



Observations of Natural History and Distribution of Three Species of *Cnemaspis* Strauch 1887 (Squamata: Gekkonidae) in Tamil Nadu, India

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I herein present information on the natural history and distribution of three species of geckos in the genus *Cnemaspis* (Gekkonidae) in Tamil Nadu, India. These data stem from fieldwork in July 2011–June 2012 and August 2017–November 2023. Identification of species was based on published descriptions in Das and Bauer (2000), Khandekar (2019), and Agarwal et al. (2020). Ecological information on the three species is presented in Table 1.

***Cnemaspis otai* Das and Bauer 2000 (Vellore Day Gecko).**—This species is listed as Vulnerable (VU) on the IUCN Red List of Threatened Species (Srinivasulu and Srinivasulu 2013) and its type locality is Vellore Fort, Vellore, North Arcot District, Tamil Nadu, India (Das and Bauer 2000). Two new locations in Jawadhu Hills were reported recently by Khandekar et al. (2023). During the survey periods, I observed 47 individuals, six active eggs, and 19 shells at elevations of 250–1,270 m asl. A gravid female (Fig. 1) was recorded on 5 June 2012 and I observed territorial displays (e.g., body-arching behavior) between two adults. Sympatric reptilian species were *Calodactylodes aureus*, *Cnemaspis yelagiriensis*, *Hemidactylus* cf. *graniticus*, *H. cf. giganteus*, *H. whitakeri*, *H. reticulatus*, *H. rishivalleyensis*, *Eutropis beddomei*, *Psammophilus dorsalis*, *Sitana ponticeriana*, *Python molurus*, *Platyceps bholanathi*, and *Ahaetulla oxyrhynca*.

***Cnemaspis yelagiriensis* Agarwal, Thackeray, Pal, and Khandekar 2020 (Yelagiri Dwarf Gecko).**—This species has not been assessed for the IUCN Red List of Threatened Species and was known only from the type locality in the Yelagiri Hills, Vellore District (now Tirupathur District), Tamil Nadu, India (Agarwal et al. 2020). I observed an individual on a boulder adjacent to a temple building (Fig. 2) at the Repeater Station near the Swamimalai Temple. An egg-deposition site in a crevice contained four active eggs and six shells. Additionally, I encountered 15 individuals and egg deposition sites with 22 shells inside the Repeater Station. Sympatric reptilian species were *Calodactylodes aureus*, *Cnemaspis* cf. *mysorensis*, *C. otai*, and *Psammophilus dorsalis*.

***Cnemaspis agarwali* Khandekar 2019 (Agarwal's Dwarf Gecko).**—This species is listed as Data Deficient (DD) on the IUCN Red List of Threatened Species (Ganesh 2021) and is known only from the type locality on a hillock near Kidayur Road, Sankari (= Sankagiri), Salem District, Tamil Nadu, India (Khandekar 2019). This species is common in the type locality (Ganesh 2021). I observed 37 individuals (Fig. 3) in the Sankari Fort where these geckos forage on the ground and in the stone walls of the fort and where it is protected by the Archaeological Survey of India. I have seen a



Figure 1. A gravid female Vellore Day Gecko (*Cnemaspis otai*) in a stairwell of the Vellore Hill Fort (left), and eggs and shells in a rock crevice at Jambu Odai, Singarapettai Range, Jawadhi Hills, Tamil Nadu, India. Photographs by the author.

Table 1. Distribution and ecological observations of three species of *Cnemaspis* (Gekkonidae) in Tamil Nadu, India. “Number” indicates numbers of individuals, active eggs, and shells, respectively. FD = Forest Division; ASI = Archaeological Survey of India.

Locality, Coordinates, and Elevation (m asl)	Number	Site Protection Authority	Reference
<i>Cnemaspis otai</i>			
Arangal Durgam Fort, Ambur (12.775, 78.632) (453)	1, 0, 0	Pilgrimage Site	Present Work
Nandhimalleswar Temple, Ambur Range (12.744, 78.599) (846)	2, 0, 0	Tirupathur FD	Present Work
Boulder at Palayapalayam, Alangayam Range, Jawadhi Hills (12.520, 78.772) (697)	1, 2, 8	Tirupathur FD	Present Work
Boulder on Kothur Hill, Tirupattur Range, Jawadhi Hills (12.598, 78.436) (684)	2, 2, 0	Tirupathur FD	Present Work
Boulder at Anguthisunai, Singarapettai Range, Jawadhi Hills (12.316, 78.619) (442)	1, 0, 2	Tirupathur FD	Present Work
Cave 1 at Aatukul malai, Singarapettai Range, Jawadhi Hills (12.282, 78.687) (350)	2, 0, 0	Tirupathur FD	Present Work
Cave 2 at Aatukul malai, Singarapettai Range, Jawadhi Hills (12.283, 78.686) (356)	1, 0, 0	Tirupathur FD	Present Work
Boulder at Jambu odai, Singarapettai Range, Jawadhi Hills (12.318, 78.719) (322)	0, 2, 7	Tirupathur FD	Present Work
Cave near koosukal, Singarapettai Range, Jawadhi Hills (12.356, 78.730) (319)	1, 0, 0	Tirupathur FD	Present Work
Boulder 1 in foothills at Vellore Hill Fort (12.925, 79.143) (250)	3, 0, 0	Unknown	Present Work
Boulder 2 at Vellore Hill Fort (12.925, 79.143) (280)	1, 0, 0	Unknown	Present Work
Boulder 3 at Vellore Hill Fort (12.925, 79.144) (302)	1, 0, 0	Unknown	Present Work
Boulder 4 at Vellore Hill Fort (12.925, 79.145) (357)	2, 0, 0	Unknown	Present Work
Boulder 5 at Vellore Hill Fort (12.924, 79.146) (394)	3, 0, 0	Unknown	Present Work
Stairwell at Vellore Hill Fort (12.924, 79.146) (416)	8, 0, 0	Unknown	Present Work
Stairwell at Vellore Hill Fort (12.924, 79.146) (416)	1, 0, 0	Unknown	Das and Bauer 2000
Vellore Hill Fort (12.925, 79.147) (411)	1, 0, 0	Unknown	Khandekar et al. 2023
Balamadi Hill, Vellore (12.890, 79.165) (364)	2, 0, 0	Pilgrimage Site	Das and Bauer 2000
Location 1, Jawadhi Hills (12.370, 78.687) (910)	1, 0, 0	Unknown	Khandekar et al. 2023
Location 2, Jawadhi Hills (12.575, 78.837) (637)	1, 0, 0	Unknown	Khandekar et al. 2023
Boulder 1, Melpet Road, Jawadhi Hills (12.389, 78.791) (712)	1, 0, 0	Tiruvannamalai FD	Present Work
Boulder 2, Melpet Road, Jawadhi Hills (12.396, 78.796) (811)	2, 0, 0	Tiruvannamalai FD	Present Work
Abandoned building, Melpet, Jawadhi Hills (12.437, 78.818) (980)	1, 0, 0	Tiruvannamalai FD	Present Work
Cave near Jain Monument, Valli Malai (13.075, 79.260) (327)	1, 0, 0	Pilgrimage Site	Present Work
Kailasagiri Hill, Omerabad, Ambur (12.839, 78.703) (359)	3, 0, 0	Pilgrimage Site	Present Work
Chennapamalai, Ambur (12.831, 78.692) (441)	1, 0, 0	Pilgrimage Site	Present Work
Repeater Station near Swamimalai Temple, Tirupathur Range, Yelagiri Hills (12.597, 78.668) (1,270)	3, 0, 2	Tirupathur FD	Present Work
<i>Cnemaspis yelagiriensis</i>			
Yelagiri Hills, Tirupathur District (12.600, 78.633) (920)	6, 0, 0	Holiday Destination	Agarwal et al. 2020
Rock crevices in Yelagiri Hills (12.582, 78.661) (1,015)	3, 0, 0	Holiday Destination	Ganesh 2024
Repeater Station near Swamimalai Temple, Tirupathur Range, Yelagiri Hills (12.597, 78.668) (1,270)	15, 0, 22	Tirupathur FD	Present Work
Boulder near Swamimalai Temple, Tirupathur Range, Yelagiri Hills (12.597, 78.667) (1,275)	0, 4, 6	Tirupathur FD	Present Work
<i>Cnemaspis agarwali</i>			
Near Kidayur Road, Sankari, Salem District (11.500, 77.843) (350)	9, 0, 0	Private Property	Khandekar 2019
Hall 4, Sankari Fort, Salem District (11.480, 77.863) (387)	11, 0, 0	ASI	Present Work
Hall 5, Sankari Fort, Salem District (11.480, 77.862) (398)	14, 0, 0	ASI	Present Work
Hall 6, Sankari Fort, Salem District (11.479, 77.862) (428)	8, 0, 0	ASI	Present Work
Hall 7, Sankari Fort, Salem District (11.478, 77.861) (460)	12, 0, 0	ASI	Present Work
Boulder near Sankari Fort, Salem District (11.478, 77.858) (630)	1, 2, 9	ASI	Present Work



Figure 2. A Yelagiri Dwarf Gecko (*Cnemaspis yelagiriensis*) at the Repeater Station near the Swamimalai Temple, Tirupathur Range, Yelagiri Hills, Tamil Nadu, India. Photograph by the author.

similar situation in *C. pakkamalaiensis* Khandekar, Thackeray, Kalaimani, and Agarwal 2023, which also is abundant in the stone halls of the Rajagiri and Krishnagiri Forts in the Gingee Hills of Tamil Nadu, and noted that they were difficult to locate in natural sites. I observed two adults exhibiting territorial arch posture and another trying to catch a Rock Bee (*Apis dorsata*). Two active eggs and seven shells (Fig. 3) were in a nearby cave. Sympatric reptilian species were *Hemidactylus* cf. *graniticulus* and *Psammophilus dorsalis*.

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Figure 3. An adult male Agarwal's Dwarf Gecko (*Cnemaspis agarwali*) (left) and eggs and shells in a rock crevice at the Sankari Fort, Tamil Nadu, India. Photographs by the author.