

## Short Communication

# Nesting record of Indian Thick-knee (Indian Stone-Curlew) *Burhinus indicus* (Salvadori, 1866) in Raimona National Park, Kokrajhar, Assam

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## ABSTRACT

During the extensive bird survey conducted in Raimona National Park (RNP) from January to June 2023, a significant sighting was made: the observation of a nesting pair of Indian Thick-knee (*Burhinus indicus*) in the Pekua area of RNP, Assam. The sole nest was documented in the riparian zone within the ground zone habitat. On April 18, 2023, two mature Indian Thick-knees and one fledgling were recorded at the nesting habitat site. These birds were observed foraging in the grasslands adjacent to the nest platform during an 8-minute observation window. The observation reaffirmed the bird's breeding season, primarily occurring in March and April, as documented in previous literature. This documented instance of successful breeding of the Indian Thick-knee from Assam is significant, as no prior published literature exists on the subject. The discovery of the Indian Thick-knee nest with surviving fledglings in the riparian zones of RNP underscores the critical need for conservation and protection of this vulnerable landscape to prevent encroachment and alteration for future preservation efforts.

**Keywords:** New Nesting record, Indian Thick-knee, Raimona National Park, Pekua, Assam

## INTRODUCTION

The Indian stone-curlew, or Indian thick-knee *Burhinus indicus* (Salvadori, 1866), is a wader bird under the order Charadriiformes and family Burhinidae. The species was formally described in 1865 by the Italian Zoologist Tommaso Salvadori based on specimens obtained in India (Salvadori, 1866) and coined the binomial name *Oedinenus indicus*. The species was later reclassified into the genus *Burhinus* in 1811 by German Zoologist Johann Karl Wilhelm Illiger (Illiger, 1811; Gill *et al.*, 2021).

They have big eyes and are brown with light lines and streaks, which makes them difficult to see against the rocks and soils in the backdrop. They are mostly active at night, and their names come from the cries they make, which resemble those of actual curlews (Birdlife International, 2016). The Indian population of this species has unusual plumage and is non-migratory, which led Rasmussen and Anderton (2005) to confirm it as a separate species. Previously, this species was treated as a subspecies of the Eurasian stone-curlew or Eurasian thick-knee *Burhinus oedinenus* (Inskipp and Collar, 2015). Barua and Sharma (2005) state that this bird is a very rare winter visitor, whereas Choudhury (2006) and Grimmett *et al.* (2011) have opined that this species is a resident species of Assam, but there are presently no reports or data on the successful nesting or breeding of this species.

As per the gathered report from eBird (2023), there were 378 confirmed sightings of Indian thick-knee in 14 districts of Assam till May 2023. Sonitpur district has reported the majority of sightings (e.g., 277 numbers), while Barpeta, Chirang, Majuli, and Goalpara districts have reported the other 101 sightings. The other districts with confirmed sightings were Biswanath (3 sightings), Baksa (19 sightings), Darang (16 sightings), Golaghat

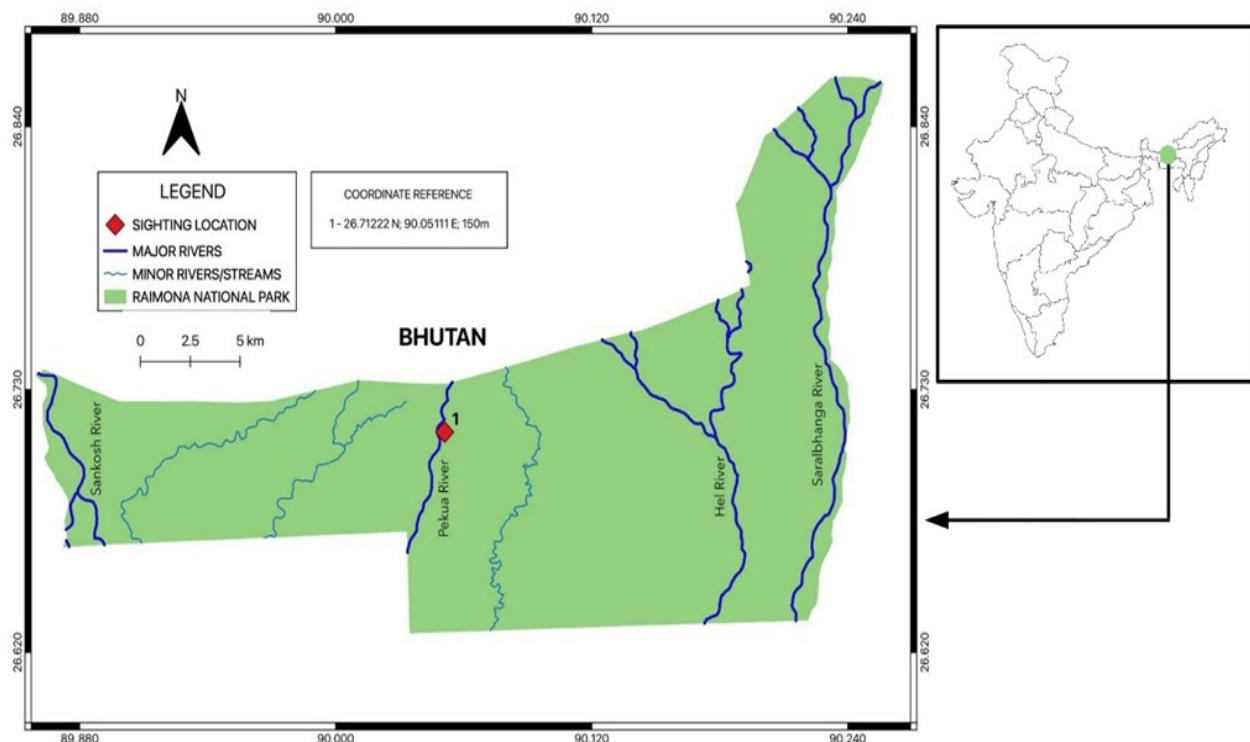
(30 sightings), Kamrup Metropolitan City (6 sightings), Kamrup (6 sightings), Nagaon (7 sightings), and Tinsukia (8 sightings). Additionally, there were also several sighting records of Thick-knee such as Nameri National Park (Barua & Sharma, 2005), Dibru-Saikhowa National Park (Choudhury, 2006; Joshi *et al.*, 2014), Brahmaputra River Sand-bars near Dibrugarh Town (Roy *et al.*, 2012), Jhanjimuk-Kokilamukh IBA Complex of Jorhat (Mahanta *et al.*, 2019), and Rajiv Gandhi Orang National Park (Chakdar *et al.*, 2019).

This paper primarily serves as a report on the new nesting record of the Indian Thick-knee, observed for the first time in the protected area network of Assam, specifically within Raimona National Park in the Kokrajhar district. The findings contribute to future conservation and management efforts targeting potential nesting habitats.

## Study Area

The RNP (422 sq. km.) is located within the Kokrajhar District in the Bodoland Territorial Region of Assam, between 26.616 to 26.833 N Latitude and 89.083 to 90.233 E Longitude. The Indo-Bhutan International Boundary serves as the region's northern boundary and the Sonkosh River and the Buxa Tiger Reserve in West Bengal serves as the western boundary, the Saralbhangha River is the eastern boundary (Figure 1) (Mahanta *et al.*, 2022). Due to the region's unique geographic location and geology, as many as twelve different types and sub-types can be found, including the very moist Sal forests, sub-Himalayan high alluvial semi-evergreen forests, moist-mixed deciduous forests, savannah forests, riparian fringing forests, and khoir-sisoo forests, as well as the wide riverbeds (Champion and Seth, 1968; Mahanta *et al.*, 2022; Islam *et al.*, 2021).

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**Figure 1.** Map of Raimona National Park along with the sighting location of Indian Thick-knee.

## MATERIALS AND METHODS

The survey of birds in the study area was conducted from January to June 2023 to determine the avian species assemblages. While conducting an extensive diversity study of avian fauna within the recently established Raimona National Park, the nesting behaviour of the Indian Thick-knee was observed and documented in the Pekua area of RNP, Assam. Active searching and opportunistic sighting methods (Robinson and Holmes, 1984) were employed for this purpose. In the course of direct field surveys, observations of the bird were made using Carl Zeiss 8×40 FM binoculars, and photographic documentation was carried out using a Sony A7 Mark 4 camera with a Sony 600mm lens. Bird identification was facilitated using a field guide book (Grimmett *et al.* 2011), and the distribution map was created using Q-GIS software (Ver. 3.32 Lima).

## RESULTS AND DISCUSSION

On April 17, 2023, at approximately 0700 hrs (Sighting Coordinates: 26.71222° N latitude and 90.05111° E longitude, and 150m MSL), a solitary bird, later identified as an Indian Thick-knee (*Burhinus indicus*) (refer to Figures 2 and 3), was observed near the Indo-Bhutan border in the riparian zone of the Pekua River. Upon noticing the observers, the bird did not exhibit any attempt to flee the area; instead, it initiated circling and guarding a small patch of grass. Subsequent careful observation revealed the grass patch to be its nest, yet no other partner or offspring were observed. The nest exhibited an intricate construction using grass from the riparian zones. Upon confirming the presence of the Indian Thick-knee nest, the decision was made to leave the location without further disturbance to the breeding bird.

On the following day, April 18, 2023, at approximately 0700 hrs, a return visit was made to the same nesting location of the Indian Thick-knee to conduct additional observations. During this visit, two adults and a lone chick were observed comfortably feeding in the grassland habitats. After an 8-minute observation from a suitable location and distance, the observers departed as the birds entered their nest. This study establishes new records of the successful breeding and fledging of the Indian Thick-knee (*Burhinus indicus*) for the first time in Assam, specifically in the previously undocumented location of the new protected area within Raimona National Park, Kokrajhar District. No prior reports of the species nesting in Assam have been documented.

The observed single fledgling suggests a potential clutch size of two or three eggs, as per the past observations by Ali and Ripley (1978). The study assumed a fledgling success rate of 50% (for a clutch size of 2) or 33% (for a clutch size of 3). The presence of diurnal raptors such as the Crested Serpent Eagle (*Spilornis cheela*), Common Kestrel (*Falco tinnunculus*), and Jerdon's Baza (*Aviceda jerdoni*), as well as nocturnal raptors like the Barn Owl (*Tyto alba*) (confirmed through personal observation consuming fledglings of similar size from tree-nesting birds), poses a significant threat to the breeding success of the Indian Thick-knee.

The findings of the Indian Stone Curlew nest with surviving fledglings in the riparian zones of Raimona National Park underscore the importance of conserving and protecting these vulnerable landscapes from encroachment, alteration, and extensive anthropogenic activities. Therefore, safeguarding riparian zones is crucial to ensuring the successful breeding activities of the Indian Stone Curlew and other breeding birds in Assam.



**Figure 2.** Photograph shows the parent Indian stone-curlew or Indian thick-knee *Burhinus (oedicnemus) indicus* protecting its fledgling through vigilance behaviour near its nest.



**Figure 3.** A Juvenile Indian stone-curlew or Indian thick-knee *Burhinus (oedicnemus) indicus* near its nest.



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