

The first nesting record of the Lesser Adjutant from Rautahat District of Nepal



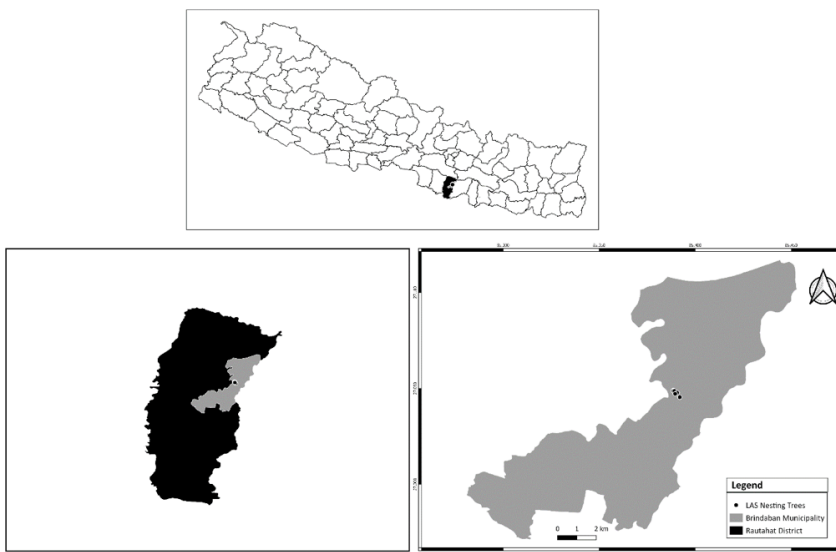
Pair of juvenile Lesser Adjutant. ©Prashant Rokka; Field Survey 21 December 2020.

Lesser Adjutant (LA) *Leptoptilus javanicus* (Horsfield, 1821) is categorized globally “Vulnerable” in the IUCN Red List of Threatened Species (BirdLife International 2017). LA has been recorded from southern and southeastern Asia including Nepal (Karki & Thapa 2013). In Nepal, presence of LA has been recorded from 14 different important bird and biodiversity areas (IBAs), four national parks as well as in different forests patches and farmlands (BirdLife International 2017; Baral et al. 2020).

Furthermore, population of LA has been estimated between 300 to 1,000 individuals with distribution reported from almost entire stretch of lowland Nepal from east to west (Inskipp et al. 2016). The species has

previously been recorded to have breeding colonies from far east to far west Nepal (Inskipp et al. 2016). Recent studies reported the existence of LA in Sindhuli and Sarlahi districts of Nepal (Baral et al. 2020; Bajagain et al. 2019). Findings of the colonies as described by prior studies provide account for recent achievement in exploration of LA population and breeding sites in Nepal (Karki & Thapa 2013; Inskipp et al. 2016; Bajagain et al. 2019; Baral et al. 2020); however, there is no previous record of its nesting in Rautahat District.

In this context, this survey was conducted in Brinda Ban Municipality of Rautahat District in central lowland of Nepal (Figure 1). The study area lies in the lower tropical



Lesser Adjutant nesting trees location in Rautahat District, Nepal.

bioclimatic zone with a tropical forest ecosystem. The lower tropical zone lies below 300m with two types of ecosystems, namely, Terai tropical Sal forest and Terai cultivated land (BPP 1995). Rautahat District consists of 26.11% (294km²) forest including the central broad strip of the Siwalik Forest known as ‘Charkoshe Jhadi’.

Survey was conducted from 15 to 21 December 2020 from 08.00–11.00 h each day and covered an area of 45.24km². Localities such as farmland, marshy areas, open grounds near forests were scanned for observing nest of LA which was similar as recorded earlier by Bajagain et al. (2019). The area search method applied

by recording the colonies seen by random walking in the area of the forest. Direct visual observations made using a pair of 8x42 Olympus binoculars. Likewise, birds as well as nesting trees photographs were captured by using Nikon P900 digital camera afar from the nesting sites to minimize disturbance. Coordinates of the nesting locations were ascertained using Garmin GPS MAP 64s (Table 1).

During the survey, a total of six colonies with 19 nests and 36 juveniles were recorded in the study site. A total of seven adults was observed out of which four were found resting in nesting trees while three were seen at farmland. We observed the colony for a short period of time which coincided with

Table 1. Nesting colony record of Lesser Adjutant from Rautahat District, Nepal.

Date	Colony	Locality	Coordinates	No. of Nests	No. of Juveniles
20.xii.2020	One	Forest land	27.048 N 85.388 E	Three	Seven
20.xii.2020	Two	Forest land	27.049 N 85.388 E	Two	Four
20.xii.2020	Three	Forest land	27.051 N 85.391 E	Two	Four
21.xii.2020	Four	Forest land	27.047 N 85.390 E	Six	Nine
21.xii.2020	Five	Farmland	27.044 N 85.391 E	Four	Seven
21.xii.2020	Six	Farmland	27.049 N 85.386 E	Two	Five



Adult Lesser Adjutant in farmland. © Prashant Rokka; Field Survey 20 December 2020.

Table 2. Information on nesting colonies with dimensions of nesting trees.

Colony	Tree height	Tree girth	Nearest settlement
One	25m	4.26m	65m
Two	22m	3.35m	75m
Three	20m	2.74m	510m
Four	22m	3.96m	122m
Five	25m	3.96m	128m
Six	25m	3.65m	5m

the lack of adults in other nests. Based on our field experience, we assume that adult LA might have gone for foraging. Details on the date, colony, locality, coordinates, number of the nests and juveniles are shown in Table 1.

This study documents the six new colonies as first nesting records of LA from the Rautahat District outside the protected area network. With no previous record from the district,

the survey has led to the discovery of a new breeding population for Nepal. All the colonies were located on *Bombax ceiba* and the heights of the trees ranged from 20–25 m (Table 2).

LA being large and conspicuous, build their nests at the uppermost and general top-level branches (Tamang 2003). Moreover, the finding of the LA colonies near human settlement in Table 2 was similar to the findings of Koju et al. (2019) and Baral and Inskipp (2004). Previous study on LA suggests that farmland supports the breeding activities of LA (Koju et al. 2019) while other studies assumes avoidance of such lands for breeding by LA (Sundar et al. 2016, 2019). In this study, we found that nesting trees were close to human settlements (Table 2) which also indicates that LA are tolerant to

some degree of human disturbance (Karki & Thapa 2013). These findings contradict with each other hence, suggests the necessity of further detailed study on landscape use by LA.

The study highlights the need for the conservation of forest land adjacent to the human dominated landscape. Additionally, protection of nesting tree species such as *Bombax ceiba* should be given a high priority as they are crucial for LA conservation.

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