

Notes on egg laying sites of *Calodactylodes aureus* (Beddome, 1870) in Tirupattur Forest Division, Southern India.

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INTRODUCTION

The Indian golden gecko *Calodactylodes aureus* (Beddome, 1870) is endemic to the Eastern Ghats mountain range of peninsular India (Bauer & Das, 2000; Kalaimani & Nath, 2012, 2013; Reddy et al., 2013; Srinivasalu et al., 2014). It prefers rocky areas with deep stream valleys and has been observed at elevations between 50 and 1000 m and reported to lay eggs in communal egg deposition sites (Bauer & Das, 2000; Javed et al., 2007) on rocky surfaces, mostly on vertical rocks in both natural and human-inhabited areas. This paper gives information on mass egg laying sites of *C. aureus* in Tirupattur Forest Division, Eastern Ghats, Tamil Nadu.

METHODS

The study was conducted in Tirupattur Forest Division 12°32'35.69" N 78°37'13.96" E (300-1300 m a.s.l.). Tamil Nadu. These forest divisions have four forest ranges; Alangayam, Ambur, Tirupattur and Singarapettai. The study area has 42 forest beats all of which were surveyed for the study. The area has six forest types namely, southern dry mixed deciduous forests, southern dry deciduous forests, southern dry savanna forests, dry bamboo brakes, dry tropical riverine forests, southern tropical thorn forests and southern scrub forests (Champion & Seth, 1968). The survey period was from September 2011 to January 2012 (over five months) for a total of 41 days (~5 hrs per day). In these forest divisions caves/rock boulders were carefully observed with powerful torches. The following details were recorded: geo-coordinates, elevation (meters), number of sightings with identification of male and female *C. aureus* using the key given by Bauer & Das (2000). The number of *C. aureus*, cave height, cave length, distance to the nearest water source, number of egg laying sites and potential threats and sympatric herpetofaunal species were recorded.

RESULTS AND DISCUSSION

During the study period a total of 855 sightings of *C. aureus* were made in 229 rock boulders/caves in Tirupattur Forest Division. Of these 133 were golden coloured males (Table 1 & Fig. 1). *C. aureus* were recorded in rock boulders/caves at a height 0.12-36 m, distance of 0.08-38m into the cave and distance from water source of about 0.01-180m. A total of



Figure 1. Example of an adult male *C. aureus* found at Tirupattur Forest Division, State of Tamil Nadu, India

Forest Range	Number of males	Total number of lizards	Number of egg laying sites
Ambur	61	266	51
Alangayam	34	268	75
Tirupattur	14	169	52
Singarapettai	24	152	51
Total	133	855	229

Table 1. Number of *C. aureus* recorded in Tirupattur Forest Division.

932 egg laying sites were recorded. The eggs were situated at a height of 0.2 - 15m from the ground on rock boulders/caves. In the caves of Yelagiri foot hills, Alangayam Range, Tirupattur Forest Division, an estimated several thousand empty egg shells and some fertile eggs in the same cave were found. (Fig. 2). The elevation range of *C. aureus* above sea level is recorded from <50m to >1250m with habitat association primarily of rocky areas with deep stream valleys (Sreekar et al., 2007). Communal egg deposition sites on rocky surfaces have been recorded previously (Bauer & Das, 2000; Javed et al., 2007) with fertile eggs recorded between late June to September (Sreekar et al., 2010). However, this study found eggs deposited between September 2011 and January 2012. During the study period ants were seen predated upon fertile eggs of *C. aureus* on two occasions



Figure 2. Photograph of the large number of empty egg shells of *C. aureus* observed in a cave in the Yelagiri Foothills, October 2011.

and *C. aureus* used wasp nests and swallow nests for laying eggs. This agrees with studies of geckos in Sri Lanka, where *C. illingthiworthorum* and *Hemidactylus depressus* use swallow and wasp nests respectively to prevent egg predation (Bauer et al., 2004). Sympatric herpetofauna observed during the study included *Psammophilus dorsalis*, *Hemidactylus* sp., *H. triedrus*, *H. gigantecus*, *H. graniticolus*, *Eutropis carinata* and *Lygosoma cf. punctatus*.

Human disturbance is a major threat to *C. aureus* in Andhra Pradesh (Dutta et al., 2004; Rajsekhar & Nandhakumar, 2007; Sreekar et al., 2010) and in our study area *C. aureus* also faces threats from man-made fire and woodcutting. This species is the only member representing the genus in India (Bauer & Das, 2000) with the taxon categorized as Least Concern but population monitoring necessary (Bauer et al., 2013).

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