



#224  
21 June 2022

## Squamate diversity and status in Kyadiguppa, Karnataka, India

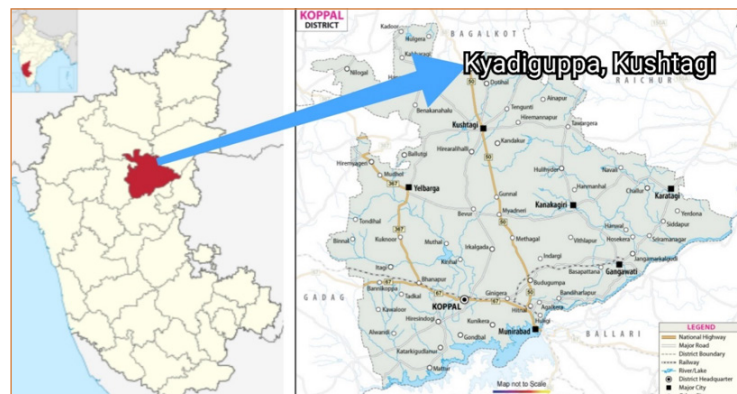
A recent conservation assessment carried out by Srinivasulu et al. (2014) reveals the occurrence of about 157 species of reptiles endemic to both Western Ghats and Peninsular India.

However, there are very few records of herpetofaunal diversity, especially squamate diversity status in the northern Karnataka region. The objective of this investigation was to document the squamate diversity status in and around Kyadiguppa village (15.90°N, 76.16°E), Kushtagi Taluk.

The sampling was done in grasslands, bushlands, rocky regions, and dry black soil fields (totally 4.73 km<sup>2</sup>), particularly during early morning from June 2020 to May 2021 when the sunlight

was low and the lizards were out for basking. The study was carried out mainly by visual-encounter method,

but opportunistic road kill observations were also documented. All spotted squamates were identified up



Karnataka map showing Koppal District location of Kyadiguppa Village in Kushtagi Taluk



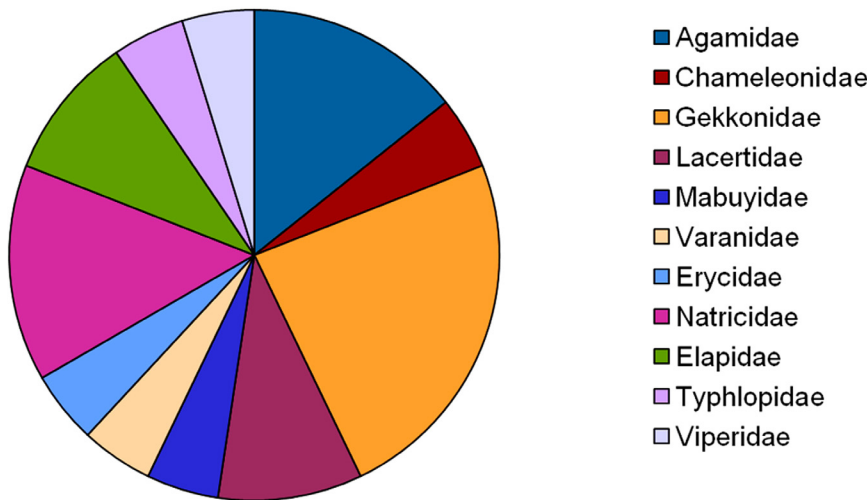
Satellite image of the study area

**Table 1. Checklist of Squamate fauna in Kyadiguppa Village, Kushtagi Taluk**

	Scientific name	Common/ Local name	IUCN Red List status
<b>Order – Squamata</b>			
	<b>Family – Agamidae</b>		
1	<i>Psammophilus dorsalis</i>	Peninsular Rock Agama	LC
2	<i>Calotes versicolor</i>	Oriental Garden Lizard	NA
3	<i>Sitana dharwarensis</i>	Dharwar Fan-throated Lizard	NA
	<b>Family: Chameleoniae</b>		
4	<i>Chamaeleo zeylanicus</i>	Chameleon	LC
	<b>Family: Gekkonidae</b>		
5	<i>Hemidactylus frenatus</i>	Common House Gecko	LC
6	<i>Hemidactylus flaviviridis</i>	Yellow-bellied Gecko	NA
7	<i>Hemidactylus giganteus</i>	Giant Leaf-toed Gecko	LC
8	<i>Hemidactylus murrayi</i>	Murray's House Gecko	LC
9	<i>Hemidactylus hemchandrai</i>	Hemchandra's Rock Gecko	NA
	<b>Family: Lacertidae</b>		
10	<i>Ophisops leschenaultii</i>	Leschenault's Lacerta	NA
11	<i>Ophisops nictans</i>	Snake-eyed Lacerta	LC
	<b>Family: Mabuyidae</b>		
12	<i>Eutropis carinata</i>	Common Skink	LC
	<b>Family: Varanidae</b>		
13	<i>Varanus bengalensis</i>	Bengal Monitor Lizard	NT
	<b>Family: Erycidae</b>		
14	<i>Eryx johnii</i>	Red Sand Boa	NT
	<b>Family: Natricidae</b>		
15	<i>Fowlea piscator</i>	Checkered Keelback	NA
16	<i>Coelognathus helena</i>	Common Trinket Snake	NA
17	<i>Ptyas mucosa</i>	Indian Rat Snake	NA
	<b>Family: Elapidae</b>		
18	<i>Naja naja</i>	Indian Cobra	NA
19	<i>Bungarus caeruleus</i>	Common Krait	NA
	<b>Family: Typhlopidae</b>		
20	<i>Indotyphlops braminus</i>	Brahminy's Worm Snake	NA
	<b>Family: Viperidae</b>		
21	<i>Daboia russelli</i>	Russell's Viper	NA

**LC – Least Concern | NA - Not Assessed | NT – Near Threatened**

Percent occurrence of families



study are either not listed or placed under ‘Least Concern’ status, the Bengal Monitor Lizard and Red Sand Boa are listed as ‘Near Threatened’ in IUCN Red List.

The gekkonid lizards such as *Hemidactylus frenatus*, *H. flaviviridis*, and *H. hemachandrai* were commonly found

to the species level using taxonomic literature (Daniels 2002; Das & Das 2018; Das 2020).

The present study documented the occurrence of 21 species of squamate reptiles, which included 13 species of lizards and eight species of snakes belonging to 11 families (Table 1). The gekkonid lizards belonging to *Hemidactylus* genus dominated with five species (23.80%), followed by agamid lizards and snakes belonging to Natricidae family, which include the keelbacks, rat snakes, and trinket snakes (14.28% each), the common venomous snakes such as Indian Cobra and Common Krait belonging to Elapidae family, and lacertid lizards (9.52% each). Other squamates like skinks, Chameleons, monitor lizards, boas, worm snakes, and vipers belonging to families Mabuyidae, Chamaeleonidae, Varanidae, Boidae, Typhlopidae and Viperidae, respectively were the most infrequent (4.76% each). While the majority of the squamates observed in this

in the urban areas, whereas other species were found either in rocky regions or on trees. The agamids such as Peninsular Rock Agamas were seen basking diromorphically (yellow and bright orange) on the boulders, whereas the Dharwar Fan-throated Lizards were usually spotted in the black soil and grassland regions.

The Common Garden Lizard *C. versicolor* and the skinks were seen either on trees or in the house gardens and bushes in both rural as well as urban areas, whereas the lacertilians were found exclusively in the rocky regions. The arboreal camouflage lizards such as Chameleons and the Monitor Lizard were found only in the rocky regions, but were rarely sighted. Among snakes, natricid species such as keelbacks and trinket snakes were sighted in dead condition, whereas the Rat Snakes were found moving in the ground holes. The most commonly found poisonous snakes that belong to Elapidae family, such as the Indian



Cobra was seen in the fields, whereas the Common Krait was found dead on the road. Russell's Viper was found usually in bushes and dry areas. Some fossorial snakes such as worm snakes and the Red Sand Boa were spotted in anthropogenic areas.

Overall, the abundance of squamate species observed in the small village like Kyadiguppa might be due to the favourable environmental conditions such as the arid climate and agricultural fields. However, the road mortalities spotted in the present study suggest the possible threat to the squamate reptilian diversity due to urbanization. Some conservative measures are required in order to preserve the reptilian diversity in this area.

## References

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**Citation: Hiremani, B., M. Pattar & C.B. Ganesh (2022).** Squamate diversity and status in Kyadiguppa, Karnataka, India. Reptile Rap #224, In: *Zoo's Print* 37(7): 01–04.