

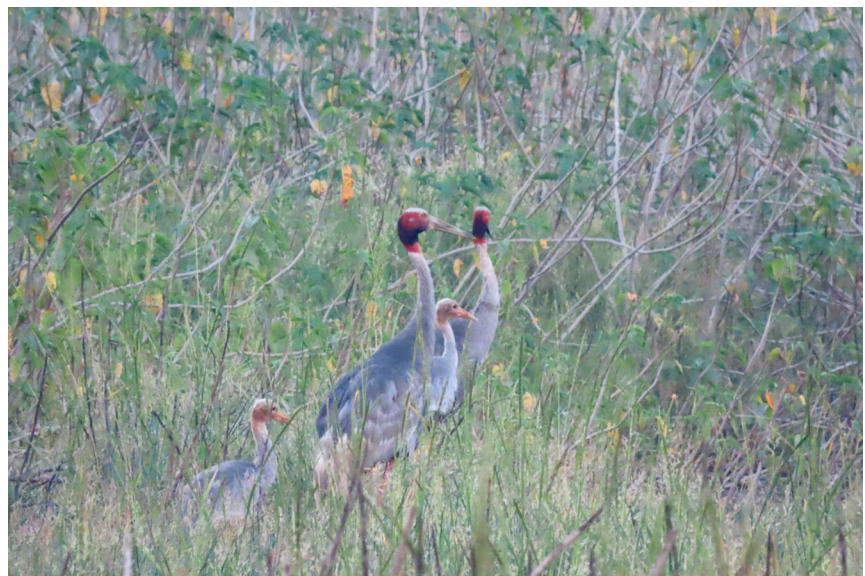
## Recent breeding record of Sarus Crane and sighting of Eastern Marsh Harrier from Surguja division, Chhattisgarh, India

The Surguja division of Chhattisgarh lies within the Chhota Nagpur (6B) province of the Deccan Peninsular Biogeographical Zone of India (Rogers et al. 2002). Spanning Korea, Surguja, Jashpur, Raigarh, Surajpur, and Balrampur districts, the region is primarily drained by the Hasdeo and Rihand rivers. The rich biodiversity of Surguja has led to the designation of several protected areas, including the Guru Ghasidas Tiger Reserve (1,471 km<sup>2</sup>) and four wildlife sanctuaries: Badalkhol (104.55 km<sup>2</sup>), Gomarda (277.91 km<sup>2</sup>), Semarsot (430.00 km<sup>2</sup>), and Tamor-Pingla (608.52 km<sup>2</sup>). The forest types range from mixed deciduous (3B/C, 5A/C) in Surguja to dry deciduous in Gomarda, and tropical moist deciduous and Sal forests in Guru Ghasi Das National Park (Champion & Seth 1968; Chandra & Boaz 2018).

The region's diverse ecosystems attract bird



Sarus Crane *Antigone antigone* at Jamgala water tank. © Pratik Thakur.



Sarus Crane family (2 adults with 2 chicks). © Pratik Thakur.

species from the Eastern Ghats, Western Ghats, and the Himalayas. Bharos et al. (2023) documented 361 bird species in Surguja, while Chandra &

Boaz (2018) earlier recorded 199 species in Surguja District and 230 species in Guru Ghasidas National Park. Recent observations have reported



Dead Sarus Crane chick was obtained from villagers. © Dainik Bhaskar.



Sarus Crane family near Kunwarpur Village. © Pratik Thakur.

255 species in Surguja District alone (Thakur & Gupta pers. comm.). Among the notable species is the Sarus Crane *Grus antigone*, India's tallest flying bird, characterized by its long neck, long legs, and distinctive red head. Found primarily in Uttar Pradesh, Rajasthan, Gujarat, Madhya Pradesh, Chhattisgarh, and Jharkhand, smaller populations have also been recorded in Haryana, Punjab, and Uttarakhand

(Rahmani et al. 2012). Rahmani et al. (2018) reported sightings of eight pairs along the Rihand River and in Jamgala Village, Surajpur District, in January 2016, with nesting also noted in 2014 (Bharos et al. 2023). The Eastern Marsh Harrier *Circus spilonotus*, a winter visitor, is another important species. Males are distinguished by their mixed black, white, and buff wing coverts and grey secondaries,

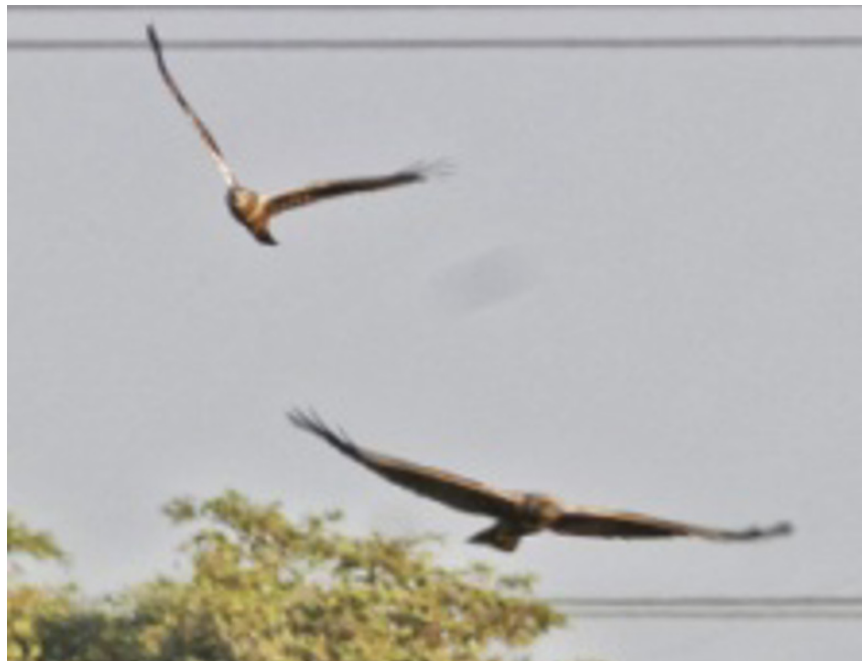
while juveniles are darker with a pale breast band. Female harriers resemble the Pied Harrier but have duller rufous bellies. Observations were confirmed using photographs and reference guides (Rasmussen & Anderton 2012; Grimmett et al. 2011). Though reported from Chennai and Kerala (Kesavabharathi & Sundaram 2016; Pradhan et al. 2017), previous studies did not mention this species in Chhattisgarh. The study sites were visited at random for data collection mostly during the morning and evening hours. Observations were conducted through visual observations or with the aid of binoculars and photographs obtained. The methodology used for locating birds involved techniques such as traveling, walking, listening for calls, and other related approaches. The bird identifications were made with the help of Grimmett et al. (2014). Confirmation of the identification of various species was ensured through the expertise of "Ask ID of Indian birds" group or other knowledgeable expert ornithologists. The highlight of the observations were Sarus Crane

breeding *Antigone antigone* and sighting of Eastern Marsh Harrier *Circus spilonotus*.

Though direct encounter with the nest was not made, from our observations and interaction with local villagers, it was clear that the Sarus pair is nesting in the reeds. It was difficult to study the nest as it was located in the middle of the reeds, with no access between the nesting site and the nearby reeds. The distance between the nesting site and human abodes is only 230 m, which demonstrates the tolerance of humans towards Sarus Crane at the site. Visits to nearby sites and other hotspots in Surguja, no Sarus Crane was found at any other location. Sarus Crane migrate seasonally in the region. During the rainy season, they remain at the nesting tank (23.0061 N, 82.9575 E) due to the abundant food available in tank and the adjacent cultivation. As the weather becomes drier, they move a little farther to nearby areas and the Rihand River. From March to May, it becomes difficult to spot the birds, as they migrate long distances of 7–8 km. On 28 April, near Kunwarpur Village,



Male Eastern Marsh Harrier at Seepat Dam, Bilaspur. © Himanshu Gupta.



Female Eastern Marsh Harrier at Seepat Dam, Bilaspur. © Himanshu Gupta.

one chick foraging with parents indicated successful rearing.

### **Eastern Marsh Harrier *Circus spilonotus***

On 3 February 2022, at around 1600 h, a male Eastern Marsh Harrier was sighted flying over the NTPC ash disposal Dam,

Bilaspur and photographed.

On 9 February 2023, a female Eastern Marsh Harrier was photographed at the same site.

On 29 October 2023, while monitoring Sarus Crane chicks at Taraju Village-Surajpur District, a male Eastern Marsh



Male Eastern Marsh Harrier at Taraju Village-Surguja. © Pratik Thakur.



Wood cut by villagers for fuel at the nesting site. © Pratik Thakur.

Harrier was encountered and photographed in flight from the beds of the *Ipomea indica*, then moving far away through the adjacent paddy field. In both these cases, the identification of the species was confirmed with aid of photographs comparing with standard literature (Rasmussen & Anderton 2012; Grimm et al. 2014).

The possible occurrence of Himalayan and subHimalayan species in northern region of

Madhya Pradesh (including Chhattisgarh) has been speculated by Tyabji (1994) in his study. Already few species have been reported by Bharos et al. (2023). This sighting record adds to it.

Above sightings at two locations namely Seepat Dam, Bilaspur District (22.0997 N, 82.2823 E) in 2022, and Taraju Village, Surguja District (23.0053 N, 82.9567 E) in 2023, are the first distribution and photographic records of

Eastern Marsh Harrier from Chhattisgarh.

### Conservation and threat issues

Regular sand mining activities have been observed along the banks of the Rihand River. Additionally, the cutting of *Ipomea indica* plants at the roosting tank provides a hiding place for the Sarus Crane. Fishing activities have also been observed in the tank where Sarus habitat exists. On 22 June 2023, a feral dog was observed approaching a pair of Sarus Cranes, but the cranes noticed the dog and flew away. The use of toxic chemicals harmful to birds has also been observed in the tank and adjacent farms. The Sarus Cranes are also vulnerable to threats like feeding on recently sown wheat treated with a pesticide Monocrotophos (Pain et al. 2004), loss or degradation of habitat or nesting sites by farmers and other agencies (Meine & Archibald 1996; Sundar 2009; Gulati et al. 2021). On 18 November, our team initiated awareness programmes to spread awareness about the species, in Taraju and Jamgala villages, e.g., 1,500 posters were pasted and distributed,

**Table: Observation of Sarus Crane in varies events.**

	Year/ Date	Site	Observations
1	2017–18	Jamgala water tank (23.0061 N, 82.9575 E)	Recorded five Sarus Cranes at the site during Chhattisgarh bird count event.
2	2021 onwards	Jamgala water tank (23.0061 N, 82.9575 E) and nearby areas.	Visited every 3-4 months, observing a pair of Sarus cranes; no cranes found at other nearby sites.
3	January 2022	Jamgala water tank (23.0061 N, 82.9575 E)	Villager's photograph with Sarus Crane chick obtained.
4	1.ii.2022	Taraju village (23.0011 N, 82.9658 E)	Pair foraging on agriculture land observed.
5	2022	Jamgala water tank (23.0061 N, 82.9575 E) and nearby areas.	Followed pair but found no Nesting record.
6	22.vi.2023	Jamgala water tank (23.0061 N, 82.9575 E)	An observed pair performed a prenuptial display and later took flight when they felt threatened by a street dog.
7	4.vii.2023	Rihand river (22.9967 N, 82.9555 E)	Pair foraging on riverbank observed.
8	24.ix.2023	Jamgala water tank (23.0061 N, 82.9575 E)	Single Sarus Crane seen emerging from reeds. Sighting of solitary Sarus Crane was unusual because they were always seen in pairs earlier.
9	30.ix.2023	Jamgala water tank (23.0061 N, 82.9575 E)	Crane observed disturbing buffalo, possibly protecting chicks or nest.
10	28.x.2023	Jamgala water tank (23.0061 N, 82.9575 E)	Encountered two chicks with breeding pair; weekly site visits started.
11	5.xii.2023	Jamgala water tank (23.0061 N, 82.9575 E)	News from the forest department indicates that a Sarus Crane was probably killed by an unknown species of Civet Cat.
12	19.xii.2023	Taraju village (23.0011 N, 82.9658 E)	Witnessed juvenile's first flight.
13	5.iv.2024 & 28.iv.2024	Near Kunwarpur village (22.9864 N, 83.0241 E)	Family seen in irrigated agricultural land 7 km from nesting site. The pair was also observed roosting near a pond.

interaction with community. The conservation of Jamgala tank and raising awareness about the Sarus Crane are crucial for preserving what may probably be the last remaining population of Sarus Crane in Surguja, Chhattisgarh.

## Conclusion

This is the most recent report on Sarus Crane breeding in Chhattisgarh, alongside a report detailing with seasonal habitat changes and other significant observations. Additionally, the

Eastern Marsh Harrier has been documented for the first time in the Surguja and Bilaspur divisions. This study will contribute to the conservation and further research of the species from the Surguja region, as the nesting site is located outside the protected area.

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#### Acknowledgements

We extend our gratitude to retired ASP Narendra Verma for his financial and logistical support. We also thank Thejas Shekhar (DFO) and the forest department for their invaluable information, and Dr. Anurag Vishwakarma for his assistance in writing the manuscript.

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**Citation:** Thakur, P., AMK Bharos, H. Gupta & R. Naidu (2025). Recent breeding record of Sarus Crane and sighting of Eastern Marsh Harrier from Surguja division, Chhattisgarh, India. *Bird-o-soar* #256, In: *Zoo's Print* 40(2): 33–38.