

# **INDIAN SPINY-TAILED LIZARD**

First record of Saara Hardwickii (Gray, 1827) in southwestern Hisar District of Haryana, India



IUCN Red List: Not Assessed

Indian Spiny-tailed Lizard basking in sun

### Reptilia

[Class of Reptiles]

Squamata [Order of Scaled reptiles]

Agamidae [Family of Iguanian lizard]

Saara hardwickii [Indian spiny-tailed lizard]

Species described by J.E. Gray in 1827 in the genus *Uromastix* later moved to the genus *Saara* in 2009 The Indian Spiny-tailed Lizard *Saara hardwickii* has been recently resurrected from *Uromastyx hardwickii* (Wilms et al. 2009a) is a unique reptile that belongs to the family Uromastycidae. This reptile belongs to genus *Saara* which is represented by three species worldwide including *Saaraas mussi* (Strauch 1863), *Saara loricata* (Blanford 1874) and *Saara hardwickii* (Gray 1827) which is the only species found, in patchy distribution in India, Pakistan and Afghanistan (Knapp 2004; Wilms et al. 2009b; Das et al. 2013). These lizards are solitary in nature and adult lizards excavate twisting burrows of 6–8 cm wide; over 2m long (Parashar et. al. 2014) where they hibernate for the winters and can be seen nearby basking in summer. In recent studies it has been observed that these





A) Shy behaviour B) Slight angled (around 5°-10°) hold of Spiny-tailed Lizard

active burrows are being used by a number of individuals so, this can be used to estimate population density (Dutta & Jhala 2007).

The species *Saara hardwickii* popularly known as "Sandha/Sandho" is known to occur throughout the arid zones of northwestern India including Rajasthan, Gujarat and Uttar Pradesh in large numbers. This is now in small fragmented, isolated populations in Thar Desert of Rajasthan and Kutch area of Gujarat (Das 2002; Daniel 2002; Sharma 2002; Wilms et al. 2009b; Das et al. 2013). The recent records shows the presence of patchy populations from Tal Chapper Wildlife Sanctuary in Churu District (Das et al. 2013) and Sariska Tiger Reserve in Alwar District of Rajasthan (Parashar et al. 2014; Das et al. 2015) which is outside Thar Desert of Zone 3A (Rodgers et al. 2002).

The Spiny-tailed Lizard has been listed as Data Deficient in India (Molur & Walker 1998) due to lack of information. However it is listed in CITES (Appendix II) and in Indian

Wildlife (Protection) Act 1972 (Schedule II). The major threat to this lizard is widespread illegal trade and killing to substitute protein through meat and oil, extracted from its skin and tail. It is considered aphrodisiac and to have other medicinal values (Das et al. 2013; Parashar et al. 2014). Another serious threat to the species is habitat destruction and



Alarmed Indian Spiny-tailed Lizard near hole with our presence





Habitat of Prosopis-Capparis Scrubland near Kalwas

loss due to expansion of agricultural lands, irrigated areas, industries and urbanization (housing, roads or other developmental activities) in Western Rajasthan (Ramesh & Ishwar 2008; Parashar et al. 2014) and Kachchh, Gujarat (Patel 2011).

The authors recorded the species for the first time in April, 2017 during one of birding sessions in Hisar District of Haryana. The species was recorded from Kalwas Village (29.042°N & 75.661°E) and Rawat Kheda Village (28.982°N & 75.677°E) in two patchy populations in Hisar District of Haryana giving Northern most distribution recorded for the first time in India.

The population of Spiny-tailed Lizards was recorded in the open scrub land reserved by Village Panchayat for cattle grazing locally known as "Gauchar". These scrub lands are dominated by scarce trees of Khejri *Prosopis cineraria*, and shrubs of Kareel or Kair *Capparis decidua* and Jharberi *Ziziphus nummularia*. The ground vegetation



Habitat of Prosopis-Capparis Scrubland near Rawatkheda

### **REPTILE RAP**





Habitat conversion of scrublands into agricultural land

was found *Boerhavia diffusa*, *Portulaca* sp., *Cynodon* sp., *Sporobolus* sp., *Aristida* sp., *Cenchrus setigerus* grasses, etc. Earlier studies have shown that these habitats and species like *Boerhavia diffusa* and *Portulaca* sp. are the main plants in diets (Das et al. 2013). These villages have mixed population from social groups of Jats, Brahmins, Gujjars, Banias, Ahirs, Chamars, Balmik and are dominated by Bishno a community known for the conservation of nature traditionally. The areas are dominated by agro practices and livestock rearing. The area is also marked with nomadic Marwari Livestock keepers who set small camps with their livestock including sheep, goats and cows for grazing.

Due to smaller patch sizes the absolute number have been counted in two days survey in April 2017 accounting for 103 active burrows in Kalwas and 157 active burrows in Rawatkheda from approximately 12 hectares of *Gouchar* land in Kalwas and approximately 24 hectares of *Gouchar* land in Rawatkheda Village. This gives the density of 8.58 burrow/ha and 6.54 burrow/ha in Kalwas and RawatKheda respectively. The recorded density in earlier studies is 28.85 burrows/ha in Jaishalmer, 51.59 burrows/ha

in Thalur substrate (Ramesh & Ishwar 2008), 324 burrows/ha in Tal Chhaper Wildlife Sanctuary (Das et al. 2013) in Rajasthan and 30.95±19.99 SE burrows/ ha in Abdasa Tehshil, Kachchh, Gujarat in 2010 (Jhala et al. 2012).

The population found in the Hisar district is isolated and



Exposed roots: Excarvation of soil from scrublands threat to the habitat

## REPTILE RAP





Excavated soil used for brick making



Pressure on grasses due to large number of livestock on small scrublands

confined to open scrub SARN land locally called as "Gauchar" grounded in between agricultural lands and human settlements widely used for cattle grazing.

These small patches are home to variety of other wild animals including Jungle Cats, Civets, Indian Fox and many birds and reptiles. It is recommended that evaluating the wildlife present in these patches and creating awareness will be vital for the survival of Indian Spinytailed lizard and many other species in human dominated landscapes.

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