

12. UNUSUAL CONGREGATION OF SAVANNA NIGHTJAR *CAPRIMULGUS AFFINIS* IN A WHEAT FIELDGIRISH JATHAR<sup>1,2,\*</sup>, SACHIN ANPAT<sup>1,3</sup>, BALU BHANGARE<sup>1,4</sup> AND DHARMARAJ PATIL<sup>1,5</sup><sup>1</sup>Watershed Organization Trust, 2<sup>nd</sup> Floor, The Forum Building, Padmavati Corner, Pune-Satara Road, Pune 411 009, Maharashtra, India.<sup>2</sup>Email: girish.jathar@wotr.org.in<sup>3</sup>Email: sachinanpat55@gmail.com<sup>4</sup>Email: bn.bhangare@wotr.org.in<sup>5</sup>Email: dharmaraj.patil@wotr.org.in

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On February 15, 2012, we were at Partala (22° 49' 4.56" N; 80° 18' 33.83" E), initiating People's Biodiversity Register. Partala is situated in Narayanganj tehsil of Mandla district in Madhya Pradesh. The village is surrounded by forested hills on three sides, and a small river flows amidst them. The river banks are surrounded by agricultural fields with scattered trees. The main crops are paddy, wheat, maize, and various pulses. The dominant vegetation in this region is *Tectona grandis*, *Terminalia arjuna*, *Aegle marmelos*, *Soymida febrifuga*, *Madhuca indica*, *Ficus religiosa*, and *Butea monosperma*.

At 18:15 hrs we reached a huge Peepal tree *Ficus religiosa*, which is one of the roosting sites of the Yellow-footed Green-pigeon *Treron phoenicoptera*. On reaching, we heard a cacophony of nightjar calls from an adjacent field. It was getting dark and we could only see silhouettes of the nightjars flying erratically, crisscrossing each other above the wheat field. There were around 30–35 birds, continuously calling and sallying on swarms of insects (moths). We identified them as Savanna Nightjar *Caprimulgus affinis* based on their distinct *cweetzz*, *cweetzz*, *cweetzz* calls. Along with nightjars, small insectivorous bats were also observed feasting on the moths. Two more species of nightjars, namely Indian Jungle Nightjar *Caprimulgus indicus* and Indian Little Nightjar *Caprimulgus asiaticus*, are found in this region. However, we could not hear the calls of these species to ascertain their presence in the congregation. The nightjars were scattered across the wheat field, and since visibility was extremely poor, we could not take photographs. We observed this congregation for almost half an hour, after which we could not follow their movements due to nightfall.

Ali and Ripley (1983) indicate that the Savanna Nightjar forms loose flocks of 7 or 8 while undertaking local movements. Similarly, Rasmussen and Anderton (2005) also state that Savanna Nightjars 'often fly in groups'. These anecdotes suggest the gregarious tendency of Savanna Nightjars. However, large congregations of Savanna Nightjars, as recorded by us, have not been published. A similar observation was made by P. Jeganathan (*pers. comm.*) in Sri Lankamalleshwara Sanctuary, Andhra Pradesh, on

June 16, 2001. He observed 15 individuals, probably of Indian Little Nightjar *Caprimulgus asiaticus*, near an agricultural field foraging on insects. The European Nightjar *Caprimulgus europaeus* is known to form loose parties or flocks of 6 to 20 individuals on their passage to autumn migration (Ali and Ripley 1983).

The only known gregarious species of nightjar is the Sand-colored Nighthawk *Chordeiles rupestris* of South America, with flocks of up to 50 individuals observed (del Hoyo *et al.* 1999). Del Hoyo *et al.* (1999) also mention that during migration and in the non-breeding season, more than one species of nightjar join to form groups of more than 20 birds, gathering at good food resources, such as grazing animals, animal corrals, lights or fires, or at insect swarms or termite emergence. Some species of nighthawk, such as Common Nighthawk *Chordeiles minor* and Lesser Nighthawk *Chordeiles acutipennis*, often forage in large flocks of several hundred birds.

On February 16, 2012, we collected some moths which were identified as *Helicoverpa* sp., a common pest on wheat. King (1994) mentions that "Adult moths emerge from just after dark to midnight and crawl onto a plant or vertical substrate where their wings dry". Williams *et al.* (2011) mentions that "Night birds such as the Tawny Frogmouth and nightjars feed on *Helicoverpa* moths as they are also active at night." These probably explain the reason for the large congregation of Savanna Nightjars sighted by us at Partala. It is very likely that such assemblages are common in this region. However, this needs further investigation.

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### 13. INDIAN SPINY-TAILED LIZARD *SAARA HARDWICKII* IN SARISKA TIGER RESERVE, NORTH-EASTERN RAJASTHAN, INDIA

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The Indian Spiny-tailed Lizard *Saara hardwickii* is endemic to the dry areas of north-western Indian subcontinent (Daniel 2002; Das 2002), and has a patchy distribution throughout its range. While largely herbivorous, it occasionally feeds on insects during the summer (Dutta and Jhala 2007). It is solitary; adult lizards excavate burrows generally 6–8 cm wide and 2 m long. Therefore, active burrows surrogate the number of individuals, and can be used to estimate population density (Dutta and Jhala 2007). In India, it is known to occur in small isolated patches in the Thar Desert and surrounding semi-arid regions of Rajasthan, Gujarat, and western Uttar Pradesh. In Rajasthan, it is known to occur in the Thar Desert, which extends through the westernmost districts of Jaisalmer, Barmer, Jodhpur, Bikaner, and Sri Ganganagar. Apart from Thar Desert, it was only known to occur in the Tal Chhapar Wildlife Sanctuary, which is situated in Churu district, adjacent to Bikaner district (Das *et al.* 2012), classified under biogeographic zone 3A-Thar Desert (Rodgers *et al.* 2002).

Perhaps the most serious threat to the Indian Spiny-tailed Lizard population is habitat loss, brought about by developmental activities, such as agriculture (expansion of farmlands and irrigated areas), industries, and urbanization (housing) in western Rajasthan (Ramesh and Ishwar 2008) and Kachchh, Gujarat (Patel 2011). These lizards are hunted for their flesh as a protein substitute and oil extracted from their skin and tail is considered aphrodisiac. Due to limited data on its distribution, status, and ecology, Spiny-tailed Lizard is considered as Data Deficient in India (Molur and Walker 1998).

The presence of the species was recorded by the first author in May 2013, in Kalakhedi beat (27° 22' 11.8" N; 76°

31' 57.5" E) of Akbarpur Range in Sariska Tiger Reserve (STR) (25° 5'–27° 33' N; 74° 17'–76° 34' E), which is the first record for this species in north-eastern Rajasthan.

Five belt transects of 500 x 6 m were laid at Kalakhedi where lizard distribution was recorded and active burrows were counted by two observers during June 2013. Since, the population is confined to a small patch, more belt transects could not be laid.

In all, 146 active burrows were recorded in the study area. The estimated density of active burrows in the study area was 98 ±42.92 SE/ha (13.86–182.13 burrows /ha, 95% CI). The reported density of active burrows in dry districts of Rajasthan is as follows: 1 burrow/ha in Barmer, 28.85 burrows/ha in Jaisalmer, 51.59 burrows/ha in Thalar substrate or gravel plains (Ramesh and Ishwar 2008) and 324 burrows/ha in Tal Chhapar Wildlife Sanctuary (Das *et al.* 2012). In Abdasa tehsil of Kachchh, Gujarat, the estimated burrow density was 90.83 ±58.14 SE/ha in 2007, but had declined to 30.95 ±19.99 SE burrows/ha in 2010 (Jhala *et al.* 2012). The recorded population of Spiny-tailed Lizard in STR is isolated and confined to peripheral rocky hillocks interspersed in a matrix of human-dominated landscape subjected to livestock grazing. It is recommended that prevention of livestock grazing and not allowing any watershed management activities in this area is vital for the survival of this species.

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