



## STATUS OF REPTILES IN MEGHAMALAI AND ITS ENVIRONS, WESTERN GHATS, TAMIL NADU, INDIA

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**Abstract:** We update the reptile fauna of Meghamalai area, Western Ghats based on a literature review and a recent study (2006–2008) by SACON. In all, 90 species of reptiles belonging to 53 genera and 14 families were reported from this area, which include 30 (33.3%) species endemic to the Western Ghats. Reptiles of the area shared distribution with all biogeographic zones of India, barring the Trans-Himalaya. High species richness in Meghamalai is due to its broader elevation width, presence of both windward and leeward zones and a variety of forest types. Studies conducted after 2006 added several species to the faunal list of the area, but could not record 16 species reported earlier including Hutton's Pit Viper, *Tropidolaemus huttoni* and the Blue-bellied Tree Skink *Dasia subcaeruleum* from the area since 1949. Numerically, several species are currently rare, and changes in land use and land cover could have led to reduction in their abundance and local extinction. It is hoped that the recently declared Meghamalai Wildlife Sanctuary would reduce further degradation of habitats and help conserve biodiversity. Further studies are needed for understanding the ecology of the several species of reptiles found in this and the nearby areas of the Western Ghats.

**Keywords:** Abundance, endemic species, reptile distribution, threat status, Western Ghats.

Meghamalai (also known as High Wavy Mountains) has been sporadically surveyed for reptiles during the 19<sup>th</sup> and early 20<sup>th</sup> centuries by Harold S. Ferguson (1880–1904) and Angus F. Hutton (1946–48). These surveys resulted in the description of new species such as Ashambu Shieldtail *Uropeltis liura*, Periyar Shieldtail *Uropeltis arcticeps madurensis*, Striped Narrow-headed Snake *Xylophis stenorynchus*, Hutton's Pit Viper *Tropidolaemus huttoni* and Blue-bellied Tree Skink *Dasia subcaeruleum*. Specimens collected during the above surveys have been deposited at the British Museum Natural History (now the Natural History Museum, London) and in the museum of the Bombay Natural History Society, Mumbai. David & Vogel (1998) and Hutton & David (2009) re-examined the collections made by Hutton. Until recently, no serious attempt has

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been made to study the reptiles of this area (Bhupathy et al. 2009; Chandramouli & Ganesh 2010). In the present paper, we update the reptile fauna of Meghamalai area and provide data on species richness, composition, distribution with respect to Indian biogeographic zones and their threat status.

## Methods

Meghamalai (9°30'–10°30'N & 77°–78°30'E) is located in Theni Forest Division (Theni District) of Tamil Nadu state (Fig. 1). Herpetofauna of the area was studied by Sálím Ali Centre for Ornithology and Natural History (SACON) during 2006–2008, wherein reptiles were sampled in three belt transects (21km<sup>2</sup>; Bhupathy et al. 2009; Fig. 1) using quadrat, and time constrained visual encounter survey (TCVES) protocols (Campbell & Christman 1982; Crump & Scott 1994) on seasonal basis during day-light hours. However, specimen collection was not done due to non-availability of permits. An inventory of reptile fauna of the area was made based on historic collections and reviews (Boulenger 1891; Smith 1949a,b; Hutton 1949; David & Vogel 1998; Hutton & David 2009) and findings of recent studies (Bhupathy et al. 2009, 2011; Chandramouli & Ganesh 2010). Nomenclature followed herein is of Das (2003), Whitaker & Captain (2008) and Aengals et al. (2011).

Distribution analysis for the species recorded from Meghamalai was carried out following the biogeography zone categorization of India proposed by Rodgers & Panwar (1998): Trans-Himalaya, Himalaya, Indian Desert, Semi-Arid, Western Ghats, Deccan Peninsula, Gangetic Plain, Coasts, Northeastern India and Islands. The numerical status of each species was assigned based on the number of observations (Not observed = 0, Rare = <5 observations, Uncommon = 6–20 and Common = >20 observations) and relative abundance (number of observations of a species/total number of observations of all species X 100) of reptiles were determined based on field data generated during December 2006–November 2008 (Bhupathy et al. 2009). Categorization of the threat status of reptiles of the area was based on Conservation Assessment and Management Plan workshop of the IUCN protocol (Molur & Walker 1998).

## Results

### Species Richness

Available reports showed the occurrence of 90 species of reptiles belonging to 53 genera and 14 families in Meghamalai and its environs. This included two species (2.2%) of turtles and tortoises, 28 (31.1%) lizards and 60 (66.7%) species of snakes. The most diverse reptile family in terms of number of genera and

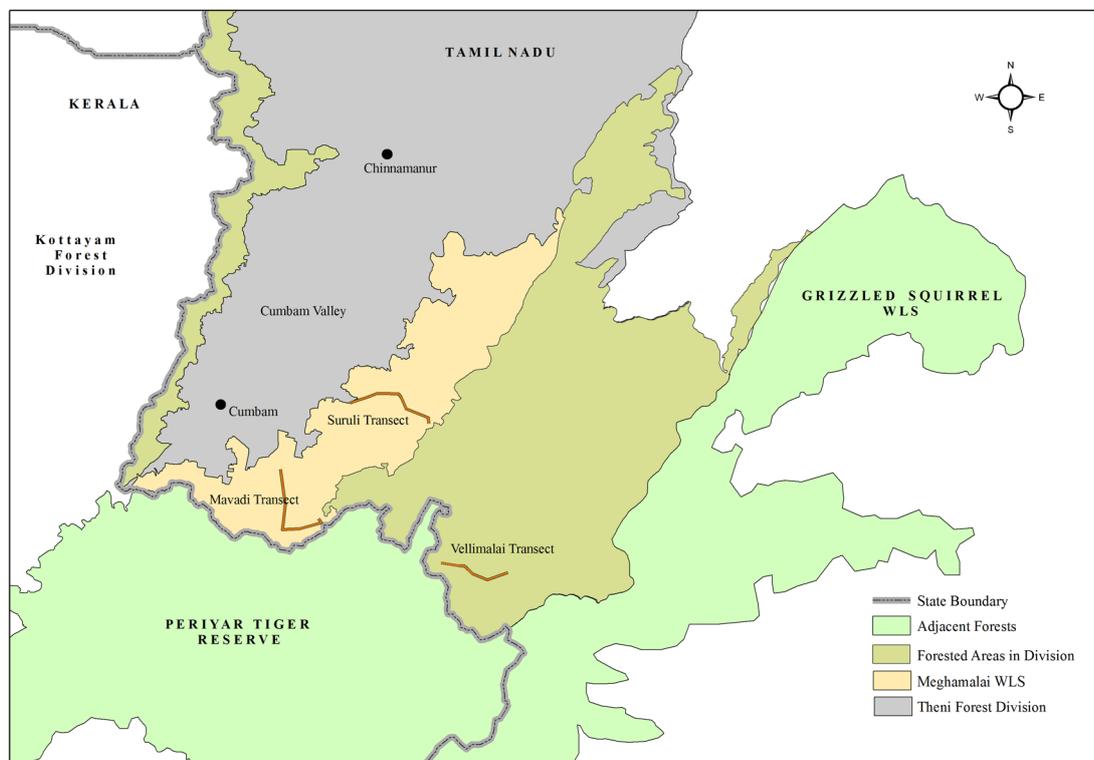


Figure 1. Map showing Meghamalai and adjacent areas of the Theni Forest Division, Tamil Nadu

species was Colubridae (Table 1). Among lizards, the highest number of species was contributed by the family Gekkonidae (10 species) followed by Agamidae (9). With respect to snakes, the highest number of species was contributed by Colubridae (32) followed by Uropeltidae (12 species). In all, six reptile families were represented by only one species (Table 1).

### Distribution

Among the reptiles reported from Meghamalai, 30 species (33.3%) were endemic to the Western Ghats. This included the highest of 11/12 (91.7%) species belonging to the family Uropeltidae. Reptiles of this area shared distribution with all biogeographic zones of the country barring Trans-Himalaya (Fig. 2). The highest of 61/90 (67.8%) species were found in Deccan Peninsula followed by Coasts (36, 40%). This area shared only four (4.4%) species with Islands found within Indian territorial waters. However, 48 (53.3%) species had distribution restricted to two biogeographic zones (Fig. 3). Only a fourth of the reptile species reported from Meghamalai had a wide distribution in 7-9 biogeographic zones of the country.

### Status

Of the 90 species of reptiles reported from Meghamalai (Appendix 1), tortoises and turtles (Indian Star Tortoise *Geochelone elegans*, Indian Black Turtle

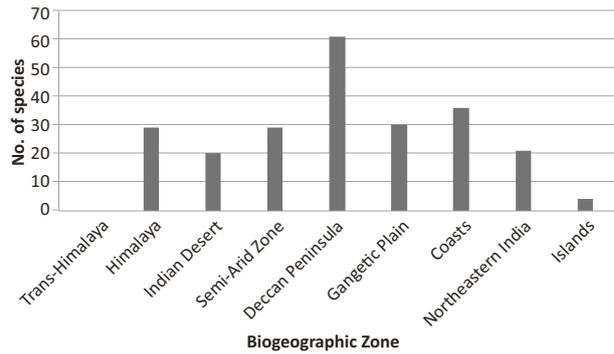


Figure 2. Reptiles reported from Meghamalai area (Western Ghats) sharing distribution with various biogeographic zones of India.

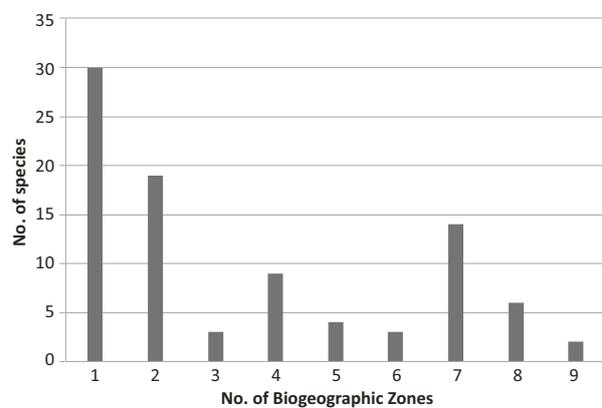


Figure 3. Reptiles reported from Meghamalai (Western Ghats) sharing distribution with number of Biogeographic zones of India.

Table 1. Composition of reptiles at family level in Meghamalai landscape, Western Ghats.

	Family	Genus	Species	Endemic species (%)
1	Testudinidae	1	1	0
2	Bataguridae	1	1	0
2	Gekkonidae	4	10	2 (20)
3	Agamidae	5	9	4 (44.4)
4	Chamaeleonidae	1	1	0
5	Scincidae	4	6	3 (50)
6	Lacertidae	1	1	0
7	Varanidae	1	1	0
8	Typhlopidae	2	2	0
9	Uropeltidae	4	12	11(91.7)
10	Boidae	2	2	0
11	Pythonidae	1	1	0
12	Colubridae	17	32	8(25)
13	Elapidae	4	4	0
14	Viperidae	5	7	2 (28.6)
	Total	53	90	30 (33.3)

*Melanochelys trijuga*) were not reported earlier from the area, but only found recently. Among 28 species of lizards reported, 10 were (numerically) rare and 11 were common (Fig. 4). The Blue-bellied Tree Skink reported from the area was not observed since its first report (1949) from this hill range. Among the 60 species of snakes reported, only three (5%) were common and 31 species (52%) were rare (i.e., <5 individuals observed in three years). Several species of snakes were numerically rare compared to lizards (Figs. 4 & 5).

During recent field (2006–2008), 3,374 records of 55 species of reptiles were obtained in TCVES and quadrat sampling; 3004 reptiles in 3600 hours of TCVES and 370 reptiles in 12ha of quadrat sampling, which empirically worked out to 0.83 reptiles/man hour of search and 30.8 reptiles/ha respectively. Only 10 species had relative abundance  $\geq 1\%$ . This typically included nine species of lizards and one snake (Hump-nosed Pit Viper *Hypnale hypnale*). The relative abundance of Bronze Grass Skink *Eutropis macularia* was the highest (34.7%) followed by a species of Day Gecko *Cnemaspis* sp1. (18.6%) and

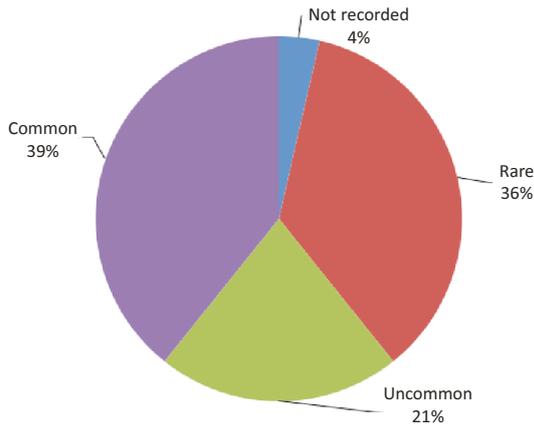


Figure 4. Status of lizards (N = 28 species) observed in Meghamalai during 2006–2008 based on number of observations (Not observed = 0, Rare = <5, Uncommon = 6–20, Common = >20 observations).

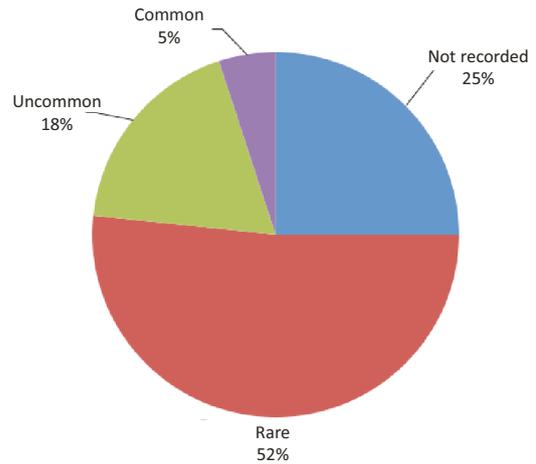


Figure 5. Status of snakes (N = 60 species) observed in Meghamalai during 2006–2008 based on number of observations (Not observed = 0, Rare = <5, Uncommon = 6–20, Common = >20 observations).

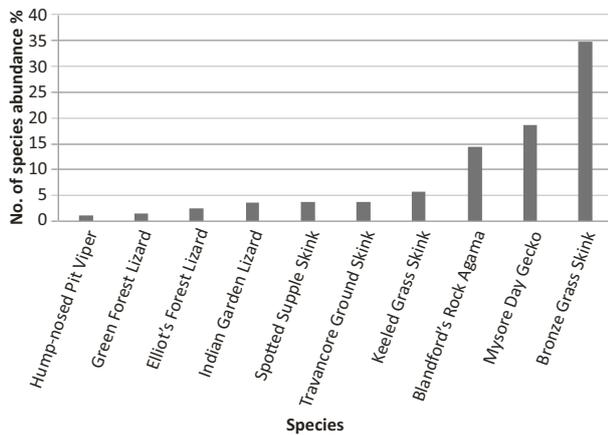


Figure 6. Relative abundance of 10 most common species of reptiles observed in Meghamalai, Western Ghats during 2006–2008.

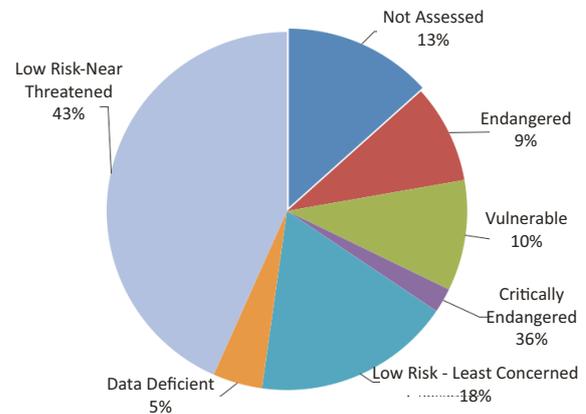


Figure 7. Threat status of reptile species reported from Meghamalai, Western Ghats (based on Molur & Walker 1998).

Blanford's Rock Agama *Psamophilus blanfordanus* (Fig. 6).

Highly threatened species of Meghamalai included two 'Critically Endangered' (Hutton's Pit Viper, Dindigal Shieldtail *Uropeltis cf. dindigalensis*) which were not sighted in the present study and eight 'Endangered' species (Appendix 1). Four species were considered as 'Data Deficient'. In all, only 16 (18%) species were categorized as 'Lower Risk- Least Concerned' (Fig. 7).

**Discussion**

A record of 90 species of reptiles including two subspecies of *Coelognathus helena* (*C.h. helena*, *C.h. monticollaris*) in Meghamalai, is the highest number of species reported so far for any specific landscape of the

Western Ghats. As both the subspecies of *Coelognathus helena* were found in the same location (i.e., sympatric), we tentatively considered them distinct species in the present analysis. We suggest further studies to determine the taxonomic status of the subspecies of *Coelognathus helena*. A compilation by Aengels et al. (2011) showed the occurrence of 518 reptile species in India, and Das (1996) reported 165 species from the Western Ghats. The present report of 90 species is about 17.4% of reptiles of the country and about 54.5% of species of the Western Ghats. Based on a review, Bhupathy (2004) reported 177 species of reptiles from Tamil Nadu State and the present report of 90 species (50.8%) from Meghamalai alone shows the conservation importance of the area. High species richness in the area is due to

its broader elevation width, various climatic conditions, and the presence of windward and leeward sides and occurrence of a variety of forest types (Bhupathy et al. 2009, 2012). Records of species such as sand boas *Gongylophis conicus* and *Eryx johnii*, Saw-scaled Viper *Echis carinatus*, Fan-throated Lizard *Sitana ponticerina* as well as Anaimalai Spiny Lizard *Salea anamallayana*, shieldtails, *Uropeltis* spp. and Large-scaled Pit Viper *Trimeresurus macrolepis* from Meghamalai (Srinivas et al. 2008; Bhupathy et al. 2009) indicate the continuum from dry to wet (thorn-dry deciduous- moist deciduous-evergreen-montane shola grasslands) forests in the landscape.

Among the 90 species of reptiles reported from Meghamalai, 30 species (33.3%) were endemic to the Western Ghats. This is much lower compared to the reported endemism (53.3%) of the reptiles of the Western Ghats (Das 1996). Occurrence of endemic species such as Ashambu Shieldtail *Uropeltis liura*, Periyar Shieldtail *Uropeltis arcticeps madurensis*, Hutton's Pit Viper and Blue-bellied Tree Skink in Meghamalai is poorly known even today. Hutton's Pit Viper is apparently endemic to the area, but has not been observed since its description despite intensive surveys in recent years (Bhupathy et al. 2009; Chandramouli & Ganesh 2010). Boulenger (1891) described the Blue-bellied Skink based on a specimen from Bodanaikanur (now Bodinayakanur, a part of the present Theni Forest Division). Further, this species was reported from Meghamalai by Smith (1949a) though no report of this species is available since then. It was considered endemic to this hill range till its recent collection from over ca. 600km (straight-line distance) northwards, in Kudremukh National Park, Karnataka (Harikrishnan et al. 2012).

The higher sharing of fauna of Meghamalai with that of the Deccan Peninsula and Coasts might be due to a similarity in bio-climate and habitats of these landscapes. However, no commonality was found with respect to the reptile fauna between Meghamalai and the Trans-Himalaya. Difference in the age, geological position, and variation in elevation, climate and perhaps the distance between these landscapes might have led to distinct reptile assemblages. It is to be noted that 48 species (53.3%) of reptiles found here were restricted to only one or two biogeographic zones of the country (Fig. 3). This shows that the reptiles of the Western Ghats (Meghamalai) are highly vulnerable to habitat alterations and climate change, if any.

Several species of reptiles found in Meghamalai were numerically rare, and 16 of them (one lizard species and 15 snakes) were not observed in recent studies

(Bhupathy et al. 2009; Chandramouli & Ganesh 2010), which were reported earlier (Boulenger 1891; Hutton 1949; Hutton & David 2009). Tortoises and turtles and most of the species of lizards observed have been recorded for the first time from the area. However, Meghamalai lies within the distribution range of many of these newly recorded species (Smith 1931, 1935, 1943; Das 1995; Whitaker & Captain 2008). Comparison of past (Hutton 1949 reviewed recently in Hutton & David 2009) and recent data (Bhupathy et al. 2009; Chandramouli & Ganesh 2010) showed the occurrence of 60 species of snakes in the area; 22 species were common to both past and recent studies, 15 only to the earlier and 23 to the latter respectively. Land use and land cover changes between the historical and recent studies could have possibly led to a local extinction of several species that might have contributed to the above disparity. According to Blatter & Hallberg (1917), this area was covered with dense montane rain forests during the early 20<sup>th</sup> century. However, presently, most parts of the landscape along 1000–1500 m have been altered for commercial plantations.

As can be expected, a higher number of snake species was (numerically) rare when compared to lizards (Figs. 4–6) and only one species of snake got a place in the top 10 relatively common reptiles of Meghamalai. This might be due to their difference in trophic and spatial niches occupied by these species (most of the snakes are predators and lizards are insectivores). Species such as the Bronze Grass Skink, a species of Day Gecko *Cnemaspis* sp.1 and Blanford's Rock Agama are specific to microhabitats such as forest floor with leaf litter, trees with larger trunk and open rocks respectively (Daniel 2002). Availability of suitable microhabitats in Meghamalai could have resulted in their higher abundance here.

Among the 'Critically Endangered' species of Meghamalai, Hutton's Pit Viper has not been sighted since its description (Smith 1949b), despite serious attempts to locate the species since then (Bhupathy et al. 2009; Chandramouli & Ganesh 2010; but see Boundy 2008). Similarly, the Blue-bellied Tree Skink has not been reported from Meghamalai since 1949 (Harikrishnan et al. 2012). Extensive field work in the region by Bhupathy et al. (2009) and Chandramouli & Ganesh (2010) did not locate the aforesaid species, and we doubt their continued existence in Meghamalai. As mentioned earlier, changes in land use might have taken a toll on these and several other species. Despite all these taxonomic uncertainties and doubtful occurrence of obscure endemic forms, this landscape is undoubtedly

one of the most important reptile areas of India. It is hoped that habitat alterations and degradation of this landscape will be under control as a portion of the area comes under the recently declared Meghamalai Wildlife Sanctuary (Tamil Nadu Government Gazette 2009). Collection-based studies on reptiles would provide more insights on faunal distribution of the area (Ganesh et al. in press) and potentially reduce the disparity in the number of species observed in the area during the 1940s and in recent years (2006–2008).

## REFERENCES

- Aengals, R., V.M.S. Kumar & M.J. Palot (2011). Updated Checklist of Indian Reptiles. Zoological Survey of India, Kolkata, India, www.zsi.gov.in/checklist/Checklist%20of%20Indian%20Reptiles.pdf (downloaded on 22 July 2013).<sup>†</sup>
- Bhupathy, S. (2004). Reptiles, pp. 62–75. In: Annamalai, R. (ed.). *Tamil Nadu Biodiversity Strategy and Action Plan - Chordate Diversity*. Tamil Nadu Forest Department, Chennai.
- Bhupathy, S., G. Srinivas, N. Sathishkumar (2009). A study on the Herpetofaunal communities of the Upper Vaigai Plateau, Western Ghats, India. Final Report submitted to the Ministry of Environment and Forests, Government of India. Sálim Ali Centre for Ornithology and Natural History, Coimbatore, 75pp.
- Bhupathy, S., G. Srinivas, N. Sathishkumar, T. Karthik & A. Madhivanan (2011). Herpetofaunal mortality due to vehicular traffic in the Western Ghats, India: a case study. *Herpetotropicos* 5(2): 119–126.
- Bhupathy, S., G. Srinivas, N. Sathishkumar, M. Murugesan, S. Babu, R. Suganthasakthivel & P. Sivakumar (2012). Diversity and conservation of selected biota of the Meghamalai landscape, Western Ghats, India. *Current Science* 102(4): 590–595.
- Blatter, E. & F. Hallberg (1917). Preliminary notes on a recent botanical tour to the High Wavy Mountain (S. India). *Journal of the Bombay Natural History Society* 25(2): 290–292.
- Boulenger, G.A. (1891). Description of a new species of lizard obtained by Mr. H.S. Ferguson in Travancore, Southern India. *Journal of the Bombay Natural History Society* 6(4): 449.
- Bouddy, J. (2008). A possible third specimen of the pitviper genus *Tropidolaemus* from India. *Hamadryad* 32 (1): 59–62.
- Campbell, H.W. & S.P. Christman (1982). Field techniques for Herpetofaunal Community Analysis, pp. 193–200. In: Scott, N.J. Jr. (ed.). *Herpetological Communities*. Wildlife Research Report 13. U. S. Department of Interior, Fish and Wildlife Service, Washington, D.C.
- Chandramouli, S.R. & S.R. Ganesh (2010). Herpetofauna of southern Western Ghats, India - reinvestigated after decades. *Taprobanica* 2(2): 72–85; <http://dx.doi.org/10.4038/tapro.v2i2.3145>
- Crump, M.L. & N.J. Scott (1994). Visual encounter survey. pp. 84–96. In: Heyer, W.R., M.A. Donnelly, R.W. McDiarmid, L.C. Hayek & M.S. Foster (eds.). *Measuring and Monitoring Biological Diversity, Standard Methods for Amphibians*. Smithsonian Institution Press, USA.
- Daniel, J.C. (2002). *The Book of Indian Reptiles and Amphibians*. Oxford University Press, Mumbai, India, 238pp.
- Das, I. (1995). *Turtles and Tortoises of India*. WWF-India/Oxford University Press, Bombay, 195pp.
- Das, I. (1996). *Biogeography of the Reptiles of South Asia*. Krieger Publishing Company, Malabar, Florida.
- Das, I. (2003). Growth of knowledge on the reptiles of India, with an introduction to systematics, taxonomy and nomenclature. *Journal of the Bombay Natural History Society* 100(2&3): 446–501.
- David, P. & G. Vogel (1998). Redescription of *Trimeresurus huttoni*, Smith, 1949 (Serpentes, Crotalinae), with a discussion of its relationships. *Hamadryad* 22(2): 73–87.
- Ganesh, S.R., S. Bhupathy, P. David, N. Sathishkumar & G. Srinivas (in Press). Snake Fauna of High Wavy Mountains, Western Ghats, India: Species Richness, Status and Distribution Pattern. *Russian Journal of Herpetology*.
- Harikrishnan, S., K. Vasudevan, A. de Silva, V. Deepak, N.B. Kar, R. Naniwadekar, A. Lalremruata, K.R. Prasoona & R.K. Aggarwal (2012). Phylogeography of *Dasia* Gray, 1830 (Reptilia: Scincidae), with the description of a new species from southern India. *Zootaxa* 3233: 37–51.
- Hutton, A.F. (1949). Notes on the snakes and mammals of the High Wavy Mountains, Madura District, south India. Part I—Snakes. *Journal of the Bombay Natural History Society* 48: 454–460.
- Hutton, A.F. & P. David (2009). Notes on a collection of snakes from south India, with emphasis on the snake fauna of the Meghamalai Hills (High Wavy Mountains). *Journal of the Bombay Natural History Society* 105: 299–316.
- Molur, S. & S. Walker (1998). *Note book for Reptiles*. CAM P. CBSG South Asian Reptile Special Interest Group / South Asian Reptile Network, Taxon Data Sheets from the Reptiles of India Report, 226pp.
- Rodgers, W.A. & H.S. Panwar (1998). *Wildlife Protected Areas in India - Vol. 1*. Wildlife Institute of India, Dehradun, 341pp.
- Smith, M.A. (1931). *The Fauna of British India, Ceylon and Burma, including the whole of the Indo-Chinese subregion. Reptilia and Amphibia. Vol. I. Testutines*. Taylor & Francis, London.
- Smith, M.A. (1935). *The Fauna of British India, including Ceylon and Burma. Reptilia and Amphibia - Vol. II. Sauria*. Taylor and Francis, London, 440pp.
- Smith, M.A. (1943). *The Fauna of British India, Ceylon and Burma, including the whole of the Indo-Chinese subregion. Reptilia and Amphibia. Vol. III, Serpentes*. Taylor & Francis, London, 583pp.
- Smith, M.A. (1949a). Notes on a second specimen of the skink *Dasia subcaerulea* from south India. *Journal of the Bombay Natural History Society* 48: 596–597.
- Smith, M.A. (1949b). A new species of pit viper from South India: *Trimeresurus huttoni* sp. nov. *Journal of the Bombay Natural History Society* 48(3): 596.
- Srinivas, G., S. Bhupathy & A. Madhivanan (2008). Occurrence of *Salea anamallayana* Beddome, 1878 in High Wavy Mountains, Western Ghats. *Journal of the Bombay Natural History Society* 105(3): 193–194.
- Tamil Nadu Government Gazette (2009). *Declaration of Meghamalai Wildlife Sanctuary*. Regd. No. TN/CCN/467/2009-11: 322–325.
- Whitaker, R. & A. Captain (2008). *Snakes of India - The Field Guide*. Draco Books, Chennai, 385pp.

## Appendix 1. Reptiles of Meghamalai and their status.

	Common name	Scientific name	Global distribution	Threat status	Numerical status	Reference
1	Indian Star Tortoise	<i>Geochelone elegans</i>	NE	VU	R	7
2	Indian Black Turtle (Image 1)	<i>Melanochelys trijuga</i>	NE	LR-NT	R	3
3	Day Gecko	<i>Cnemaspis</i> sp.1	EI	NA	C	3
4	Ornate Day Gecko	<i>Cnemaspis ornata</i>	E	VU	R	3
5	Day Gecko	<i>Cnemaspis</i> sp.2	E	NA	R	3
6	Kollegal Ground Gecko	<i>Geckoella kollegalensis</i>	EI	DD	UC	3
7	Brooke's House Gecko	<i>Hemidactylus</i> cf. <i>brookii</i>	NE	LR-LC	R	3
8	Asian House Gecko	<i>Hemidactylus frenatus</i>	NE	LR-LC	C	3
9	Bark Gecko	<i>Hemidactylus leschenaultii</i>	NE	LR-LC	UC	3
10	Spotted Rock Gecko	<i>Hemidactylus maculatus</i>	EI	LR-LC	R	3
11	Termite-hill Gecko (Image 2)	<i>Hemidactylus triedrus</i>	NE	LR-LC	R	3
12	Oceanic Worm Gecko	<i>Hemiphyllodactylus aurantiacus</i>	EI	VU	UC	3
13	Fan-throated Lizard	<i>Sitana ponticeriana</i>	NE	LR-LC	R	3
14	Western Ghats Flying Lizard	<i>Draco dussumieri</i>	E	LR-NT	UC	3
15	Anaimalai Spiny Lizard	<i>Salea anamallayana</i>	E	EN	R	3
16	Indian Garden Lizard	<i>Calotes versicolor</i>	NE	LR-NT	C	3
17	Large-scaled Forest Lizard	<i>Calotes grandisquamis</i>	E	LR-NT	R	3
18	Green Forest Lizard (Image 3)	<i>Calotes calotes</i>	NE	LR-NT	C	3
19	Roux's Forest Lizard	<i>Calotes rouxii</i>	EI	LR-NT	UC	3
20	Elliot's Forest Lizard	<i>Calotes ellioti</i>	E	LR-NT	C	3
21	Blandford's Rock Agama	<i>Psammophilus blanfordanus</i>	NE	NA	C	3
22	South Asian Chamaeleon	<i>Chamaeleo zeylanicus</i>	NE	VU	R	3
23	Spotted Supple Skink	<i>Lygosoma punctata</i>	NE	LR-LC	C	3
24	Blue-bellied Tree Skink	<i>Dasia subcaeruleum</i> #	E	DD	NR	5
25	Beddome's Grass Skink	<i>Eutropis beddomei</i>	E	NA	R	3
26	Keeled Grass Skink	<i>Eutropis carinata</i>	NE	NA	C	3
27	Bronze Grass Skink	<i>Eutropis macularia</i>	NE	NA	C	3
28	Travancore Ground Skink	<i>Scincella travancoricum</i>	E	VU	C	3
29	Leschenault's Lacerta (Image 4)	<i>Ophisops leschenaulti</i>	EI	LR-LC	C	3
30	Bengal Monitor Lizard	<i>Varanus bengalensis</i>	NE	VU	UC	3
31	Brahminy Worm Snake	<i>Ramphotyphlops braminus</i>	NE	LR-NT	C	3
32	Beaked Worm Snake	<i>Grypotyphlops acutus</i>	NE	NA	R	3
33	Pied-belly Shieldtail	<i>Melanopidium punctatum</i>	E	VU	R	1,3
34	Perrotet's Shieldtail	<i>Plecturus perroteti</i>	E	LR-LC	NR	1
35	Red-bellied Shieldtail	<i>Rhinophis sanguineus</i>	E	DD	NR	1
36	Travancore Shieldtail	<i>Rhinophis travancoricus</i>	E	DD	NR	1
37	Kerala Shieldtail	<i>Uropeltis ceylanica</i>	E	LR-LC	NR	1
38	Elliot's Shieldtail	<i>Uropeltis ellioti</i>	EI	LR-NT	NR	1
39	Palni Shieldtail	<i>Uropeltis pulneyensis</i>	E	EN	NR	1
40	Red-spotted Shieldtail	<i>Uropeltis rubromaculatus</i>	E	EN	NR	1
41	Ashambu Shieldtail	<i>Uropeltis liura</i> #	E	EN	NR	6
42	Dindigul (?) Shieldtail	<i>Uropeltis</i> cf. <i>dindigalensis</i>	E	CR	NR	2
43	Black-bellied Shieldtail	<i>Uropeltis woodmasoni</i>	E	EN	NR	4
44	Periyar Shieldtail	<i>Uropeltis arcticeps madurensis</i> #	E	LR-NT	R	2,3

	Common name	Scientific name	Global distribution	Threat status	Numerical status	Reference
45	Rock Python	<i>Python molurus</i>	NE	LR-NT	R	1,3
46	Common Sand Boa	<i>Gongylophis conicus</i>	NE	NA	R	3
47	Red Sand Boa	<i>Eryx johnii</i>	NE	LR-LC	R	3
48	Gunther's Vine Snake	<i>Ahaetulla dispar</i>	E	LR-NT	UC	1,2,3
49	Common Vine Snake	<i>Ahaetulla nasuta</i>	NE	LR-NT	UC	2,3
50	Bronze-headed Vine Snake	<i>Ahaetulla perroteti</i>	E	EN	R	1,3
51	Brown Vine Snake	<i>Ahaetulla pulverulenta</i>	NE	LR-NT	R	1,3
52	Banded Racer	<i>Argyrogena fasciolata</i>	NE	LR-NT	NR	1
53	Ceylon Cat Snake	<i>Boiga ceylonensis</i>	NE	NA	R	1,2
54	Collared Cat Snake	<i>Boiga nuchalis</i>	NE	LR-NT	R	3
55	Common Cat Snake	<i>Boiga trigonata</i>	NE	LR-LC	R	3
56	Yellow-Green Cat Snake	<i>Boiga flaviviridis</i>	EI	NA	R	3
57	Ornate Flying Snake	<i>Chrysopelea ornanta</i>	NE	LR-NT	UC	3
58	Common Trinket Snake	<i>Coelognathus helena helena</i>	NE	NA	R	3
59	Montane Trinket Snake	<i>C. h. monticollaris</i>	E	NA	R	1,2,3
60	Common Bronzeback Tree Snake	<i>Dendrelaphis tristis</i>	NE	LR-LC	R	3
61	Bridel Snake	<i>Dryocalamus nympha</i>	NE	VU	R	1,3
62	Lesser Stripe-necked Snake	<i>Liopeltis calamaria</i>	NE	LR-NT	UC	3
63	Common Wolf Snake	<i>Lycodon aulicus</i>	NE	LR-LC	R	3
64	Barred Wolf Snake	<i>Lycodon striatus</i>	NE	LR-NT	R	3
65	Travancore Wolf Snake	<i>Lycodon travancoricus</i>	EI	LR-NT	UC	1,2,3
66	Common Kukri Snake	<i>Oligodon arnensis</i>	NE	LR-LC	R	3
67	Striped Kukri Snake	<i>Oligodon brevicauda</i>	E	LR-NT	R	1,3
68	Russell's Kukri Snake	<i>Oligodon taeniolatus</i>	NE	LR-NT	UC	1,3
69	Travancore Kukri Snake	<i>Oligodon travancoricus</i>	EI	EN	R	1,2
70	Black Spotted Kukri Snake	<i>Oligodon venustus</i>	E	LR-NT	R	2
71	Indian Rat Snake	<i>Ptyas mucosa</i>	NE	LR-NT	UC	1,2,3
72	Dumeril's Black-headed Snake	<i>Sibynophis subpunctatus</i>	EI	LR-NT	R	3
73	Gunther's Narrow-headed Snake	<i>Xylophis stenorhynchus</i> #	E	EN	NR	6
74	Beddome's Keelback	<i>Amphiesma beddomei</i>	E	LR-NT	R	1,2,3
75	Hill Keelback	<i>Amphiesma monticola</i>	E	VU	R	3
76	Striped Keelback (Image 5)	<i>Amphiesma stolum</i>	NE	LR-NT	UC	1,3
77	Olive Keelback	<i>Atretium schistosum</i>	NE	LR-NT	NR	1
78	Green Keelback	<i>Macropisthodon plumbicolor</i>	NE	LR-NT	C	1,2,3
79	Checkered Keelback	<i>Xenochrophis piscator</i>	NE	LR-LC	R	1,2,3
80	Common Krait	<i>Bungarus caeruleus</i>	NE	LR-NT	R	3
81	Striped Coral Snake	<i>Calliophis nigrescens</i>	EI	LR-NT	R	1,2,3
82	Spectacled Cobra	<i>Naja naja</i>	NE	LR-NT	R	1,3
83	King Cobra	<i>Ophiophagus hannah</i>	NE	LR-NT	NR	1
84	Russell's Viper	<i>Daboia russelii</i>	NE	LR-NT	UC	1,3
85	Saw-scaled Viper	<i>Echis carinatus</i>	EI	LR-NT	UC	3
86	Hump-nosed Pit Viper (Image 6)	<i>Hypnale hypnale</i>	NE	LR-NT	C	2,3
87	Bamboo Pit Viper	<i>Trimeresurus gramineus</i>	EI	LR-NT	NR	1
88	Large-scaled Pit Viper	<i>Trimeresurus macrolepis</i>	EI	LR-NT	R	1,2,3
89	Malabar Pit Viper	<i>Trimeresurus malabaricus</i>	E	LR-NT	UC	1,2,3

	Common name	Scientific name	Global distribution	Threat status	Numerical status	Reference
90	Hutton's Pit Viper	<i>Tropidolaemus huttoni</i> #	E	CR	NR	1

# = Meghamalai landscape is type locality

Global distribution: NE - Non endemic to India, EI - Endemic to India, E - Endemic to Western Ghats

Threat status: CR - Critically Endangered, E - Endangered, VU- Vulnerable, LR/NT - Lower Risk Near Threatened, LR/LC - Lower Risk Least Concerned, DD - Data Deficient, NA - Not Assessed (Molur & Walker 1998)

Numerical status: R - Rare, UC - Uncommon, C - Common; NR - Not Recorded

Reference: 1 - Hutton & David (2009), 2 - Chandramouli & Ganesh (2010), 3 - Bhupathy et al. (2009), 4 - Hutton (1949), 5 - Boulenger (1891), 6 - Smith (1943), 7 - S. Babu pers. comm.



Image 1. Indian Black Turtle



Image 2. Termite-hill Gecko



Image 3. Green Forest Lizard



Image 4. Leschenault's Lacerta



Image 5. Striped Keelback



Image 6. Hump-nosed Pit Viper

