

## First Provincial Record of Black-crowned Night heron (*Nycticorax nycticorax*) in West Sumatra and the Summary of Its Sumatran Records

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**ABSTRACT.** The Black-crowned Night heron (*Nycticorax nycticorax*) is a known visitor in Sumatra with more sighting records in the eastern side of the island. Meanwhile, on the west, it was historically recorded from only two offshore islands, namely Nias and Enggano. During the waterbird survey from early 2018 at Pasir Jambak Beach of Padang City in the coastline of West Sumatra, a Night heron was spotted among the colony of mixed egret species. This study aims to update the knowledge of this species in West Sumatra, as well as its general occurrence in Sumatra. This study was conducted by counting the population of each waterbird species found in the research area, while for documentation purposes, a Nikon Coolpix P900 was used to take pictures. Species identification was guided with related books for the Sumatera area. Data then were analyzed and outlined descriptively in accordance with what accumulated from the field survey and online searching. The result showed that the first sighting of Black-crowned Night-heron in West Sumatra follows the common fly-through route of migrant birds in eastern side of Sumatra. The summary of the compiled records of this species indicates that it is probably a vagrant along the western coastline, while it visits more frequently on the eastern side. This is the first record of its kind in the province of West Sumatra, although, previous records cover almost all provinces in Sumatra.

**Keywords:** Ardeidae; Kowak; migrant birds; *Nycticorax nycticorax*; waterbird species

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### INTRODUCTION

The Black-crowned Night heron (*Nycticorax nycticorax*) is widely distributed across the globe with its four known subspecies (del Hoyo *et al.*, 1992). It is recognized by its black crown, nape, and back, which contrasted with its whitish underpart and grey wings and tail (King *et al.*, 1975). The subspecies *N. n. nycticorax* spreads from Central and South of Europe eastward to Asia, extending into Indonesian Archipelago, Japan, Africa, and Madagascar. Waterbird census on January 1990 counted 2901 Black-crowned Night-heron at various localities in Indonesia. The breeding colony in Pulau Rambut, off Jakarta Bay is estimated to be at least 4000 (del Hoyo *et al.*, 1992).

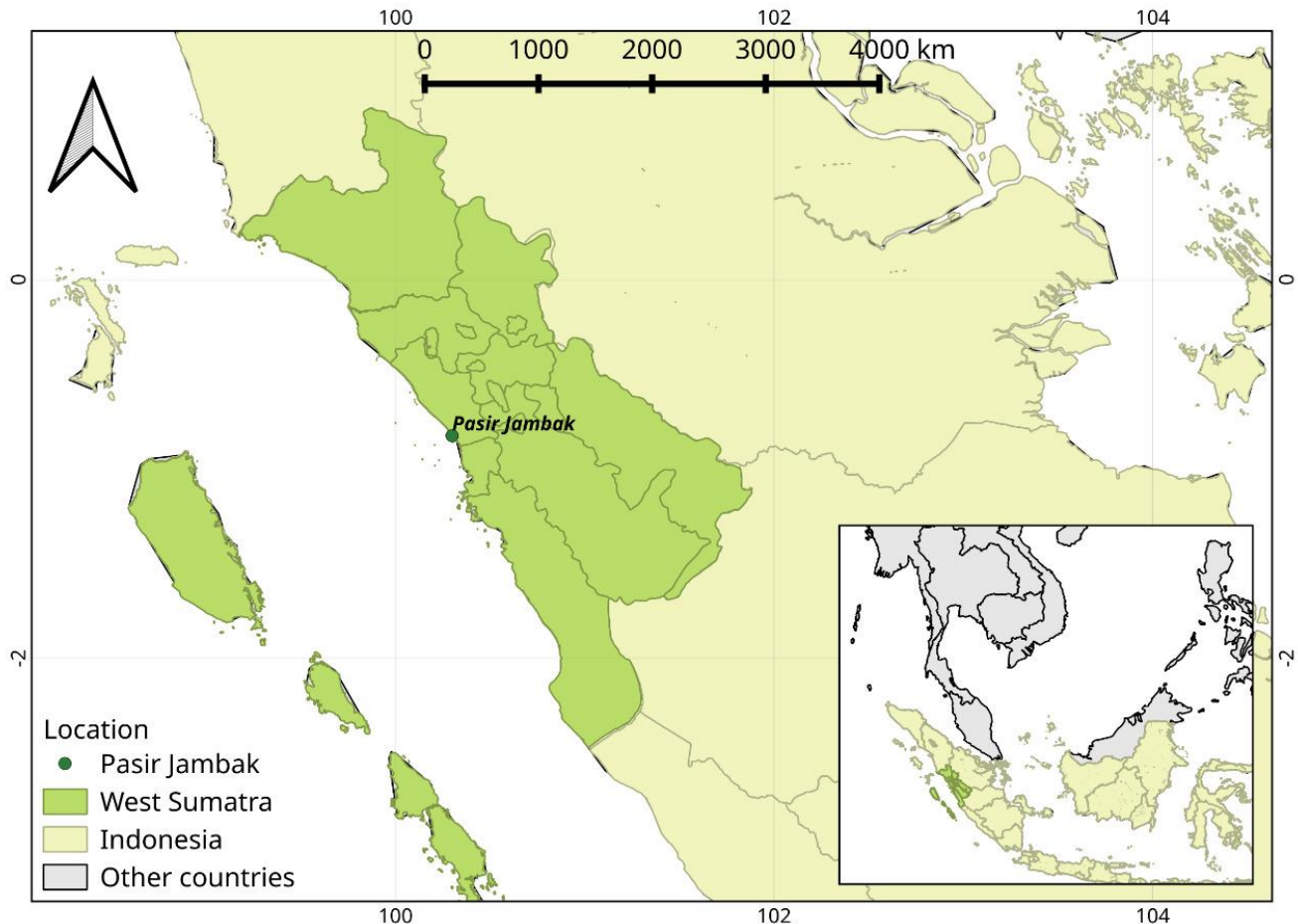
In Sumatra, this species is recorded more from the eastern coastline, including the offshore islands. It was sighted as rare visitors in several locations in Lampung (van Marle & Voous, 1988; Parrott & Andrew, 1996), South Sumatra (Verheugt *et al.*, 1992), Jambi, North

Sumatra, and Aceh (van Marle & Voous, 1988; Holmes, 1996). The sighting records were also made from Aruah Islands in Riau Province (van Marle & Voous, 1988) and Bintan (Rajathurai, 1996); both are located in Malacca Strait. Meanwhile, on the west Sumatran islands, Black-crowned Night-heron was historically recorded from Nias and Enggano Island of Bengkulu (Ripley, 1944; Dymond, 1994; Holmes, 1996). It was not recorded at Mentawai Islands in the offshore of West Sumatra Province (Kemp, 2000), neither from its coastal area (Novarino *et al.*, 2006; Chandra, 2008; Prananta, 2009). Consequently, it was not included in the provincial list of birds in West Sumatra until recently. Therefore, this study aims to update the knowledge of this species in West Sumatra Province, as well as its general occurrence in Sumatra. This is the first record of the existence of Black-crowned Night-heron in West Sumatra.

## MATERIALS AND METHODS

This study was conducted between May 2017 and April 2018 along the coastline of West Sumatra Province, which included Panjang Island in West Pasaman Regency,

Tiku Beach in Agam, Pasir Jambak Beach in Padang City, the province capital, and Gasan Gadang Beach in Padang Pariaman (Janra *et al.*, 2018).



**Fig. 1.** Location site of *Nycticorax nycticorax*

The study was also tailored with Water Bird Census 2018 activity organized by Wetland International – Indonesia Programme. It involved counting the population from each waterbird species. Furthermore, a 10x42 magnification binocular was used to enhance sighting during survey, while for documentation purposes, a Nikon Coolpix P900 was used to take pictures. Species identification was guided with related books for the area (MacKinnon *et al.*, 1998; Eaton *et al.*, 2016). For establishing the historical records on Black-crowned Night heron in

Sumatra, any published record on the species in Sumatra was exhaustively tracked facilitated by online searching engine using a combination of keywords '*Nycticorax nycticorax*,' 'Black-crowned Night heron', and 'Sumatra'. The result was then summarized into a table that listed date, location, and other remarks regarding the sighting of species (Table 1). Furthermore, data were analyzed and outlined descriptively in accordance with what accumulated from the field survey and online searching.

**Table 1.** Summary of historical and current records of Black-crowned Night-heron *Nycticorax nycticorax* in Sumatra

Date	Location	Source	Remarks
1981-1982	<b>Aceh</b> Lhokseumawe	van Marle & Voous, 1988	-
Sep 1981	Gunung Leuser Reserve	van Marle & Voous, 1988	One adult
4 Feb 1992	Meulaboh	Holmes, 1996	An individual heard
	<b>North Sumatra</b>		
1890	River Serdang	van Marle & Voous, 1988	-
15 Apr 1915	Ramunia	van Marle & Voous, 1988	-
19 Feb 1977	Percut	van Marle & Voous, 1988	-
1891	Balige	van Marle & Voous, 1988	-
1863-1905	Nias	Ripley, 1944	-
28 Sep 1986	Belawan	Holmes, 1996	31 individuals, mostly immatures
6 Jan - 18 Jun 2011	Tanjung Rejo	Putra <i>et al.</i> , 2015	Averagely 3637 individual per month observed
	<b>Jambi</b>		
July 1986	Coastal Swamp	van Marle & Voous, 1988	One individual
5 Sep 1986	Batang Hari River	Holmes, 1996	-
	<b>West Sumatra</b>		
6-7 Jan 2018	Padang Beach	This study	One individual
	<b>Bengkulu</b>		
1944	Enggano	Ripley, 1944	Two males, one female collected
	<b>Riau</b>		
Nov 1906	Aruah Islands	van Marle & Voous, 1988	-
	<b>Riau Islands</b>		
25 Apr 1994	Tanjung Bintan & Tanjung Tondang	Rajathurai, 1996	Voice recorded at two different sites
	<b>South Sumatra</b>		
20 Mar 1989	Tanjung Koyan	Verheugt <i>et al.</i> , 1992	One individual
	<b>Bangka Belitung</b>		
1863	Bangka	van Marle & Voous, 1988	-
	<b>Lampung</b>		
May 1976	Tanjung Karang	van Marle & Voous, 1988	-
Jan 1977	Menggala	van Marle & Voous, 1988	-
Oct 1978	Way Kambas Reserve	van Marle & Voous, 1988	Marked as rare (see also Parrot & Andrew, 1996)
19-24 Mar & 11-16 May 1994	Rawa Pacing, Lampung	Holmes & Noor, 1995	Breeding colony with estimated total population 3354 individuals

## RESULTS AND DISCUSSION

**The sighting of Black-crowned Night-heron.** On January 6, 2018, a survey was conducted at nipa-palm (*Nypa fruticans*) clusters within Pasir Jambak Beach of Padang (Fig. 1), which was part of the waterbird survey series. This clump of nipa-palm vegetation is known as the breeding site for mixed colonies of Cattle Egret *Ardea ibis*, Intermediate Egret *Ardea intermedia*, Little Egret *Egretta garzetta*, and Striated Heron *Butorides striata*. Furthermore, black-crowned Night-heron is distinguished from Striated Heron from its bigger size, two prolong black plumes on its head, and prominent white underparts (Fig. 2).

Rufous Night-heron (*Nycticorax caledonicus*), another *Nycticorax* member in Indonesian Archipelago, is different from its rufous or reddish brown upper wing covert (MacKinnon *et al.*, 1998), which was previously not recorded in Sumatra until 2000 (Iqbal & Takari, 2006).

Around 9.30 h, at the approximate of the center of nipa palm cluster, at a barren tip of a nipa midrib, a Black-crowned Night-heron was sighted among the breeding and nest building egrets. It was immediately identified to be different from other surrounding white egrets through its typical silhouette and coloration of black upperparts, whitish underpart, and grey wings. It was perching silently during the

observation, did not make any aggressive gesture, and was not agitated by other flying-through birds. It stayed at the perch until the observer left the site an hour later. Subsequent observation made on the next day re-spotted the presumably same individual perching at around the same place and time. No other individual was observed until the waterbird survey concluded in April 2018.



**Fig. 2.** Black-crowned Night-heron in Sumatra

**Historical Records of Black-crowned Night-heron in Sumatra.** The most comprehensive account on Sumatran birds compiled by van Marle & Voous (1988) provides an array of historical records for Black-crowned Night-heron in this island. The literature search was extended using online repository in biodiversity library website ([www.biodiversitylibrary.org](http://www.biodiversitylibrary.org)), to find any necessary detail regarding the historical records of this species. Most of the records after the 1990s were published in Kukila Journal of Indonesian Ornithologists's Union.

There are 21 published records on Black-crowned Night-heron before the current West Sumatran sighting (Table 1). North Sumatra was with the highest (7 records), followed by Lampung (4 records) and Aceh (3 records). Three originated from the western coastline of Sumatra; Meulaboh (Holmes, 1996), Nias and Enggano Island (Ripley, 1944). These reports concern only one to several individuals sighted or heard. The rest of the records are from the eastern coastline of Sumatra, including two reports of individual counts in thousand. These include the 3637 individuals counted monthly at Tanjung Rejo, northeast of North Sumatra, and a population estimate of 3354 at Rawa Peking, northeast of Lampung.

This is probably the first direct sighting record of vagrant Black-crowned Night-heron on west Sumatran coastline, as the previous were from the offshore island (Ripley, 1944), or recorded through vocalization (Holmes, 1996). The sighting of this bird among the breeding colony of egrets indicates its preference for roosting in aggregation with other Ardeidae species. This is because the roosting and breeding colony of Black-crowned Night-heron was frequently reported to intermingle with sites of darters, egrets, and other herons (Lambert & Erfemeijer, 1989; Mardiasuti *et al.*, 2018).

In Indonesia, Black-crowned Night-heron breeds mainly in Java and Borneo (van Marle & Voous, 1988; Robson, 2011; Eaton *et al.*, 2016). The colonies in Pulau Rambut and Pulau Dua, on the offshore of West Java, were probably the largest breeding aggregation in Sunda region (del Hoyo *et al.*, 1992). One record from Lampung was based on the observation of birds in captivity (Holmes & Noor, 1995), while the individual colonies were suspected more as visitors from Pulau Dua and Pulau Rambut (van Marle & Voous, 1988).

The data on the historical records of Black-crowned Night-heron suggests that the visiting flocks tend to fly through the eastern part of Sumatra than of the west. It is due to the main concentration of water birds and shorebirds in Sumatra (Crossland *et al.*, 2006). This relates to the habitat condition in the eastern side with wide intertidal mudflat zone that provides more resources for huge flock (Brown & Sherry, 2006; Whitten *et al.*, 2009). Western Sumatra tends to be steeper terrain and with a limited intertidal surface, reducing habitat capacity to support aggregation of water birds (Ripley, 1944; Crossland *et al.*, 2006). Furthermore, the sighting of a Black-crowned Night-heron in the West of this Province is the last piece that completes the puzzling distribution of this species in Sumatra. Further observation, however, is needed to establish its firm status in west Sumatran coastline. Nevertheless, it is currently safe to maintain its status as vagrant in this island.

## CONCLUSION

The first sighting of Black-crowned Night-heron *Nycticorax nycticorax* in West Sumatra Province completed the records for this species in all demographic area of Sumatra. The summary of all published sighting on this species suggests that it follows the common fly-through route of migrant birds in eastern side of Sumatra. Therefore, this bird should be considered as a vagrant in West Sumatra and probably in all parts of the coastline.

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