

## Short Communication

# Records of Jerdon's baza *Aviceda jerdoni* (Blyth, 1842) from eastern Nepal

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## Abstract

Jerdon's baza *Aviceda jerdoni* is one of the least studied raptor species in Nepal which is listed as a Critically Endangered species in the 'Nepal's Red List of Birds'. This paper presents the records of this species during opportunistic surveys, conducted in 2018/2019 from Ilam and Jhapa districts of eastern Nepal. A total of 18 individuals were sighted during the study period with the first record of nest of the species in Nepal. The sightings were made between 70 m, lowest global known range to 1048 m from mean sea level, and the highest altitudinal record for Nepal. Hunting and unintentional prey poisoning were identified as major threats for species in the study site.

**Keywords:** Altitudinal range, Breeding, Nesting, Raptors, Threat

## 1 | Introduction

Jerdon's baza *Aviceda jerdoni* (Blyth, 1842) is a raptor species of the order Accipitridae under the family Falconiformes and is among the least studied raptors in Nepal. The species is categorized under the Least Concern in the IUCN Red List of species (BirdLife

International 2016). It has been recorded globally from Bangladesh, Bhutan, Brunei, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines, Singapore, Sri Lanka, Thailand and Vietnam between 200-1100 m asl (BirdLife International 2016). Among five subspecies (Clark et al. 2020), *Aviceda jerdoni jerdoni* is recorded in Nepal. The raptor was first recorded in Nepal from Dharan Forests Important Bird Area (Basnet et al. 1999; Basnet et al. 2000). Further few sporadic observations were made by different observers from the same area in 2000, 2001, 2008 and 2011 and also from Chitwan National Park in 2000, 2003, 2006, 2008 and 2012 (Inskipp et al. 2016). The species has also been recorded from Morang district in 2004 (Basnet et al. 2006). In Satasidham Forest, Jhapa, a pair of Jerdon's baza was sighted in April and October 2017 and a single individual was sighted in June 2017 from the same area (Anish Timsina Pers. Comm., February 5, 2021). Limited

distribution and scarce sightings of the species provides limited data about the species from Nepal.

The species is listed under the Critically Endangered category in Nepal's Red List of Birds (Inskipp et al. 2016). It has been listed as a resident species of Nepal by BirdLife International (2016). Grimmett et al. (2016) have mentioned about its breeding in Nepal and Inskipp et al. (2016) have also reported it to be probably a resident breeder in Nepal. Jerdon's baza was observed displaying and carrying food in May 2000 in Dharan forests (Benstead & Benstead 2000). Similarly, a copulating pair of this species was also observed in March 2011 in the same region (Inskipp et al. 2016). This paper presents the records of the species from hill forests, foothills and plains from eastern Nepal with nesting information from eastern hills.

## 2 | Materials and methods

### 2.1 | Study area

This study was conducted in forest of Mai Municipality (26°45'N, 87°52'E) and Suryodaya Municipality (26°53'N, 88°4'E) of Ilam District and Jalthal Forest of Haldibari Rural Municipality (26°50'N, 88°01'E) of Jhapa District. Forest of Mai Municipality which lies in Siwalik region was mainly composed of *Schima wallichii*, *Castanopsis indica* and *Shorea robusta*. The forest in Suryodaya Municipality lying in mid-hills region was majorly composed of *Schima-Castanopsis* forest whereas Jalthal Forest

located in Terai region was dominated by *Shorea robusta*. The location map of the study area has been shown in the Fig. 1.

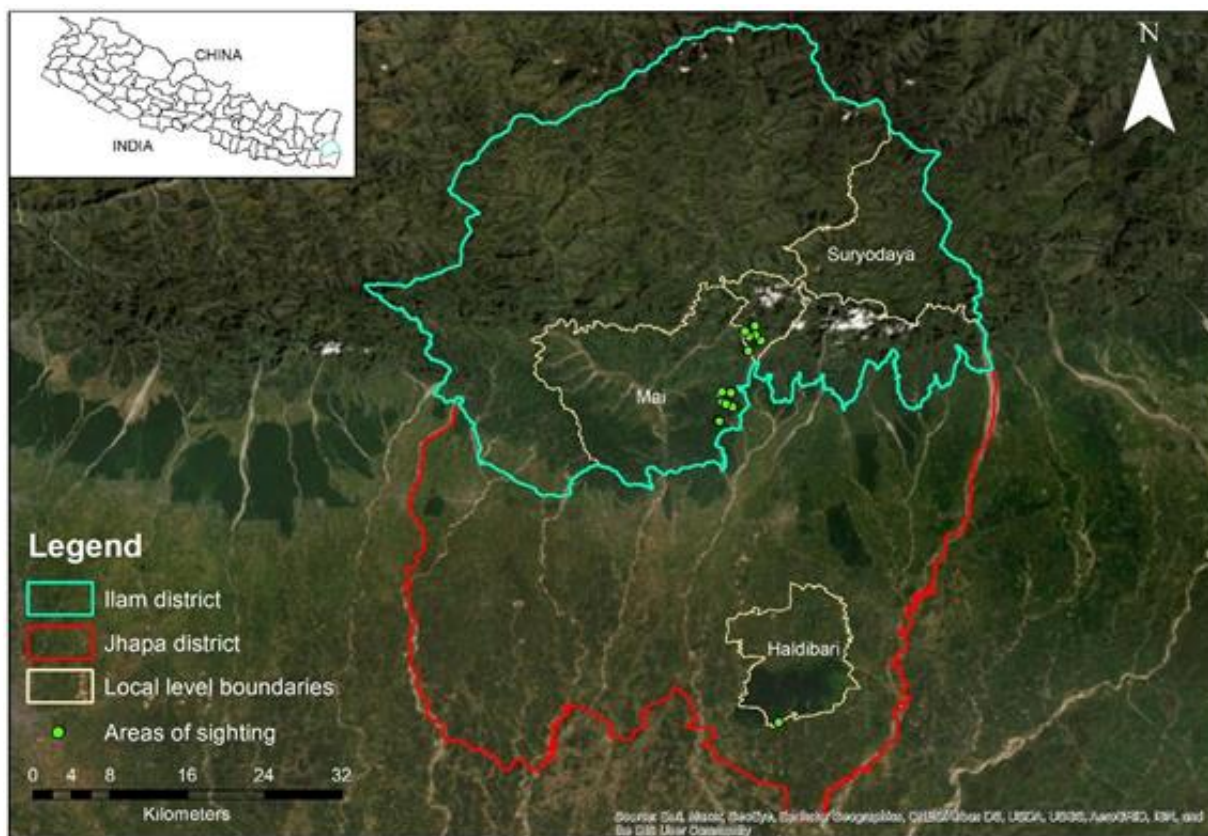


Figure 1. Map showing the areas of sighting of Jerdon's baza

## 2.2 | Data collection and analysis

Data were recorded from opportunistic surveys and observations during bird diversity study from the areas of Ilam and Jhapa districts. Surveys were conducted during 2018/19 in the hill forests of Mai Municipality and Suryodaya Municipality, Ilam District and Jalthal Forest of Haldibari Rural Municipality, Jhapa District, Nepal. Two observers walked through the existing trails for the survey. The site of observation of the species was recorded using a handheld GPS receiver.

For the proper identification of the species, Grimmet et al. (2016) was followed. Individual was identified with its distinctive long and erect white-tipped black crest, broad wings (pinched in at base) and fairly long tail (Grimmet et al. 2016). Photographs of the species were taken whenever possible and confirmation of the species with experts was done with the help of such photographs. Furthermore, informal discussions with local people were made regarding their observation and understanding of the species. Farmers near the location of nest were interviewed with open-ended questions related to their knowledge of the species. In addition to it, secondary literatures were reviewed thoroughly regarding this species to analyze its record in different parts of Nepal.

## 3 | Results

### 3.1 | Species data

Altogether 18 sightings of Jerdon's baza were made from the two districts during the entire survey period (Table 1). In Ilam District, the species was sighted 14 times from community forests (CFs) nearby each other in Mai Municipality (Dalthahar CF, 6; and Sukhani CF, 2) and Suryodaya municipality (Gitange CF and adjacent areas, 6). Individuals were sighted singly in different locations of Ilam district and at least one individual was recorded in each visit during the study in different months (January, April, June, and October 2018). In the Jalthal forest of Haldibari rural municipality, Jhapa District, four individuals (Durgavitta CF, 4) were seen perching in neighboring trees during a survey in September 2019. The elevation range of the records lies between 70 m – 1048 m with 70 m at Durgavitta CF, Haldibari, Jhapa, and 1048 m at a forest patch in Suryodaya, Ilam. Fig. 1 shows the locations of Jerdon's baza sighted during the study and Fig. 2 shows a Jerdon's baza perching on a tree branch, observed in Ilam district.

**Table 1.** Details of record of Jerdon's baza recorded in the study area

SN	Recorded site	# individuals sighted	Date of sighting	Time of sighting	Behavior of bird	Latitude (°N)	Longitude (°E)	Elevation (m asl)
1	Suryodaya	1	02/04/2018	08:57	Perching	26.80971	87.97152	463
2		1	04/04/2018	09:35	Perching	26.81461	87.96690	620
3		1	03/06/2018	08:18	Nesting	*	*	980
4		1	04/06/2018	09:10	Perching	26.81857	87.95655	1048
5		1	12/10/2018	08:37	Flying	26.79979	87.95996	526
6		1	13/10/2018	10:14	Perching	26.82368	87.96627	776
7	Mai	1	09/01/2018	11:40	Flying	26.74770	87.94500	215
8		1	11/01/2018	09:20	Flying	26.75245	87.93522	269
9		1	06/04/2018	08:16	Perching	26.75938	87.93307	325
10		1	06/04/2018	08:42	Perching	26.76154	87.93516	309
11		1	09/06/2018	09:38	Perching	26.75033	87.93919	230
12		1	10/06/2018	08:25	Flying	26.73478	87.93103	225
13		1	14/06/2018	09:00	Perching	26.73431	87.93295	224
14		1	11/10/2018	08:22	Flying	26.76086	87.94340	275
15	Haldibari	4	09/09/2019	08:40	Perching	26.45273	87.98796	70

\* The GPS coordinates of the nesting site have not been provided here considering the sensitiveness of the information. However, the author may provide the location in request of the researchers.

**Figure 2.** Jerdon's baza observed during the survey in Ilam (Photo credit: S. R. Tamang)

### 3.2 | Nesting information

A single nest of the species (Fig. 3) was recorded from the forest of Suryodaya, Ilam district during the study in 2018. The area consisted of sub-tropical broadleaved forest. *Schima wallichii* and *Castanopsis indica* were the major tree species found in the area. A female lying flat on the nest was observed from the ground. The nest was built up of dry twigs and leaves in one of the top branches of a *Schima wallichii*. The total height and diameter at breast height (dbh) of the tree were 20 m and 54 cm respectively. The nest was however located at a height of 16 m from the ground. The elevation of the base of the nesting tree was 980 m asl. The nesting tree was located at the edge of the forest with

agricultural land on the other side and approximately 300 m from the nearest human settlement.

### 3.3 | Threats

Owing to its nature of being unperturbed to minor disturbances (also observed while photographing it as it perched on low branches and did not make quick responses or fly away while moving near on several accounts), this species seems vulnerable to hunting. Further, unintentional poisoning of the species by feeding on poisoned rats could pose threat to species as rat poisoning is common around. Therefore, along with habitat degradation and fragmentation, hunting and other activities like poisoning in potential prey could be threats to the conservation of the species. Such activities could pose

**Figure 3.** Nest of Jerdon's baza (Photo credit: S. R. Tamang)



even more threats in case of habitat like in Nepal where their distribution has been very limited, directing a small resident population of the species.

#### 4 | Discussion

This paper presents several records of the species from forests of Ilam and Jhapa districts as new reported sites for Jerdon's baza in Eastern Nepal. It was recorded in a wide altitudinal range of 70 to 1048 m asl which presents a new altitudinal record of its distribution both globally and nationally. Inskipp et al. (2016) have reported the elevation range of the species in Nepal to be limited to 150-250 m. The record of the species at 1048 m during the study also extends its national upper elevational range from 250 m to 1048 m asl. Similarly, with previous distribution known to be in the altitude range of 200-1100 m globally (BirdLife International 2016) globally, sighting at 70 m in Jalthal presents a record of Jerdon's baza at lowest altitude with an extension of global elevation range to 70 m in lowlands. The unique Jalthal Forest is a mixed lowland forest with its microclimate often owing to hill species which might have made it suitable for use by Jerdon's baza. But a group of individuals observed during the survey and no further observations during subsequent winter and summer surveys provides a little clue about the residential evidence of the species from the forest.

The nesting information and observation of the species in four different months of a year supplements and strengthens the information on breeding of Jerdon's baza in Nepal. Though probable breeding has been reported before by Inskipp et al. (2016), this is the first confirmed breeding record of the species from Nepal. The presence of nests at the forest edge in relatively open canopy interestingly aligns with observations of various previous studies (Buij 2000; Shivkumar & Prakash 2005; Nair 2007) where nests were recorded from similar habitats. This may be accounted to ease of access to food and provides some clues on the behavioral ecology of the species. However, nesting in open canopy areas may increase the risk of nest depredation by humans and other wildlife.

#### 5 | Conclusions

As this paper only presents findings from opportunistic surveys, further research on the species is necessary to get more details on its population, ecology and distribution. Proper awareness programs regarding the importance of bird species and its conservation seem very important in the area.

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#### Authors' contributions

Tamang, S. R. carried out the field data collection; Tamang, S. R., Poudel, A. P. and Pandeya, P. wrote the manuscript. All the authors contributed to the finalization of the draft and gave approval for the publication.

#### Conflicts of interest

Authors declare no conflict of interest.

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