

PRESENT STATUS OF *EUTROPIS NAGARJUNI* (SHARMA, 1969) (REPTILIA: SCINCIDAE) - AN ENDEMIC SKINK FROM ANDHRA PRADESH, INDIA

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ABSTRACT

Nagarjuna's Skink *Eutropis nagarjuni* (Sharma, 1969) was recently recorded from a site close to its type locality. Additional information on its extended range is included in this paper along with a brief description of its diagnosis as compared to *Eutropis beddomii* (Jerdon, 1870).

KEYWORDS

Eutropis nagarjuni, *habitat*, *Nagarjuna's skink*, *Nagarjunasagar-Srisailem Tiger Reserve*, *status*, *taxonomy*

Sharma (1969) described *Mabuya nagarjuni* based on the specimens collected from hills 3km south of Vijaypuri South (16°35'N & 79°28'E; 170m) on the right bank of river Krishna in Andhra Pradesh. *Mabuya nagarjuni* Sharma, 1969 closely resembles the congeneric *Mabuya beddomii* (Jerdon, 1871), which is yet to be collected or reported from Andhra Pradesh (Sharma, 2002) although the distribution map (Map 60 on page 282 in Sharma, 2002) depicts parts of western Andhra Pradesh as its range.

Taxonomy

The genus *Mabuya* Fitzinger, 1826 is one of the largest and most widespread genera of skinks with approximately 110 species ranging from south-east Asia west through south-central and south-west Asia, Africa, the Seychelles, Madagascar, and into Central and South America and the Caribbean (Greer & Broadley, 2000). The generic *nomen Mabuya* has been in use since Fitzinger proposed it in 1826. However, Mausfeld *et al.* (2002) proposed splitting of this genus into four distinct genera [namely, *Chioninia* Gray, 1845 (for Cape Verde species); *Euprepis* Wagler, 1830 (for African species); *Eutropis* Fitzinger, 1843 (for Asian species), and *Mabuya* Fitzinger, 1826 (for the New World species)] basing on DNA analysis. Thus, after Mausfeld *et al.* (2002) the Asian species of *Mabuya* Fitzinger, 1826 should be treated as belonging to *Eutropis* Fitzinger, 1843. Around 18 species of skinks belonging to *Eutropis* Fitzinger, 1843 are known from India (Das, 1996; Sharma, 2002).

Diagnosis

Eutropis nagarjuni (Sharma, 1969) can be distinguished from *Eutropis beddomii* (Jerdon, 1870) by supranasals being separated by frontonasal (*E. beddomii* has supranasal in contact with each other), separate prefrontals (*E. beddomii* has prefrontals in contact with each other), three pairs of nuchals (*E. beddomii* has single pair), presence of post nasal (*E. beddomii* lacks it), dorsal scales with 5-7 keels (*E. beddomii* has 3-5 keels), 16-22 lamellae beneath the fourth toe (*E. beddomii* has 12-15 lamellae), and oval ear opening twice the size of the

lateral scales (*E. beddomii* has circular ear opening almost the size of the lateral scales) (Sharma, 1969, 1971, 2002).

Materials examined

Five adults and 13 young were observed in three different locations in a 1-km radius in Thurkasala (16°30'N & 79°16'E, 200m) vicinity near Anupu (8km south of Vijaypuri South) in Nagarjunasagar Srisailem Tiger Reserve on 14 June 2003. At one location two adults with six and seven young, respectively, were observed. Two adult individuals were sighted from further two locations. From the location where the adults with young were observed, a lone adult male was collected (Images 1^w and 2^w; Standard length: 54mm; Tail length: 61mm). The voucher specimen (ZSI/FBS/N/1164) was deposited in the National Zoological Collection at Freshwater Biological Station, Zoological Survey of India, Hyderabad. Four syntypes [ZSI 21170 (adult female), ZSI 21171 (adult female) ZSI 21172 (2 examples, unsexed)] and two additional specimens [ZSI 24698 (2 examples, no data on sex)] held in the National Zoological Collection, Zoological Survey of India, Kolkata were also compared by the senior author (CS) (Srinivasulu & Das, *in review*).

Colour

Sharma (1969, 2002) described the colour of the dorsal surface of this species as dark brown to almost black with white equidistant longitudinal stripes (three on the back, the middle one being vertebral) that becomes indistinct on the tail (Images 1^w & 2^w). The scales on the head have dark brown centers and light brown margins. The limb is dark brown dorsally and the hind limbs are sculptured with white above. Belly white. Unlike any of the earlier specimens, the present specimen shows orangish-red stripe on either side of the neck that could be sex specific trait (Image 2^w).

Habitat

The localities in the vicinity of the Vijaypuri South from where the type series and the recent specimen (ZSI/FBS/N/1164) were collected are basically hilly stony upland along the right bank of River Krishna. The place where the species was sighted is near Anupu - a famous tourist spot where the ancient Nagarjuna University was relocated as the original site where it stood submerged due to the construction of the Nagarjunasagar Dam on river Krishna. The vegetation of the area in general is that of dry deciduous scrub forest with preponderance of xerophytic

^w see images 1 & 2 in the web supplement at www.zoosprint.org

elements. The location from where the recent specimen was collected is strewn with large rocky boulders along side a steep rocky precipice below which the Krishna flows. The adult individuals along with the young ones were observed under the rocks. The habitat of the other location, near Kalwakurthy in Mahbubnagar district, from where the other two specimens were collected is not known. The vicinity of Kalwakurthy, mentioned as Kowakurt (Sanyal *et al.*, 1993) is also slightly undulating rocky area with a few hillocks predominated with xerophytic scrub and agriculture expanse.

Young ones

The young ones (13 individuals observed) were all exact replicas of the adult ones. All the young kept together and followed their guardians darting from under one rock to another. Two syntypes [ZSI 21172] recently rediscovered in the National Zoological Collection, Zoological Survey of India, Kolkata by Srinivasulu & Das (*in review*) collected in the month of August are young. Our sighting of young ones in the month of June confirms that this species breeds between June and August.

Distribution

Sanyal *et al.* (1993) published an extended range for this species further south of its range based on two additional specimens (ZSI 24698, 2 ex.) from Kowakurt (=Kalwakurthy) ca. 40km east of Mahbubnagar in Mahbubnagar district (collected in January 1988). Sharma (2002) in his recent review does not mention anything about these specimens. Our efforts in the vicinity of both Mahbubnagar and Kalwakurthy did not yield any sightings. As per the present knowledge, we put on record the range of the Nagarjuna's skink as in the vicinity of the type locality with one earlier record from Kalwakurthy environs. Recently, Thulsi Rao *et al.* (2005) have wrongly identified *Eutropis nagarjuni* as *Eutropis beddomii* (see Image 30 in the web supplement of Rao *et al.*, 2005), which extends the distribution of *Eutropis nagarjuni* up to Amrabad Plateau.

Threats

Although both the type locality and the locality from where the recent specimen was collected falls under the jurisdiction of the Nagarjunasagar-Srisailem Tiger Reserve, the Nagarjuna's Skink is under threat due to habitat alteration expedited by livestock grazing, fuelwood collection and habitat management activities such as digging of soil and moisture trenches. The proposed uranium-mining project north of the type locality will add to the existing threats and would cause irreparable loss not only to this taxon but also many species that share its habitat.

Status

Eutropis nagarjuni (Sharma, 1969) is endemic to India and very little is known about its ecology. It was listed as Endangered (En B1, 2c) basing on restricted extent of occurrence and area of occupancy (Molur & Walker, 1998).

CONCLUSION

The present observations increases our existing knowledge about *Eutropis nagarjuni* (Sharma, 1969) and reveals its existence in the vicinity of the type locality after over more

than four decades since its first collection in August 1962. This species should be accorded conservation priority owing to its endemism, restricted distribution range and threats to its habitat.

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