, Tirunelveli District, Tamil Nadu (Joshua & Sekar 1984), Kalakad-Mundanthurai Tiger Reserve (Johnsingh 2001; Kumar et al. 2001), Mundanthurai Wildlife Sanctuary, Tamil Nadu (Karthikeyan 1991)]. At present the conservation status in India for *D. subcaeruleum* is Data Deficient (Molur & Walker 1998), and *D. halianus* is Critically Endangered. Hence according to IUCN criteria, for *D. subcaeruleum,* the species requires reassessment. The present conservation status for *D. halianus* in Sri Lanka is Near Threatened (IUCN & MENR 2007).

Although the type localities of *D. halianus* are mentioned as Henarathgoda ($07^0$04'N & $80^0$01'E) and Anuradhapura ($08^0$21'N & $80^0$23'E), this species could only be found in the latter locality but not in the former, based on our field studies. However, Henarathgoda remains its type locality in most of the literature (Annandale 1906; Deraniyagala 1931; Smith 1935; Taylor 1950; Deraniyagala 1953; Das & de Silva 2005; Somaweera & Somaweera 2009), in spite of the fact that there remains no valid record after the initial sighting. Henarathgoda, is an area situated close to the present Gampaha Town ($07^0$05'N & $79^0$59'E), located in the lowland wet zone. Therefore, the initial statement

Image 6. Dorsal view of *Dasia halianus* deposited in 1906, collected from Elehara (North Central Province)

of distribution of *D. halianus*, in this locality could in fact be a mistake, which can very well be justified by the description of the type locality by Haly as "the hot and dry districts of Ceylon", where Gampaha on the contrary belongs to the wet zone. Regardless, our field studies confirm that *D. halianus* does not exist at the Gampaha locality today.

According to Anandale, there exists a third specimen (half grown) from Horana collected and deposited on the 08 November 1901 by G.H. Swayne at the NMSL (Annandale 1906), without any mention of a district nor a province to relate this locality to. But according to our field studies and findings *D. halianus* is a species found only in the dry and intermediate zones of the country. P.E.P. Deraniyagala, in 1931 mentions that this species was found in "Horana", in the North Central Province (Deraniyagala 1931). But he himself later in 1953, states that the species was found in "Horana", in the Western Province (Deraniyagala 1953). According to our field studies carried out so far, we have not been able to find *D. halianus* in the western province locality (wet zone), and there were no records from the Horana locality of the western province in the NMSL inventory. But *D. halianus* is found in the north central province, and there are records from the north central province in the NMSL inventory. Hence according to our studies we can confidently state that there is no evidence that *D. halianus* is found in the Horana ($06^0$43'N & $08^0$03'E), nor anywhere in the wet zone of the western province. After re-evaluating its conservation status of *D. halianus* remains Near Threatened due to its area of occurrence extending to more than 30,000km^2, and its occupancy having a score of >60 points from available distribution data.

According to the museum inventory, there were ten specimens of *D. halianus* deposited in the NMSL. We were able to sort out four *D. halianus* specimens from the mixed up collection. Three specimens were recognized, and were in accordance to the inventory. The remaining specimen was totally dried out and the labels were also destroyed, and was in an unrecognizable state (Image 6). Another specimen which could not be examined was found in the collection of exhibits.

According to the type description, two type specimens were deposited out of which one is a young individual and the other is an adult. Although there is a mention of Fig. 1, 2, and 3 of Plate 1, in the type description these were not present in the journal. The figures would no doubt have been good evidence to clarify the type specimens. Due to the absence of any figures the following from the adult type description will be good evidence in the identification of the adult type specimen, "White back with ten black bands, one on the nape one between the forelimbs; three on the back, one between the hind limbs, and four on the tail with remains of a fifth".

In the inventory there were two specimens deposited under registry no. R.S.K II, but no mention of collection date and there locality. We were able to find one specimen of an adult which (Image 7), has a SVL of 74.65mm, in a labeled bottle under R.S.K. II. Six body bands, which matches the type description, were seen on this specimen, but tail bands were very difficult to recognize in the regenerated tail because of discolouration. R.S.K II also has the following characters, a small interparietal, frontoparietals are larger than the interparietal length, parietals touching each other behind interparietal. All these characters of R.S.K II, can be seen in the drawing done by Deraniyagala (Deraniyagala 1931, 1953). The short tail length compared to its body length in the drawing, matches that of the regenerated tail of

Image 7. Lateral view of NMSL R.S.K. II.

Image 8. A side of a Two Rupee note, of the Democratic Socialist Republic of Sri Lanka, printed in 1979, by the Bank of Ceylon.

R.S.K II. Hence, we believe that this specimen was selected by Deraniyagala for his drawing. The two rupee note (Image 8) printed in the nineteen seventies, has a drawing of *D. halianus,* because of its shape, proportion and the scales on the head, we feel that the artist (Mr. Lucky Senanayake) had taken the same drawing by Deraniyagala with minor changes. This drawing is good evidence to confirm that R.S.K II, is a specimen belonging to Deraniyagala's time hence is ruled out from any doubts of being any of the type specimens.

A specimen in the British Museum under BMNH 1908.3.19.3 (Image 9) from Ceylon presented by Prof. Graham Kerr, accessioned on the 19 March 1908, having SVL 68mm and a tail length of 57mm (pers. comm. Colin McCarthy 2007), and the body bands, along with the tail matches well with the adult type description, and hence can be confidently placed as that of the adult type specimen, and we thus place this specimen of BMNH as the lectotype of *D. halianus.*

In the Ceylon Administration Report 1893, prepared by Mr. Haly, he mentions "A third specimen of *Lygosoma halianus* was purchased from the Southern Province. The rarity of this species is accounted for by the fact that it lives on tops of high trees". In contrast Annandale in 1906, mentions that he used a third half grown specimen deposited in the NMSL, a specimen collected and presented by G.H. Swayne, 08 November 1901, for his description. This specimen which Annandale mentions should actually be the fourth, and is clearly evident from its location and date that this was not the specimen which Haly purchased. Hence it can be concluded that Annandale was not aware of the third specimen which Haly mentions in his report. Annandale had used a separate specimen, from that of his description for his drawing. The drawing in Annandale's description is captioned as "young *Thyconyx halianus*" (Image 10), which was three times enlarged, and matches with the juvenile

Image 9. Dorsolateral view of the lectotype *Dasia halianus* BMNH 1908.3.19.3.

Fig. 1.—Young *Theconyx halianus* showing general form and coloration, from above. × 3.

Image 10. The sketch done by Annandale (1906) of the juvenile paralectotype.

type description "sixteen black bands, one in front and one behind the fore limbs" hence the drawing is the only sketch currently available of the missing juvenile paralectotype.

Another specimen also exists in the Zoological Survey of India under ZSI 15977 (Das et al. 1998), the handwritten label attached to the specimen states "*Thyconyx halianus* (Nevill) Annandale". The next label states that this is a "co-type", hence we feel that this specimen could have been what Annandale had selected to measure in his paper, which happens to be the fourth specimen, and is ruled out of being any of the type specimens.

From our studies in a fully grown tail there should be 10 to 12 black bands, hence according to the type description we can infer that the tail of the adult type specimen was regenerated. Also an important comment to be made on the type description is, "the single pre-frontal touches both rostral and vertical." which could well be the fronto nasal and not the prefrontal, because there are two prefrontals and this never touches the rostral. The specimen collected by P.E.P. Deraniyagala, from Galatabendiyawa Estate (there is a mention about another specimen collected in 1935, which we were not able to locate in the NMSL collection) and another from Wilpattu collected in 1967, and donated by Mr. Aditya were the other two recognized specimens. Two specimens apart from those in the inventory were also found (see Table 1 & 2). None of the specimens at the NMSL matched the figures (Fig. 2 & Fig. 3) in the publication by Anandale 1906. Finally this work has taxonomically established the status of *D. halianus* in Sri Lanka (Image 11), and has redescribed the Indian species *D. subcaeruleum*.

REFERENCES

Annandale, A. (1906). New and interesting lizards in Colombo museum. *Spolia Zeylanica* 3: 189–192.

Bambaradeniya, C.N.B. (2001). Threatened herpetofauna of Sri Lanka, pp. 91–101. In: Bambaradeniya, C.N.B. & V.N. Samarasekara (eds.). *An Overview of the Threatened Herpetofauna of South Asia.* The World Conservation Union, Sri Lanka, vi+118pp.

Batuwita, S. & R. Pethiyagoda (2007). Description of a new

Table 1. The morphometric measurements (mm) of the voucher specimens of *Dasia subcaeruleum* and *Dasia halianus* normalized to the Head length (HL). * mark indicates broken tail.

	***Dasia subcaeruleum* (BNHS)**	***Dasia halianus* (NMSL)**								
	1391	RSKII	RSKII(b)	001	002	003	004	Mean	SD	Range
AG	2.27	2.59	2.32	2.23	2.14	2.49	1.81	1.81 - 2.59	33.55	11.82
DBE	0.44	0.47	0.45	0.50	0.46	0.50	0.49	0.45 - 0.50	6.91	2.63
DFE	0.35	0.36	0.35	0.39	0.35	0.37	0.35	0.35 - 0.39	5.24	1.84
EaW	0.02	0.04	0.02	0.02	0.04	0.03	0.03	0.02 - 0.04	0.45	0.23
EE	0.63	0.71	0.63	0.62	0.61	0.68	0.53	0.53 - 0.71	9.29	3.27
EL	0.06	0.06	0.06	0.04	0.05	0.07	0.06	0.04 - 0.07	0.83	0.49
EN	0.27	0.29	0.27	0.28	0.28	0.28	0.28	0.27 - 0.29	4.05	1.42
EW	0.19	0.20	0.20	0.22	0.22	0.23	0.30	0.20 - 0.30	3.24	1.53
FL	0.51	0.48	0.49	0.43	0.41	0.48	0.36	0.36 - 0.49	6.55	2.31
HD	0.37	0.38	0.39	0.39	0.38	0.38	0.33	0.33 - 0.39	5.45	1.70
HL	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 - 1.00	14.52	5.07
HW	0.69	0.76	0.66	0.66	0.64	0.73	0.60	0.60 - 0.76	9.92	3.70
IN	0.16	0.17	0.16	0.19	0.20	0.17	0.21	0.16 - 0.21	2.63	0.98
NE	0.77	0.84	0.79	0.83	0.80	0.76	0.91	0.76 - 0.91	11.79	4.14
SE	0.40	0.42	0.41	0.40	0.42	0.42	0.42	0.40 - 0.42	6.00	2.21
SED	0.89	0.91	0.90	0.93	0.92	0.88	1.06	0.88 - 1.06	13.42	4.90
SN	0.12	0.14	0.13	0.14	0.15	0.13	0.19	0.13 - 0.19	2.09	0.86
SVL	4.49	4.75	4.56	4.41	4.25	4.64	3.97	3.97 - 4.75	65.01	22.56
TBL	0.51	0.56	0.53	0.50	0.54	0.51	0.46	0.46 - 0.56	7.57	2.32
TD	0.44	0.50	0.46	0.38	0.40	0.46	0.25	0.25 - 0.50	6.18	2.03
TL	4.48	0.95 *	3.05	4.63	0.61 *	4.25	1.16 *	0.61 - 4.63	36.69	31.36
TW	0.45	0.47	0.49	0.44	0.44	0.49	0.34	0.34 - 0.49	6.61	2.22

Table 2. The scale and lamellae counts of the voucher specimens of *Dasia subcaeruleum* and *Dasia halianus*. * marks indicate broken tail.

	***Dasia subcaeruleum* (BNHS)**	***Dasia halianus* (NMSL)**					
	1391	RSKII	RSKII(b)	001	002	003	004
IL	7	7	6	7	7	7	7
LF1	8	10	9	9	8	10	10
LF2	10	12	12	11	11	12	12
LF3	14	13	14	13	13	13	14
LF4	15	14	16	14	14	14	15
LF5	11	12	12	11	12	11	12
LT1	9	8	9	8	8	8	9
LT2	12	12	14	12	12	11	11
LT3	17	14	18	15	16	15	16
LT4	18	17	19	16	17	17	18
LT5	15	15	15	13	13	13	15
PV	52	46	48	46	46	45	48
SC	71	12*	39	67	8*	64	13*
SLG	7	7	7	7	7	7	7
SLO	5	5	5	5	5	5	5
SMB	24	24	24	24	24	24	3
V	56	54	54	54	55	56	57

species of Sri Lankan litter skink (Squamata: Scincidae: Lankascincus). *Ceylon Journal of Science* (*Bio Science*) 36(2): 80–87.

Cox, M.J., P.P. Van Dijk, J. Nabhitabata & K. Thirakhupt (1998). *A Photographic Guide to Snakes and Other Reptiles of Peninsular Malaysia, Singapore and Thailand*. New Holland Publishers (U.K.) Ltd., London, 144pp.

Daniel, J.C. (2002). *The Book of Indian Reptiles and Amphibians*. Oxford university press, viii+238pp.

Das, I. (1994). The reptiles of South Asia: checklist and distribution summery. *Hamadryad* 19: 15–40.

Das, I. (1997). Checklist of the reptiles of India with English common names. *Hamadryad* 22(1): 32–45.

Das, I. (1999). Biogeography of the amphibians and reptiles of the Andaman and Nicobar Islands, India, pp. 43–77. In: Ota, H. (ed.), *Tropical Island Herpetofauna*. Elsevier, 353pp.

Das, I. (2001). Biodiversity and the biogeography of the herpetofauna of Southern Asia, pp. 1–38. In: Bambaradeniya, C.N.B. & V.N. Samarasekara (eds.). *An Overview of the Threatened Herpetofauna of South Asia*. The World Conservation Union, Sri Lanka, vi+118pp.

Das, I. (2002). *A Photographic Guide to The Snakes and Other Reptiles of India*. New Holland Publishers (U.K.) Ltd., London, 144pp.

Das, I., B. Dattaguota & N.C. Gayen (1998). History and catalogue of reptile types in the collection of the zoological survey of India. *Journal of South Asian Natural History* 3(2): 121–172.

Das, I., & A. de Silva (2005). *Snakes and Other Reptiles of Sri Lanka*. New Holland Publishers (U.K.) Ltd., London, 144pp.

Das, I., A. de Silva & C.C. Austin (2008). A new species of *Eutropis* (Squamata: Scincidae) from Sri Lanka. *Zootaxa* 1700: 35–52.

Deraniyagala, P.E.P. (1931). Some Ceylon Lizards. *Ceylon Journal of Science* (Section B), 16(2): 139–180.

Deraniyagala, P.E.P. (1953). *A Coloured Atlas of Some Vertebrates From Ceylon. Vol. 2.* Tetrapod Reptilia. The Ceylon Government Press, vii+101pp.

de Silva, A. (1994). An introduction to the herpetofauna of Sri Lanka. *Lyriocephalus* 1(1&2): 3–19.

de Silva, A. (1995). The herpetofauna of Sri Lanka, checklist and common names part 1, Testudines, Crocodylia and Lacertilia. *Lyriocephalus* 2(1&2): 26–27.

de Silva, A. (1996). *The Herpetofauna of Sri Lanka: A Brief Review.* Published by author, xv+99pp.

de Silva, A. (2006). Current status of the reptiles of Sri Lanka, pp. 34-163. In: Bambaradeniya, C.N.B. (eds.). *Fauna of Sri Lanka: Status of Taxonomy, Research and Conservation.* The World Conservation Union, Sri Lanka and Government of Sri Lanka, 308pp.

de Silva, A., C.C. Austin, A.M. Bauer, S. Goonaewardene, J. Drake, P. de Silva, T. Shripathy, S. Ramesh, K. Suthagar & A. Kajatheepan (2005a). Observations on the skinks inhabiting the Knuckles massif: with special reffernce to genus *Lankascincus*. *Liriocrphalus Special Issue* 6(1&2): 95–100.

de Silva, A., A.M. Bauer, C.C. Austin, S. Goonaewardene, J. Drake, P. de Silva, M.G.T.H. Aberathna, T. Dassanayaka, G.S. Samarawickrama, R.D.C.K. Dassanayaka, A.M.R.K. Amarakoon & M.M. Goonasekera (2005b). The diversity of the Knuckles ecosystem, with special reference to its herpetofauna. *Liriocrphalus Special Issue* 6(&): 13–33.

DWC (2007a). *Biodiversity Baseline Survey: Ritigala Strict Natural Reserve*. Consultancy Services Report prepared by Green, M.J.B. (ed.), De Alwis, S.M.D.A.U., Dayawansa, P.N., How, R., Singhakumara, B.M.P., Weerakoon, D. and Wijesinghe, M.R. ARD Inc in association with Infotech Ideas and Greentech Consultants. Sri Lanka Protected Areas Management and Wildlife Conservation Project (PAM&WCP/CONSULT/02/BDBS), Department of Wildlife Conservation, Ministry of Environment and Natural Resources, Colombo, 44pp.

DWC (2007b). *Biodiversity Baseline Survey: Wasgamuwa National Park*. Consultancy Services Report prepared by Green, M.J.B. (ed.), De Alwis, S.M.D.A.U., Dayawansa, P.N., How, R., Singhakumara, B.M.P., Weerakoon, D. and Wijesinghe, M.R. ARD Inc in association with Infotech Ideas and Greentech Consultants. Sri Lanka Protected Areas Management and Wildlife Conservation Project (PAM&WCP/CONSULT/02/BDBS), Department of Wildlife Conservation, Ministry of Environment and Natural Resources, Colombo, 44pp.

Eremchenko, V.K. & I. Das (2004). *Kaestlea*: A new genus of scincid lizards (Scincidae: Lygosominae) from the Western Ghats, South-Western India, *Hamadryad* 28(1&2): 43-50.

Greer, A.E. (1970). The relationships of the skinks referred to the genus *Dasia*. *Breviora* 348: 1–30.

Greer, A.E. (1991). Lankascincus, a new genus of skink lizards from Sri Lanka, with description of three new species. *Journal of Herpetology* 25(1): 59–64.

Haly, A. & H. Nevill (1887). Ceylon science. *Taprobanian* 2: 55–58.

Haly, A. (1893). Ceylon Administration Report 1893: 4: 13.

Inger, R.F., & W.C. Brown (1980). Species of the scincid genus Dasia (Gray). *Fieldiana Zool* 3: 1–11.

IUCN Sri Lanka (2000). The 1999 *List of Threatened Fauna and Flora of Sri Lanka*. The World Conservation Union, Sri Lanka, viii+113pp.

IUCN Sri Lanka & Ministry of environmental and natural resources Sri Lanka (2007). *The 2007 Red List of Threatened Fauna and Flora of Sri Lanka.* The World Conservation Union, Sri Lanka and Ministry of Environmental and Natural Resources Sri Lanka, xiii+148pp.

Johnsingh, A.J.T. (2001). The Kalakad–Mundanthurai Tiger Reserve: A global heritage of biological diversity. *Current Science* 80(3): 378–388.

Joshua, J., & A. G. Sekar (1984). Range extension of the skink *Dasia haliana* (H. Nevill, 1887). *Journal of Bombay Natural History Society* 82: 422-423.

Kandamby, D. S. (1997). Herpetological types reposed in

the National Museum Colombo, Sri Lanka. *Lyriocephalus* 3(1): 31–33.

Karthikeyan, S. (1991). Sighting of the arboreal skink *Dasia haliana* at Mundanthurai Wildlife Sanctuary, Tamil Nadu. *Journal of the Bombay Natural History Society* 88(1): 122–123.

Karunarathna, D.M.S.S., L.J.M. Wickramasinghe, V.A.P. Samarawickrama, & D.A.I. Munindradasa (2008). The range extension of genus *Chalcides* Laurenti, 1768 (Reptilia: Scincidae) in to Sri Lanka. *Russian Journal of Herpetology* 15(3): 225–228.

Kumar, A., R. Chellam, B.C. Choudhury, D. Mudappa, V. Karthikeyan, N.M. Ishwar & B. Noon (2001). Impact of rainforest fragmentation on small mammals and herpetofauna in the Western Ghats, south India. *A summary of research findings. Occasional paper*, 34pp.

Mausfeld, P. & A. Schmitz (2003). Molecular phylogeography, intraspecific variation and speciation of the Asian scincid lizard genus *Eutropis*, 1843 (Squamata: Reptilia: Scincidae): taxonomic and biogeographic implications. *Organisms Diversity and Evolution* 3: 161–171.

Ministry of Forestry and Environment (2005). *Biodiversity Conservation in Sri Lanka*: *A Framework of Action.*. Ministry of Environmental and Natural Resources Sri Lanka (Reprint), 114pp.

Molur, S. & S. Walker (eds.). (1998). *Report on the Workshop "Conservation Assessment and Management Plan for Reptiles of India"*. BCPP-Endangered Species Project, 175pp.

Murthy, T.S.N. (1990). *A Field Book of the Lizards of India*. Record Zoological Survey of India. Occasional papers 115(8): 49.

Smith, M.A. (1935). *The Fauna of British India, Including Ceylon and Berma. Reptilia and Amphibia*. Vol. II: Sauria. Taylor and Francis, London, xii+583.

Smith, M.A. (1937). A review of the genus *Lygosoma* (Scincidae: Reptilia) and its allies. *Record of Indian Museum* 39(3): 213–234.

Somaweera, R. & N. Somaweera (2009). *Lizards of Sri Lanka, A Colour Guide with Field Keys*. Edition Chimaira, Frankfurt Am Main, 303pp.

Taylor, E.H. (1950). Ceylon lizards of the family Scincidae. *The University of Kansas Science Bulletin* 33(2): 481–518.

Taylor, E.H. (1953). A review of the lizards of Ceylon. *The University of Kansas Science Bulletin* 35(2): 1537–1542.

Wickramasinghe L.J.M., R. Rodrigo, N. Dayawansa & U.L.D. Jayantha (2007). Two new species of *Lankascincus* (Squamata: Scincidae) from Sripada Sanctuary (Peak Wilderness) in Sri Lanka. *Zootaxa* 1612: 1–24.

Appendix 1.
Haly, A. & H. Nevill (1887). Scincidae of Ceylon. *Taprobanian* vol. 2, (part II): 55-58.
This beautiful and distinct skink has long been in the Colombo Museum, and the director, Mr. Haly, has kindly drawn up for me the following diagnosis; as I have had the specimens figured for this journals, I cannot agree with him that it is better to leave them unnamed, in case they are already described, and the description overlooked by us. Unless his description and my figures be named, they cannot be registered for reference. It is known from the hot and dry districts of Ceylon, as yet.
Mr. Haly's diagnosis is as follows
On a probably new species of *Euprepes*.
Some years ago a specimens of a skink (*Euprepes*) from Henarathgoda was presented by Mrs. Horsford, and since that a young one of the same species from Anuradapura has been presented. Nothing like this species has described in Gunther's Reptiles of British India, and as it is exceedingly rear, it is probably as yet undescribed.
Synopsis. - A pair of supranasal shields; the whole of the lower eyelid scaly; opening of the ear very small; each scale with four keels.
Description. - Adult, a pair of very narrow supranasal shields; the single prar-frontal touches both rostal and vertical. The fifth upper labial is below the eye, a little longer than high. Ear opening small, with no lobules. Lower eyelid scaly. Scales with four very weak keels anteriorly, becoming strong posteriorly, reduced to three on the tail, in thirty or thirty-one longitudinal series between the limbs, and twenty-four transverse series. Preanal scales not enlarged; sub-caudals rather larger than the others. Limbs of moderate strength. Third hind-toe nearly as long as the fourth.
White back with ten black bands, one on the nape, one between the fore limbs; three on the back, one between the hind limbs, and four on the tail with remains of a fifth. Black bands run from the nostril through the eyes, which are connected by a band across the occiput; this band throws forward a band each side of the vertical.
Young[1] - In the young the suture of the rostral and pre-frontal is much broader. The prolongations of the occipital bands meet in a point in the pre-frontal, and are almost united in the middle, leaving two white spots on the vertex. There are sixteen black bands, one in front and one behind the fore limbs, and nine on the tail. The scales are smooth very faint indications of keels.

Appendix 2. Comparative material examined.
Dasia subcaeruleum (Boulenger, 1891). BNHS 1391. 28.xi.1984, 89.54mm (SVL), Kalakkad Hills, Tirunelveli, Tamil Nadu. Coll. by A. J. T. Johnsingh and party.

Dasia halianus (Haly and Nevill, 1887). NMSL RSK11, 74.65mm (SVL), Ceylon. NMSL RSK11 (b), 79.15mm (SVL), Wilpattu, Donated by Mr. L. A. Aditya, 25 November 1967. NMSL 001 (uncatalogued specimen) 59.13mm (SVL). NMSL 002 (uncatalogued specimen) 61.71mm (SVL). NMSL 005 (uncatalogued specimen) 79.75mm (SVL), Galatabendiyawa Estate, Nikawveratiya, Sept. 1934. NMSL 006 (uncatalogued specimen) 35.68mm (SVL), Galatabendiyawa Estate, Nikawveratiya, Sept. 1934.

Image 11. *Dasia halianus* live specimen, from Kuda-oya, Sri Lanka.

Author Details: L.J. Mendis Wickramasinghe, is the President of the Herpetological Foundation of Sri Lanka. Having over 17 years of field herpetological experience in Sri Lanka with a focus on taxonomic identification and biodiversity assessments. Currently leading several projects on herpetology in the country. Nethu Wickramasinghe, is an MPhil (chemistry) student at the University of Peradeniya, completed the basic degree in chemistry at the University of Delhi. Currently an active member of the Herpetological Foundation of Sri Lanka. Lalith Kariyawasam, is an MPhil (land snails) student at the University of Kelaniya, and currently a research assistant in the herpetological section of the Department of National Museums, Sri Lanka.

Acknowledgements: First author wishes to thank the Durell Wildlife Conservation Trust for giving a scholarship for the Amphibian Biodiversity Conservation course in India, which facilitated the reference of specimens at the BNHS, to the Nagao Natural Environment Foundation for part funding, to the support rendered by the Biodiversity Secretariat to Mr. Gamini Gamage (Director, Bio Diversity), Mrs Hasula Wickramasinghe, and Mrs. Dakshini Perera, for collaborating to do this work and for all the support, the Department of Wildlife Conservation for granting permission, to conduct the current project (Permit no. WL/3/3/354), especially to the former Director General Mr. Ananda Wijesooriya, to Dr. Chandrawansa Pathiraja (Director General) and the Deputy Director S.B. Dissanayake (Research and Training). to Dr. Channa Bambaradeniya, Mr. Bathiya Kekulandala, Dr. David Gower, Dr. Collin McCarthy, Mr. Varad Giri, Dr. P. N. Dayawansa, Dr. Sanjay Molur, and Ravi Chandran for encouraging and supporting this output. The authors wish to thank the Director National Museums of Sri Lanka, Dr. Nanda Wickramasinghe and staff members (Mrs. Swarnapali Samaradivakara, Mrs. Manaram de Silva Mrs. Mayuri Munasinghe and Mrs. Manori Nandasena), are gratefully acknowledged for their assistance in museum reference work. Mr. Naresh Chaturvedi, the Curator of Bombay Natural History Society and the staff of the herpetology section of BNHS are thanked for their assistance in the collection reference work. Mr. Sameera Suranjan Karunarathna, Mr. Dulan Ranga Vidanapathirana, Mr. Dinal Samarasinghe, Major Udesh Rathnayake and Mr. W.L.D.P.T.S. de A. Goonatilake provided valuable literature relevant for this work. Mr. Mahesh Chaturanga, Mr. Lalith Senanayake and Mr. Kasun Pradeep Benaragama assisted in developing the photographs and Sinhala abstract. Mr. Jagath Krishantha, Mr. Ruwan Chinthaka, for their support and encouragement. Finally, we also like to thank Dr. Aurélien Miralles and Mr. Jagath Gunawardana for their valuable comments.