Record of *Oligodon travancoricus* Beddome, 1877 (Serpentes, Colubridae) from Grizzled Squirrel Sanctuary, Western Ghats, Tamil Nadu, India

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OLIGODON TRAVANCORICUS Beddome, 1877 is endemic to the Western Ghats, south of Palghat. Precise locality records are known from, High Wavy Mountains, Valliyoor and Kalakkad in Tamil Nadu and Olavakode, Munnar and High Ranges in Kerala (Anonymous, 2001; Ferguson, 1895; Hutton, 1949; Murthy, 1990; Sharma, 2003; Smith, 1943; Whitaker, 1978). The most recent field studies on this species were in 1996. Its IUCN status is Endangered (EN) and this is based on: restricted distribution, limited location, continuing decline in extent of occurrence, severely fragmented area of occupancy and quality of habitat. However, the Indian Wildlife (Protection) Act, 1972, list the species in Schedule IV (Anonymous, 2001). Previously only male specimens are reported (Sharma, 2003; Smith, 1943). Herein, we present data from four live examples, two males and two females, observed in Grizzled Squirrel Sanctuary, a part of the Cardamom hills. Previous surveys conducted approximately two decades ago in this region did not record *O. travancoricus* (Malhotra & Davis, 1991). This paper also illustrates *O. travancoricus* in life for the very first time.

METHODS AND MATERIALS

Meristic, metric and morphological data were recorded from live specimens that were released back into the wild. Meristic data included scalerows around body, which was counted at one head length posterior to neck (near neck), in the middle of snout-vent length (at mid-body) and at one head length anterior to vent (near tail) (David & Vogel, 1998). Scales after the preventrals, up to the scale before the anal scale were counted as ventrals (Dowling, 1951) and those after the anal, up to the penultimate scale (i.e., excluding terminal scale) were counted as subcaudals. Scales between rostral and the final scale bordering the jaw angle were counted as supralabials, and those touching eye, given within parenthesis. Scales between mental and the scale bordering last supralabial were counted as infralabials, those touching genials given within parenthesis. Scales surrounded by supralabials, postoculars and parietals were counted as temporals (Whitaker & Captain, 2004). Symmetrical head scalation character values were given in left, right order. Morphologic data included coloration and pattern on the dorsum, venter and tail. Metric data included snout-vent and total lengths, which were measured with a string and a standard measuring tape (L.C = 1 mm; Butterfly brand) and the values were given in mm. Sex was determined by using a thin, smooth, metallic probe. Photographic documentation was done prior to release. All photographs of the snake were taken in life, in situ, using a Canon Powershot A620® camera. Geographic coordinates and altitude of sighting localities were recorded by using Garmin® 12 channel Global Positioning System. Habitat type followed Champion & Seth (1968).

Coloration in Life (Figs. 1-4)

Dorsum greyish brown with dark brown bands that sometimes became paired spots on the tail; bordered by thin black inner and off-white outer linings; the bands widest and best visible on dorsum and then tapering or failing to reach the laterals. Each band 1-2 scales wide and the inter-band distance 6-9 scales wide; a few narrow, less prominent,

Figure 1. Adult male *Oligodon travancoricus.* Photographs by S.R. Ganesh.

Figure 2. Lateral view of head showing chevron markings.

Figure 3. Ventral view of hind body showing checkered markings.

Figure 4. Dorsal view of head markings showing white parietal spots.

Figure 5. Wet Evergreen Forest: the habitat of *Oligodon travancoricus*.

dark brown streaks without outer linings, present between two conspicuous bands. Venter heavily patterned, with black checkered markings on a white background, both the colours being in equal proportions. Head with three, chevron markings, the first one occupying prefrontal-ocular-anterior supralabial region; the second occupying parietal-temporal-posterior supralabial region; the third occupying occipital-nuchal region. Second chevron the broadest with a pair of white, parietal spots.

Habitus
Body moderately stout, slightly depressed, without distinct neck.

Ecological Notes (Fig. 5)
All four examples were found in Tropical Evergreen Forests at 800-1000 m altitude. Microhabitats recorded were dense leaf-litter and rock aggregations. They were encountered on the move during daytime, between 12.10-18.18 hrs, in post monsoon season (i.e. February-March). The snakes were sighted in and around human habitation; the first one was from a building and the rest were from forest paths. *Oligodon venustus* was recorded to be syntopic with this species in this hill range.

Locality
Specimens 1 and 2 were from Periya Kavu (N 09°25.044' E 077°21.240'; 813 m). Specimens 3 and 4 were from Kottai Malai (N 09°29.543' E 077°24.231'; 987 m). Both were within Grizzled Squirrel Sanctuary in Virudunagar district of Tamil Nadu state, India.

Variation
Details for all four specimens observed are given in Table 1 (n=4): labials 6-7; preventrals 3-4; ventrals 150-154; subcaudals 31-39; snout-vent length 313-375; total length 365-439; relative tail length 0.11-0.15; bands 23-27 on body, 5-6 on tail.

DISCUSSION

Our specimens agreed with literature describing the species and our scale counts, though consistent, outrange the literature records, thus slightly expanding the characterization of this species. This was based on providing intraspecific variations from novel conspecifics. In almost all aspects, our materials were consistent with literature values except for ventral counts (see below). Labials of our materials were 6-7 (vs. 7 [Sharma, 2003; Smith, 1943]). Ventrals we recorded were 150-154 (vs. 154-155 [Smith, 1943; Murthy, 1990]). Subcaudals of our specimens were 31-39 (vs. 34-37 [Smith, 1943; Murthy, 1990]; 37 [Sharma 2003]). The number of bands on body and tail were also consistent (23-27, 5-6 vs. 25, 5 [Sharma, 2003; Smith, 1943]). Sharma (2003) recorded ventral count as 145, which is far lower than Smith's and ours, even if preventrals are

Characters	**Specimen I**	**Specimen II**	**Specimen III**	**Specimen IV**
Sex	Female	Male	Female	Male
Scales (smooth)	17:17:15	17:17:15	17:17:15	17:17:15
Supralabials (enters orbit)	7 (3,4)	6,7 (3,4)	7 (3,4)	7 (3,4)
Infralabials (touch genials)	7 (4)	6,7 (4)	7 (4)	7 (4)
Preocular	1	1	1	1
Postocular	2	2	2	2
Temporals	1+2	1+2	1+2	1+2
Preventrals	3	3	4	3
Ventrals	151	154	150	151
Anals	2	2	2	2
Subcaudals (paired)	39	31	33	39
Snout-vent length	373	313	375	371
Total length	420	365	423	439
Relative tail length	0.11	0.14	0.11	0.15
Bands on body, tail	26, 5	23, 5	26, 5	27, 6

Table 1. Sex, meristic, metric and morphologic data of four live *Oligodon travancoricus*.

excluded. Since there was no explicit mention of the source material (= specimen) for this variation and given its discrepancy with all other literature and our materials, the ventral count value 145 should be currently regarded as dubious. Sharma (2003) and Smith (1943) (implicitly) reported relative tail length to be 0.14 which agrees with our male specimens. The value of this character is known only from males (see Sharma, 2003; Smith, 1943). Murthy (1990) reported a single specimen SRSS 118, as a male of 450 mm length but no mention of snout vent length or tail length values exist. Thus, we provide the first record of relative tail length values for female conspecifics, whereby the body-tail ratio was lower (0.11), indicating typically shorter tail in females. The record in Anonymous (2001) from Olavakode was an adult, from a lower elevation forest near Palghat but its scalation and ecological data is not available (Gerry Martin, pers. comm.). Malhotra & Davis (1991) did not record this species in Grizzled Squirrel Sanctuary. Murthy (1990) lists only one specimen but gives length values and subcaudal counts in min-max ranges, perhaps repeating those in literature. Ferguson (1895) remarked that several specimens were sent to him from the High Range; while Hutton (1949) mentioned that five specimens, two being juveniles measuring 100-120 mm were found during April in evergreen forests. Ferguson (1895), Hutton (1949) and Sharma (2003) state this species to be 'fairly common' but Murthy (1990) describes it as 'rare'. As our short-survey produced four more specimens, its 'rare' status may arguably be unwarranted.

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REFERENCES

Anonymous. (2001). Note book for Reptiles. CAMP. CBSG South Asian Reptile Special Interest Group / South Asian Reptile Network, Taxon Data Sheets, 1998, 226 pp.

Champion, H.G. & Seth, S.K. (1968). *A Revised Survey of the Forest Types in India.* New Dehli: Manager of publications, New Delhi.

David, P. & Vogel, G. (1998). Redescription of *Trimeresurus huttoni* Smith, 1949 (Serpentes, Crotalinae), with a discussion of its relationships. *Hamadryad* **22**, 73-87.

Dowling, H.G. (1951). A proposed standard system of counting ventrals in snakes. *British J. Herpetol.* **1**, 97–99.

Ferguson, F.H. (1895). List of snakes taken from Travancore from 1888 to 1895. *J. Bombay Nat. Hist. Soc.* **10** (1), 68–77.

Gururaja, K.V., Dinesh, K.P., Palot, M.J., Radhakrishnan, C. & Ramachandra, T.V. (2007). A new species of *Philautus* Gistel (Amphibia: Anura: Rhacophoridae) from southern Western Ghats, India. *Zootaxa* **1621**, 1-16.

Hutton, A.F. (1949). Notes on the snakes and mammals of the High Wavy Mountains, Madura district, south India. Part I Snakes. *J. Bombay Nat. Hist. Soc.* **48** (3), 454-460.

Malhotra, A. & Davis, K. (1991). A report on the herpetological survey of the Srivilliputhur Reserve Forests,Tamil Nadu. *J. Bombay Nat. Hist. Soc.* **88** (2), 157-166.

Murthy, T.S.N. (1990). Reptiles of Kalakad Sanctuary, India. *The Snake* **22**, 44-59.

Sharma, R.C. (2003). *Handbook – Indian Snakes*. Kolkata: Zoological Survey of India, 292 pp.

Smith, M.A. (1943). *Fauna of British India, including Ceylon and Burma. Vol- III Serpentes,* London: Taylor & Francis Ltd. 583 pp.

Whitaker, R. (1978). *Common Indian Snakes – A Field Guide.* New Delhi, India: Macmillan Publishers,154 pp.

Whitaker, R. & Captain, A. (2004). *Snakes of India – The Field Guide.* Chengalpet, South India: Draco Books, 481 pp.