

NOTES

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SCRUBLAND *CALOTES NEMORICOLA* ?

BETWEEN 1970 and 1974, a series of papers appeared in journals published on four continents on various aspects of the field biology and physiology of *Calotes nemoricola* (Subba Rao, 1970, 1972; Subba Rao and Rajabai, 1972, 1972a, 1974). The specimens reported on, had been collected near the Sri Venkateshwara University Campus in Tirupati (13° 8" N and 79° 4"E), Andhra Pradesh, in southeastern India.

Previous literature (eg. Gunther, 1864; Smith, 1935) indicates that *Calotes nemoricola* is a species of the forests of the Western Ghats including the Nilgiris, a region floristically and faunistically quite dissimilar to that of the rest of India, with a unique herpetofauna (see review by Jayaram, 1974). Subba Rao did not comment on the assignment of the name, nor on the assumption that a species endemic to mesic forest could occur in scrubland (see below). No voucher specimens were deposited in any major museum.

The habitat was described (Subba Rao, 1970; Subba Rao and Rajabai, 1972) as "fields . . . scattered with small rocks, stones and pebbles of quartzite with shrubs". This may be categorised as scrubland, and is drastically different from the evergreen forests of the Western Ghats (see description in Subramanyam and Nair, 1973); for instance at Tirupati, the highest air temperature in the month of May is 40°C (Subba Rao, 1970), much higher than any temperatures recorded in the forests of the Western Ghats.

The brief description (Subba Rao, 1970) of the male "*Calotes nemoricola*" (swollen cheeks, a gular pouch and tail base swollen with thick scales, in addition to a dorsal crest), leaves the identity of the species involved uncertain. However, only a single arboreal species of agamid has been reported to occur in the eastern coastal region of India. This is the widely distributed and locally abundant garden lizard ('bloodsucker'), *Calotes versicolor*.

At least one worker, Murthy (1985), has included Tirupati in the distribution of *Calotes*

nemoricola. Murthy (1985a) illustrates what appears to be *Calotes versicolor* from Tirupati (Murthy, *pers comm.*) taken by Dr. B. S. N. Reddy, one of Dr. M.V. Subba Rao's co-workers (plate VIII, Fig.2), but captions it '*Calotes nemoricola*' (sic). The animal depicted lacks the oblique fold in front of the shoulder, a diagnostic feature of the complex of *Calotes* to which *C. nemoricola* belongs.

In view of the fact that the animals studied by Dr. Subba Rao appear to be *Calotes versicolor* and that ecology, climate and other factors are in accord with this, the Tirupati record of *Calotes nemoricola* should be removed from the fauna of Andhra Pradesh and the range of this species should remain as the "Western Ghats".

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BIOLOGY OF THE INDIAN GARDEN LIZARD, *CALOTES VERSICOLOR* (DAUDIN)

PART I : MORPHOMETRICS

THE Indian garden lizard (*Calotes versicolor*) occurs from Afganistan to the Indo-chinese subregions (Smith, 1935), and is probably the most frequently seen lizard on the Indian subcontinent. It is a common sight in the Indian countryside, in the typical pose : the hindlimbs hooked onto tree bark, the lower abdomen touching the tree, forelimbs almost fully stretched and the head propped up. Females are generally smaller, stay in the bushes and only the bigger ones exhibit a male-like stance.

No long term studies have been done on the species. This paper is the first part of a series on the biology of *C. versicolor* and deals with morphometrics of the population under investigation.

All specimens studied were caught and observed between 2 April and 18 May 1990,

within the Madras Crocodile Bank (approx. 8 acres) and its surrounding areas in Vadanemmeli, Chengai Anna (formerly Chingleput) district, Tamil Nadu, South India. Males outnumbered females in this study, presumably because they were more conspicuous, being larger and taking up more prominent positions. Lizards were caught during the day with a noose fixed to the end of a stick or a fishing rod. A black noose worked best as it went mostly unnoticed by the lizards even when it brushed over their snouts - though at times the lizards flicked their tongues, perhaps mistaking it for prey.

For 36 specimens, we determined total body length (TBL), snout-vent length (SV), tail length (TL), head width at the jaws (HWJ) and at the widest point (HWM), (Fig. 1) using dial vernier calipers or a metal foot rule, and body mass, using a Pesola balance (230 to 1000 gms) and/or Acculab digital scale (1 to 230 gms). The number of upper labials (UL), lower labials (LL) and midbody scales (MB) were counted. The animals were usually sexed by their morphological characteristics (body mass, comparative width of head, dorsal spines, colour pattern and external examination of the intromittent organs by probing). Colour nomenclature follows Smith (1975). Colour was noted from captured animals; free-ranging animals were observed to be brighter.

FIG. 1 Variation in the Head width at the Angle of the Jaws and the Gular Sacs

