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## Nesting records of Asian Woollyneck from Assam, Northeast India

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**Abstract.** Asian Woollyneck *Ciconia episcopus* (Boddaert, 1786), is a Near Threatened species of stork restricted to South and South East Asia. Previously considered a seasonal migrant to the plains of Assam was found successfully breeding along the northern part of Kaziranga National Park in Assam. In this note, we provide observations of Asian Woollynecks nesting in three localities in Biswanath district with three successful and one unsuccessful attempt and four additional records from Majuli and Lakhimpur districts of Assam, India. So far, there were only two known breeding records of the species from Assam as well as the whole of Northeast India, hence our observation makes these records important for the conservation of the species in the whole region.

**Key words:** Restricted range species, *Ciconia*, confirmed nesting, geographical distribution, *Ciconiidae*, successful breeding, storks.

### 1. Introduction

The Asian Woollyneck *Ciconia episcopus* (Boddaert, 1786), is a near-threatened species (BirdLife International, 2022) sparsely distributed across South and South East Asia (Sundar 2006; Hancock et al., 2011; Ghale and Karmacharya 2018; Gula et al., 2020; Prashant et al. 2021). Its global estimated population is about 50,000–249,999 individuals (Sundar, 2020). They are generally found in wetlands of flood plains, rivers, ponds, swamps, tidal mudflats, paddy fields, and even man-made tanks and their food mainly comprises insects, fish, crabs, frogs, molluscs, lizards and snakes, slowly foraging through water or vegetation (Ali, 1996; Grimmett et al., 2001). Like most storks, they form a large platform-like nest on trees using branches and dead sticks lined by dry grasses in the bowl (Scott, 1975; Hoyo et al., 1992; Hancock et al., 2011).

The Brahmaputra floodplains of Assam support three breeding species of storks (Ali & Ripley, 1983; Saikia 1995; Singha, 1998; Mandal, 2018; Mandal et al., 2022) namely Greater Adjutant *Leptoptilos dubius* (Gmelin, 1789), Lesser Adjutant *L. javanicus* (Horsfield, 1821) and Asian Openbill *Anastomus oscitans* (Boddaert, 1783). Asian Woollyneck were considered seasonal non-breeding migrant to Assam during the winter months (Mandal et al., 2020). So far only two breeding sites are known in Assam: 6-7 nests in *Bombax ceiba* and *Albizia*

*procera* trees between Sukani and Diffolu R within Kaziranga National Park and one in Kohora village on an *Alstonia scholaris* tree (Choudhary, 2000). However, a few individuals were regularly sighted in the Majuli, Lakhimpur, Morigaon and Biswanath districts of Assam and the north bank part of Kaziranga National Park, which raised the curiosity to look for the probable nest of Asian Woollyneck in the localities. Further, it was believed that a high level of flooding dissuades the species from nesting in Assam, but there are no detailed surveys across the state to prove this suspicion (Mandal et al., 2020). Thus, this report on observations of nesting of the Asian Woollyneck at Biswanath, Lakhimpur and Majuli districts of Assam are new confirmed breeding records from northeastern India.

## **2. Material and methods**

### **2.1. Study area**

The study was conducted throughout Assam, India. It is the second largest state of Northeast India with a geographical area of 78,438 sq. km, which is 2.39% of the geographical area of the country. It is situated in the south of the Himalayas bounded by the hilly terrains of Arunachal Pradesh on the north, Mizoram, Meghalaya and Tripura on the south, Nagaland and Manipur in the east, and the west by West Bengal along the Barak and Brahmaputra river valleys. Though the state has hilly terrains on the corners, the majority of the state are flood plains of the river Brahmaputra, which traverses throughout the state from East to West. The climate of the area is a humid subtropical type with an average temperature of 5°C to 32°C and the average rainfall is from 1500 mm to 4000 mm (Islam & Rahmani, 2004). The state has seven national parks and 21 wildlife sanctuaries and several small to large wetlands are dispersed across its total length where Asian Woolly necks have previously been observed (Kakati et al., 2021).

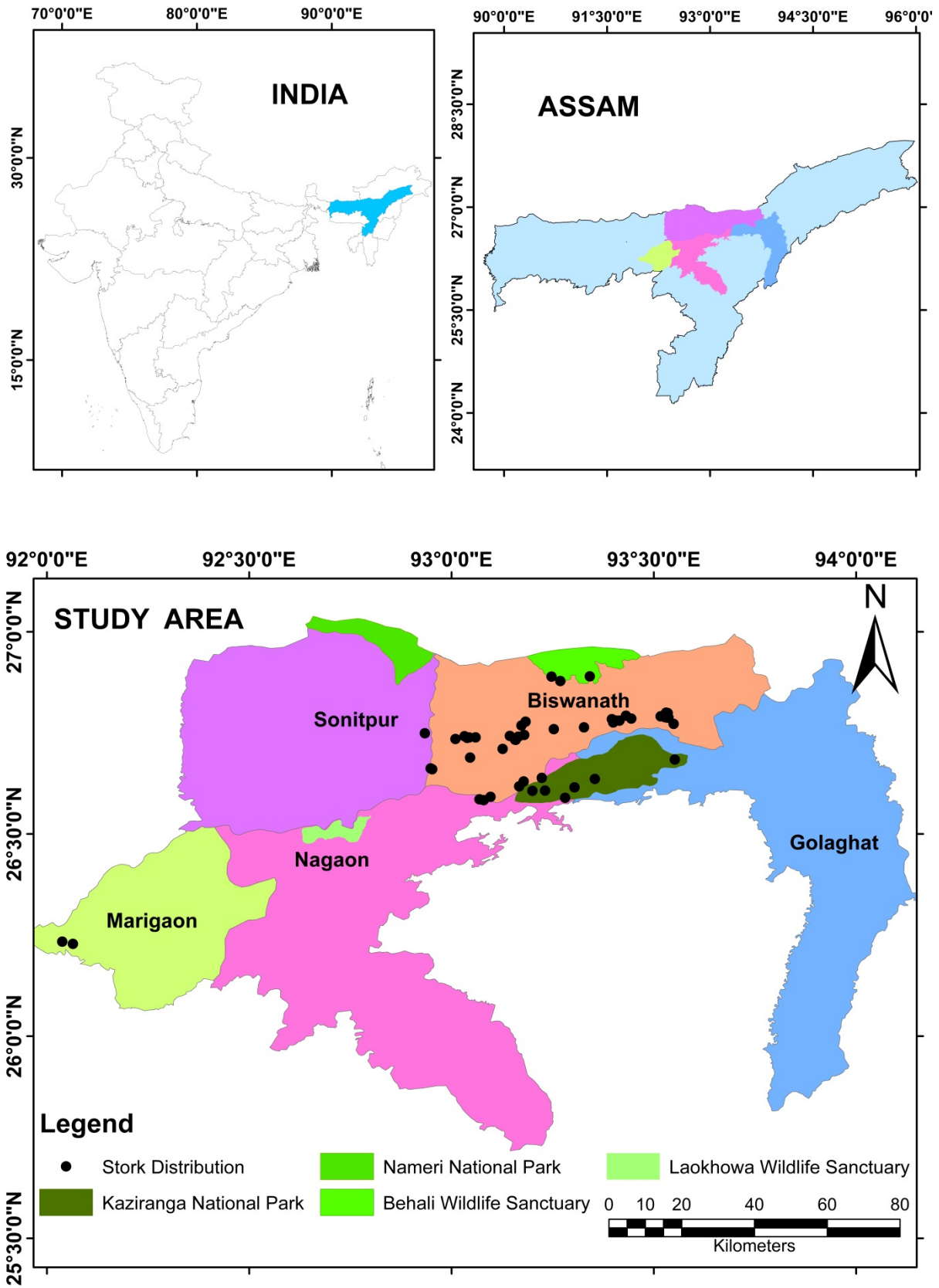


Figure 1. Map of the study area with the observational records

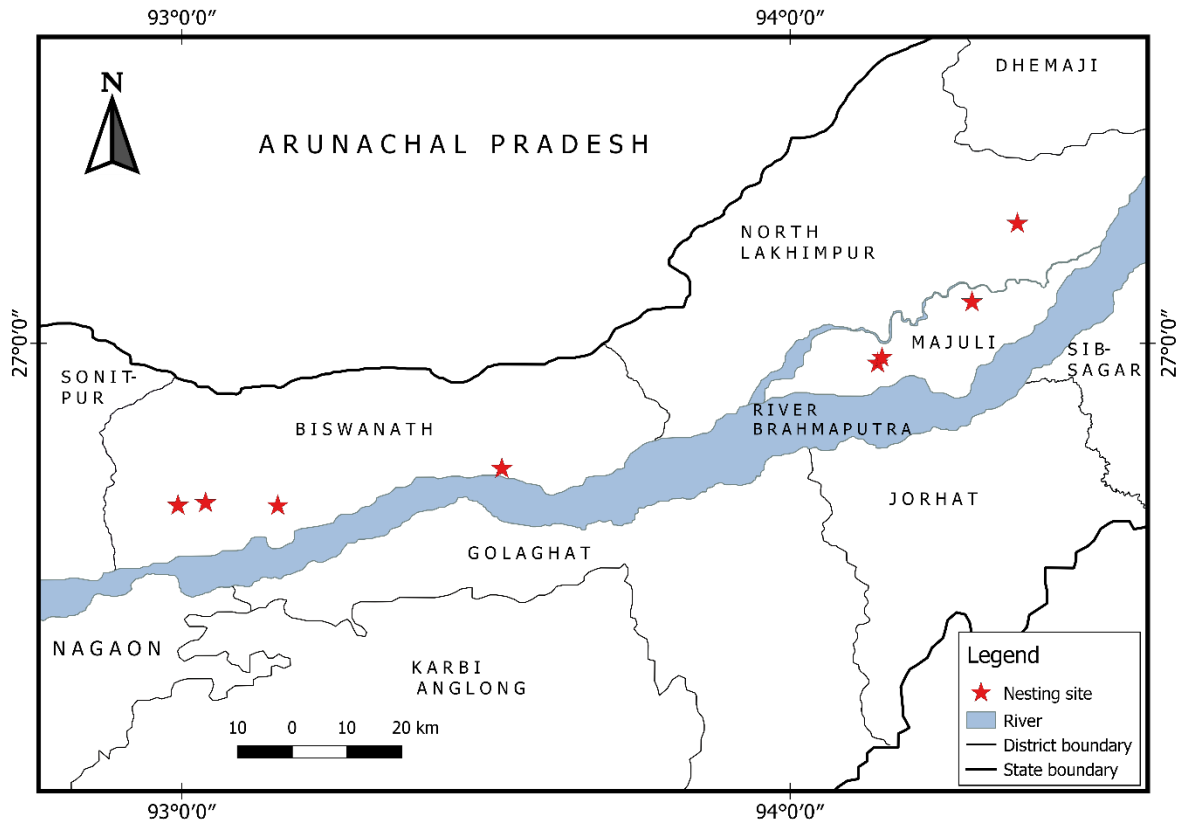


Figure 2. Map of the study area with the nesting sites

## 2.2. Data collection

The study was carried out from October 2016 to June 2022. Short field visits of a few hours were repeatedly made to the locations where storks had previously been seen (Appendix 1). Once a confirmed sighting was made, the entire surrounding area was divided into a grid of 2.5×2.5 km, and each grid was visited thrice a year in each of three seasons i.e. summer (March–June), monsoon (July–October), and winter (November–February) following Mehta (2020). Most of the survey was done using a bike as a mode of transport. Once the nests were spotted, the nesting data were collected through direct visual observations and conducting interviews through questionnaires, group discussions, and personal interactions with inhabitants nearer to the nesting sites. The nesting tree positions were noted down using Global Positioning System Garmin eTrex©H.

## 3. Results

We made 86 observations (Appendix 1; Fig 1) and recorded four nests of Asian Woollynecks during the survey, with four additional records received via personal communication with Mridu Kumar Phukan (Appendix 2; Fig 2). Before this, a list of 17 observations has been made by Mandal et al. (2020) for Assam.

The first nest was documented on 27 February 2017 on a *Bombax ceiba* (*Ximolu*) tree near the National Highway-15 in Nagshankar, Biswanath, Assam. Two adults, one was sitting on the nest and while the other was seen preening its own body on the nearest branch. The nest was built in the middle of the canopy at a height of around 15 m from the ground and was directed towards the west. The nesting tree was located just 5 m from the national highway accompanied by a small forest patch and paddy field on the northern side and a wetland on the south-eastern where they were sighted regularly. But on November 2017, we found the tree was cut down for the expansion of the highway.

The second nest was documented on the 11<sup>th</sup> of June, 2021 within Biswanath town (Fig. 2). We observed two adult storks (male and female) constructing the nest (Fig. 3 A-B). One was engaged in building the nest while the other one collected sticks from nearby trees. The nest was built in the middle of the canopy, at a height of 13 m above ground on a *Bombax ceiba* tree directed west. In the south of the nest, there is a small forested patch from where they were observed collecting their nesting materials like bamboo twigs, climbers, and dry branches. The nest was located about 8m distance from the nearest house, and on the eastern side of the nesting tree, there was a paddy field with swampy areas where the storks were regularly sighted when they feed. In the paddy field, there is a *Ximolu* tree where the woolly necked storks were commonly seen resting along with Lesser Adjutants, Asian Open-bills, Pond Herons, Intermediate Egrets and Cattle egrets. We observed them feeding upon fish, mice, snakes, frogs, etc. even large invertebrates. After that, they get busy in the building nest for 30 minutes to 1 hour and continued with the same activities for 50 continuous days. Later, some Rhesus monkeys, *Macaca mulatta* were seen to disturb the storks, but they managed to build it despite the disturbances. They were seen in the nest only early in the morning, until 4–4:30 am in the summer and around 5:15–5:45 am in the winter, then they fly away from the nest to the feeding ground and return to the nest at 7:30–8:30 am and starts preening. Then they get busy building their nest. Both individuals were involved in nest building. Between 8:30 am to 5:30 pm in winter and 6:45 pm in summer they fly many times from the nest to the feeding ground and return to the nest. Between these activities, they were also observed copulating and preening. However, on 30 July 2021 lightning struck the tree, leaving the tree leafless and the storks never returned to the tree. We later observed them roaming in the area, but could not locate the new nest so far.

The third nest was discovered on the 23rd of September, 2021 near Sootea Police station inside Sootea town (Fig. 2) at a distance of just 8 m from the National Highway-15. The nest was constructed on a *Ficus religiosa* tree, locally known as *Aahot* at a height of

about 15 m, directed southwest. There were four individuals (2 adults and 2 sub-adult chicks) in the nest (Fig. 3 C-D). The nearest feeding ground was a paddy field at around 340 m from the nesting tree, and large wetlands like Ogota, Sildubi, Rowmari, etc (Kakati et al. 2020). During the study, they were seen carrying sticks, bamboo twigs, and grass as their nest building materials. Local people informed us that the storks have been rebuilding their nest on the same tree for the past six years. However, the expansion of the highway and installation of floodlights disturbed the colony, changing their nesting behavior.

The fourth nest was discovered on 11th May 2022 in Dipara village near Kalyani temple, Borongabari, Gohpur (Fig. 2). The nest was found on *Samanea saman*, commonly known as *Rain tree*. The nest was constructed about 15 m above the ground and was found within human habitation located in the northern part of the Kaziranga National Park. The nest was directed towards the north about 400m from the river, Brahmaputra. When we first recorded the nest the adult storks (male and female) were busy in their nest-building activities (Fig. 3 E-F). Later they were also seen copulating. On 7<sup>th</sup> August, 2022 total of four storks were observed in the same nesting tree. According to the nearby respondents, the birds have been building their nests for the last 8 years continuously in the same tree but on different branches. However, some people are known to collect stork eggs from the nest, when the parents were out foraging. But this activity didn't dissuade the species, and they built their nest the next year in the same tree.

Additionally, in communication with Mridu Pawan Phukan, an ornithologist from Assam confirmed a few more observations of nesting from 2005-2007 which were not published yet. In the year 2005 on 18<sup>th</sup> April, two nests in two different nearby trees were observed in Dhekiajuli village near Garmurh, Majuli. In each tree, one nest was observed with two individuals. One of the trees was shared with a Slender-billed Vulture nest. Woolly nest stork was found in the middle canopy and the vulture nest was recorded at the top. There was no conflict between both species. The nesting trees were near a wetland and a paddy field. On 27 September 2006 one nest with two individuals was recorded in Jengraimukh, Majuli within the human habitation area. And on 25<sup>th</sup> September 2007, one nest with two individuals was recorded in Kajuwapathar, Dhakuakhana, Lakhimpur which was located in the middle of a paddy field on a gentle slope. In all the cases, the tree species was *Bombax ceiba* (Ximolu).



Figure 3. Asian Woolly-neck: A-B. A pair while and copulating preparing the nest in *Bombax ceiba* tree at Bargaon, Biswanath, Assam. Photographed on 11 June 2021 by Ranjit Kakati. C-D. Three individuals (two adults and one sub-adults) in the nest in *Ficus religiosa* tree at Sootea, Biswanath, Assam. Photographed on 23 September 2021 by Ranjit Kakati. E-F. A breeding pair with its nest built in *Samanea saman* tree at Dipara village, near Kalyani temple, Borongabari, Gohpur, Assam. Photographed by Aditya Prasad Das on 02 August 2022.

#### 4. Discussion

This note provides new records of Asian Woollyneck breeding in Assam as well as in northeast India, after observations made in Choudhary (2000). We obtained information on



eight nests in seven sites (the only observation of unsuccessful nesting was in Bamgaon within Biswanath town). Locals informed us that Asian Woollyneck pairs likely reuse the same tree for re-nesting over years suggesting that nest trees inside human habitations need to be conserved to facilitate long-term breeding of stork pairs. Our observation of nest site fidelity by Asian Woollynecks is similar to observations in northern India where almost 45% of nest sites were reused at least once by Asian Woollynecks (Kittur and Sundar 2021). However, we also came to know that in Dipara they have been building nests in different branches of the same tree for several years. And even reports of them using abandoned nests of other species like Grey Heron *Ardea cinerea* are also there (Banerjee 2017). We observed that the Asian Woollynecks build their nests inside human habitation areas, preferably 10 to 15 m high above the ground. This might be because within human habitations they feel protected from the raptors which often snatches eggs and chicks. Incidences of loss of eggs to human predation were also recorded from the study sites. In northeastern India, Asian Woollynecks have been observed nesting on *B. ceiba* and *F. religiosa* (present study). These trees are very tall and storks probably used these to avoid humans and other disturbances. There are also reports of nesting in *Artocarpus heterophyllus*, *Dalbergia sissoo*, *Mangifera indica*, *Mitragyna parvifolia*, *Tectona grandis*, *Eucalyptus* sp., *Acacia nilotica*, *Azadirachta indica*, *Syzygium cumini* and *Salmalia malabarica* (Choudhary 2013; Greeshma et al., 2018; Kittur and Sundar 2021). They construct their nests within the forks of horizontal branches, with a little shade and protection, whereas other storks like Greater Adjutants, Lesser Adjutants and Asian Open Bills share the same habitat but prefer a top canopy with horizontal platforms (Mandal & Saikia, 2013). We found that Asian Woolly necks build solitary nests in trees, whereas the others (Greater Adjutants, Lesser Adjutants and Asian Open Bills) build colonies in the same tree. Asian Woollynecks were previously assumed to prefer isolated wetland areas for nesting. However, several anecdotal observations in cities (Vaghela et al., 2015; Greeshma et al., 2018; Hasan & Ghimire, 2020) and a detailed study across an agricultural landscape (Kittur & Sundar, 2021) have shown this assumption to be untrue. But the nesting sites are always near bamboo grooves, wetlands, and paddy fields, for ease of access to building materials and food. Observations on nest buildings were found to be from April to the last week of July. The storks are found to co-habit the same tree with vultures avoiding any form of conflict. Like the other studies, our observations of Asian Woollyneck nesting on trees inside towns in northeastern India suggest that future studies on this species will require to cover towns and cities.

## 5. Conclusion

From the observational records of the species, we could conclude that the Biswanath district of Assam is a suitable area for Asian Woollyneck conservation as it hosts several wetlands as feeding grounds for the storks (Kakati et al., 2021). The availability of food, favorable ecological conditions, and security provided by the people to the nesting seem to be other major contributing factors to their survival. These confirmed breeding records of Asian Woollyneck from Assam as well as NE India can be used for future implications for the conservation of the species.

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Appendix 1. Observation of Asian Woollynecks in Biswanath and Sonitpur districts of Assam from 2016 to 2022.

Sl. No.	Location	Month and Year	Count	Habitat	Coordinates
1.	Dahgaon, Biswanath	07 October, 2016	2	Paddy field	26°44'25.71"N 93° 9'53.70"E
2.	Botiamari , Biswanath	15 December, 2016	3	River side	26°46'48.96"N 93°24'54.61"E
3.	Sootea , Biswanath	25 December , 2016	1	Paddy field	26°44'5.52"N 93° 0'35.13"E
4.	Rowmari Beel, Panpur, Kaziranga National Park	8 January, 2017	5	Wetland	26°39'43.72"N 92°56'54.70"E
5.	Gangmou, Behali, Biswanath	20 January, 2017	2	Riverside	26°45'49.50"N 93°19'39.55"E
6.	Behali Reserved Forest, Biswanath	25 January , 2017	2	Riverside	26°53'21.34"N 93°14'50.06"E
7.	Bagori, Kaziranga NP	5 February, 2017	5	Wetland	26°36'23.67"N 93°12'0.03"E
8.	Pobitora WLS, Morigaon	10 February, 2017	2	Wetland	26°13'41.65"N 92° 3'51.61"E
9.	Bamgaon, Biswanath	25 April, 2017	1	Human habitation area	26°43'59.07"N 93° 9'26.64"E
10.	Botiamari, Biswanath	7 October, 2017	2	River side	26°47'2.56"N 93°23'47.02"E
11.	Nagshankar, Biswanath	27 October, 2017	1	Roadside (On the nest)	26°43'59.38"N 92°59'35.80"E
12.	Dagaon, Biswanath	1 November, 2017	1	Paddy field	26°44'25.71"N 93° 9'53.70"E
13.	Agaratoli, Kaziranga NP	14 November, 2017	3	Wetland	26°41'2.54"N 93°33'7.22"E
14.	Kohora, Kaziranga NP	14 November, 2017	2	Wetland	26°38'9.73"N 93°21'15.73"E
15.	Bagori, Kaziranga NP	15 November, 2017	2	Wetland	26°36'55.07"N 93°18'14.63"E
16.	Bagori, Kaziranga NP	28 December, 2017	2	Wetland	26°35'21.93"N 93°16'51.16"E
17.	Rowmari Beel, Panpur, Biswanath, Kaziranga National Park	10 January, 2018	3	Wetland	26°39'43.62"N 92°56'54.68"E
18.	Biswanath , Kaziranga National Park	11 January, 2018	1	River side	26°37'4.07"N 93°10'2.45"E
19.	Biswanath , Kaziranga National Park	11 January, 2018	2	River side	26°35'30.89"N 93° 5'47.37"E
20.	Biswanath , Kaziranga	11 January, 2018	1	River side	26°46'49.49"N

	National Park				93°24'24.57"E
21.	Kodomon, Biswanath	15 February, 2018	2	Wetland	26°42'37.40"N 93° 7'35.59"E
22.	Bamgaon, Biswanath	27 July, 2018	2	Human habitation area	26°43'59.13"N 93° 9'26.72"E
23.	Bamgaon, Biswanath	4 August, 2018	2	Human habitation area	26°43'59.13"N 93° 9'26.72"E
24.	Behali Wildlife Sanctuary	19 August, 2018	1	Forest	26°53'23.43"N 93°20'31.06"E
25.	Bamgaon, Biswanath	16 September, 2018	2	Human habitation area	26°43'59.10"N 93° 9'26.41"E
26.	Rowmari Beel, Panpur, Kaziranga NP	27 February, 2018	3	Wetland	26°39'43.72"N 92°56'54.70"E
27.	Biswanath Ghat	16 January, 2018	1	Riverside	26°37'47.63"N 93°10'42.52"E
28.	Sootea	18 July, 2018	1	Paddy field	26°44'20.21"N 93° 3'34.67"E
29.	Dholai Beel	29 July, 2018	1	Roadside	26°44'56.51"N 92°56'3.30"E
30.	Dipara Beel	5 October, 2018	2	Riverside	26°47'21.94"N 93°32'2.98"E
31.	Rowmari Beel, Panpur, Biswanath, Kaziranga NP	15 January, 2018	4	Wetland	26°37'47.63"N 93°10'42.52"E
32.	Biswanath, Kaziranga NP	15 January, 2018	1	Riverside	26°38'19.90"N 93°13'23.39"E
33.	Botiamari, Biswanath	4 February, 2018	5	Riverside	26°46'32.72"N 93°23'59.55"E
34.	Dagaon, Biswanath	25 September, 2018	1	Paddy field	26°44'26.00"N 93° 9'55.49"E
35.	Ogota Beel	20 January, 2019	2	Wetland	26°41'20.10"N 93° 2'45.81"E
36.	Rowmari Beel, Panpur, Kaziranga NP	24 January, 2019	3	Wetland	26°37'47.63"N 93°10'42.52"E
37.	Pobitora WLS, Morigaon	29 January 2019	1	Wetland	26°14'1.56"N 92° 2'16.83"E
38.	Bamgaon	4 August, 2019	1	Human habitation area	26°43'59.13"N 93° 9'26.72"E
39.	Dahgaon	27 September, 2019	2	Paddy field	26°44'25.71"N 93° 9'53.70"E
40.	Botiamari	25 December, 2019	1	Riverside	26°47'33.02"N 93°25'52.63"E
41.	Rowmari beel, Panpur, Kaziranga NP	19 January, 2020	3	Wetland	26°39'36.16"N 92°57'8.32"E
42.	Burhapahar Range, Kaziranga NP	25 January, 2020	1	Wetland	26°35'8.92"N 93° 04'8.96"E
43.	Bagori Range, Kaziranga NP	25 January, 2020	2	Wetland	26°36'25.85"N 93°13'52.88"E
44.	Burhapahar Range, Kaziranga NP	25 January, 2020	3	Wetland	26°35'1.08"N 93° 4'46.79"E
45.	Bamgaon	15 April, 2020	1	Human habitation area	26°43'59.13"N 93° 9'26.72"E
46.	Bamgaon	17 April, 2020	1	Human habitation area	26°43'59.13"N 93° 9'26.72"E
47.	Burhigang	24 August, 2020	1	Roadside	26°44'42.00"N 93°10'47.49"E
48.	Dahgaon	9 October, 2020	2	Paddy field	26°44'25.71"N 93° 9'53.70"E
49.	Geruabari	30 October, 2020	1	Paddy field	26°46'40.02"N

					93°10'59.49"E
50.	Rowmari beel, Kaziranga NP 6 <sup>th</sup> Addition	12 January, 2021	5	Wetland	26°39'36.16"N 92°57'8.32"E
51.	Telini, Gohpur	14 January, 2021	1	River side	26°47'27.7"N 93°31'00.8"E
52.	Bamgaon	12 February, 2021	2	Human habitation area (On the nest)	26°43'59.13"N 93° 9'26.72"E
53.	Bamgaon	29 April, 2021	2	Paddy field	26°44'11.43"N 93° 9'29.20"E
54.	Bamgaon	20 May, 2021	1	Human habitation area (On the nest)	26°43'59.13"N 93° 9'26.72"E
55.	Bamgaon	28 May, 2021	1	Human habitation area	26°43'59.13"N 93° 9'26.72"E
56.	Bamgaon	4 June, 2021	2	Human habitation area	26°43'59.13"N 93° 9'26.75"E
57.	Bamgaon	8 June, 2021	1	Human habitation area (On the nest)	26°43'59.13"N 93° 9'26.72"E
58.	Bamgaon	11 June To 30 July, 2021	2	Human habitation area (On the nest)	26°43'59.13"N 93° 9'26.72"E
59.	Bamgaon	30 August, 2021	1	Human habitation area (On the nest)	26°43'59.13"N 93° 9'26.72"E
60.	Kochgaon	3 September, 2021	2	Human habitation area	26°44'33.32"N 93° 8'39.29"E
61.	Geruabari	11 September, 2021	1	Paddy field	26°46'6.07"N 93°10'22.83"E
62.	Sootea	18 September, 2021	1	Roadside	26°44'19.50"N 93° 2'37.10"E
63.	Sootea	20 September, 2021	1	Paddy field	26°44'30.11"N 93° 1'56.17"E
64.	Bamgaon	21 September, 2021	1	Human habitation area	26°43'59.17"N 93° 9'26.77"E
65.	Sootea (with nest)	23 September, 2021	4	Roadside	26°44'15.59"N 93° 2'20.27"E
66.	Sootea	18 October, 2021	3	Roadside	26°44'15.59"N 93° 2'20.27"E
67.	Sootea	29 October, 2021	3	Roadside	26°44'15.59"N 93° 2'20.27"E
68.	Bamgaon	25 October, 2021	1	Human habitation area	26°43'58.12"N 93° 9'31.63"E
69.	Sootea	7 November, 2021	2	Roadside	26°44'15.59"N 93° 2'20.27"E
70.	Sootea	18 November, 2021	1	Roadside	26°44'15.59"N 93° 2'20.27"E
71.	Dipara	21 December, 2021	2	River side	26°47'17.7"N 93°31'56.4"E
72.	Dipara	25 December, 2021	2	River side	26°47'15.4"N 93°32'11.1"E
73.	Thute Chapori, Kaziranga NP	31 December, 2021	4	River side	26°46'19.8"N 93°32'56.7"E
74.	Dipara	14 January, 2022	2	River side	26°47'16.3"N 93°31'59.5"E
75.	Hatijan	14 April, 2022	8	Paddy Field	26°47'56.7"N 93°32'04.3"E
76.	Dipara	17 April, 2022	2	River Side	26°47'19.2"N 93°31'41.3"E
77.	Behali Wildlife Sanctuary	25 April, 2022	1	Forest area	26°52'41.56"N 93°16'8.94"E
78.	Dipara	11 May, 2022	2	Human Habitation Area (On the nest)	26°47'38.30"N 93°31'33.31"E

79.	Dipara	22 May, 2022	1	Human Habitation Area	26°47'31.2"N 93°31'20.7"E
80.	Dipara	15 June, 2022	1	Human Habitation Area (On the nest)	26°47'38.30"N 93°31'33.31"E
81.	Hatijan	23 May, 2022	2	Paddy Field	26°48'00.5"N 93°31'49.9"E
82.	Dipara	9 June, 2022	4	Human Habitation Area	26°47'38.7"N 93°31'34.1"E
83.	Sootea, Biswanath	5 June, 2022	2	Roadside (On the nest)	26°44'15.59"N 93° 2'20.27"E
84.	Gameri Ghat	11 June, 2022	10	River side	26°47'07.5"N 93°26'39.9"E
85.	Monabarie T.E., Biswanath	27 June, 2022	1	Water canal, Tea Garden	26°45'33.41"N 93°15'10.48"E
86.	Sootea	30 June, 2022	2	Roadside (On the nest)	26°44'15.59"N 93° 2'20.27"E

Appendix 2. Nesting records of Asian Woollynecks in Assam from 2005 to 2022.

Sl. No.	Location	Month and Year	Count	Habitat	Coordinates
1.	Dhekiajuli, Garmurh, Majuli	18 April, 2005	2	Human habitation area	26°58' 26.2" N 94°08' 19.2" E
2.	Dhekiajuli, Garmurh, Majuli	18 April, 2005	2	Human habitation area	26°58' 58.7" N 94°08' 32.7" E
3.	Jengraimukh, Majuli	27 September, 2006	2	Human habitation area	27°04' 05.3" N 94°17' 57.4" E
4.	Khajuwa Pathar, Dhakuakhana, Lakhimpur	25 September, 2007	2	Paddy field	27°11' 49.2 N 94°22' 25.9" E
5.	Nagshankar, Biswanath	27 February, 2017	1	Roadside (On the nest)	26°43'59.38"N 92°59'35.80"E
6.	Bangaon	17 September, 2016	2	Human habitation area	26°43'59.13"N 93° 9'26.72"E
7.	Sootea	18 November, 2021	1	Roadside	26°44'15.59"N 93° 2'20.27"E
8.	Dipara	15 June, 2022	1	Human habitation area (On the nest)	26°47'38.30"N 93°31'33.31"E