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New distribution and rescue report of glossy-bellied racer snake *Platyceps ventromaculatus* (Gray, 1834) (Squamata: Serpentes: Colubridae) from Jodhpur, Rajasthan, India

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Abstract

Monitoring of regional species diversity enables estimation of the health of an ecosystem and the functional role of each species. It can be a useful tool to frame recommendations to reduce human mediated environmental degradation. Recently we have been monitoring and rescuing snake species from various urban-rural gradient ecosystems using citizen science programmes. The present paper reports a new distribution record and rescue of Glossy Belied Racer, *Platyceps ventromaculatus* (Gray, 1834) from a human habituation in Phalodi, Jodhpur, Rajasthan, India. Such reports helps supplement the necessary information on conservation management of habitat and the biodiversity as a whole.

Keywords: distribution, human-animal conflict, rehabilitation, Squamata: Serpentes

Introduction

Rapid loss of species due to human activities ushered in the need to conserve them for our own wellbeing. There has also been an increase in human animal conflict due to increasing loss and fragmentation of habitats across the world. In the year 2019, Wildlife and Ecology (WNE) society, India, has launched the Sarpa Sathi Project. Under this project we are focusing on snake conservation through reducing human snake conflict. Recently a large snake species was reported from a dense human habituation. The present paper reports this episode wherein WNE had undertaken the task of rescue, identification and release of the snake species in a safer and natural environment.

Observation

A juvenile Glossy Belied Racer (*Coluber ventromaculatus*) of Length: 82.3 cm was observed (Figure 1) by the first author from Lohawat Bisnawas, Phalodi, Jodhpur, Rajasthan, India (Figure 2). It was then rescued by the fourth author and released in its natural environment. The species was identified by the fifth author as per available literature (Gray, 1834; Whitaker and Captain, 2008).

Species description

Presence of 14 to 15 maxillary teeth. The diastema is distinct and the head is well distinguishable from the neck. Rostral extends onto the snout, quite high and broad, and compartmentalises the internasals anteriorly; the internasals are slightly smaller than the prefrontals; temporals 2+3; the supralabials 9 in number, of which the 5th and 6th touch the eye, the 6th one is placed highest and in contact with the much larger lower anterior temporal. Scales in the ratio formation of 19:19:15 or 13 rows, and smooth. Presence of hemipenis, which extends to the 10th caudal plate. The calyculate portion takes up 1/3 space of the organ, and the cups are deeply indented and spinous. This portion gradually transitions into a spinose one, where the spines, around 20 in number, lie in a lateral series and are almost uniform in size. Above it is light greyish in colour with a series of black cross-bars or rhomboidal spots dorsally. This colour is restricted mostly to the scale edges. An arrangement of smaller spots along the sides of the body are placed similarly, alternating with the dorsal bars; the ventrals

are yellowish or whitish hued. Presence of a short black vertebral stripe on the neck region. An oblique black bar below the eye and one on the temple may or may not be present. Head is greyish, sometimes with, sometimes devoid of dark symmetrical markings. Tail above is uniformly greyish. The width and intensity of the black colouration of the dorsal bars vary- they may be thinner or broader than their interspaces. Males can reach up to a total length of 1090 mm, with a tail dimension of 275 mm, whereas females reach up to 1000 mm, with a tail of about 285 mm (Smith 1943) [4].

Distribution

India: The species has been reported earlier from Surat, Gujarat; Rann of Kutch, Gujarat; Doda, Jammu and Kashmir; Mumbai, Maharashtra; Jaisalmer, Rajasthan; Pokaran, Rajasthan; Ajmer, Rajasthan; Subathu, Himachal Pradesh, Almora, Uttaranchal and New Delhi, India.

World: North west India, Afghanistan, Pakistan, Uzbekistan, Iran, Iraq, Jordan, Kuwait, Bahrain, Saudi Arabia (along the Arabian Sea) and Palestine.

Discussion

The productivity of an ecosystem is fostered by its biodiversity, where each species irrespective of its size has an important role to play. Thus detailed knowledge of their distribution is critical, especially for conserving the endemic or vulnerable species (Sousa-Silva *et al.* 2014) [5]. Often incomplete information on the distribution, often gathered with limited spatial accuracy makes the assessment of species status (International Union for Conservation of Nature, IUCN) difficult for monitoring programmes and conservation policies. Further ongoing accelerative growth of human population and resource consumption is changing the ecosystem structure, thus leading to massive loss of

biodiversity. The benefits derived by human from ecosystem services provided by nature can only be obtained if we safeguard our biodiversity. Snakes form an important component of food web but are killed whenever spotted due to fear of their bite and lack of knowledge, resulting in depletion of their population (Husain and Prohit 2019) [2]. Further reptiles including snakes are highly susceptible to climate change, responding negatively to thermal and rainfall alterations mainly in terms to their breeding potential. (Lourenço-de-Moraes *et al.* 2019) [3]. Conservation of snakes through awareness programmes along with rescue and rehabilitation operation may be the only cardinal way to safeguard their wellbeing. However how do these species survive in a newly introduced environment still needs to be evaluated.



Fig 1: Glossy-bellied racer snake *Platyceps ventromaculatus*



Fig 2: A satellite overview (Google earth) image showing the site of rescue of the Glossy-bellied racer snake *Platyceps ventromaculatus*

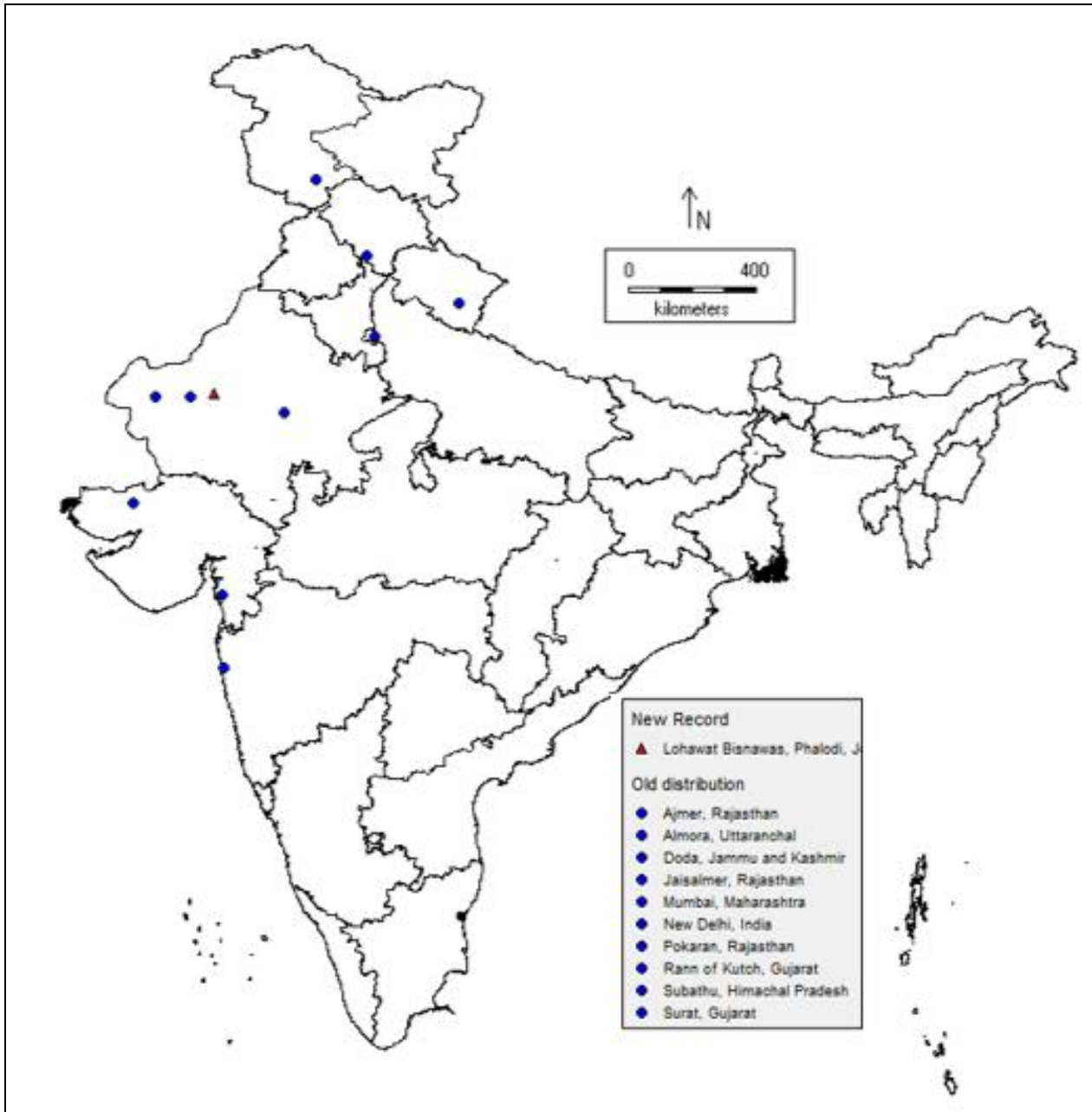


Fig 3: Previous and new record distribution of the Glossy-bellied racer snake *Platyceps ventromaculatus*

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