

Final Report  
Nordmann's Greenshank Population Analysis, at Pantai Cemara Jambi  
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## Background

Many shorebirds species have declined along East Asian-Australasian Flyway which support the highest diversity of shorebirds in the world, including the globally endangered species, Nordmann's Greenshank. Nordmann's Greenshank listed as endangered in the IUCN Red list of Threatened Species because of its small and declining population (BirdLife International, 2016). It's one of the world's most threatened shorebirds, is confined to the East Asian–Australasian Flyway (Bamford et al. 2008, BirdLife International 2001, 2012).

Its global population is estimated at 500–1,000, with an estimated 100 in Malaysia, 100–200 in Thailand, 100 in Myanmar, plus unknown but low numbers in NE India, Bangladesh and Sumatra (Wetlands International 2006).

The population is suspected to be rapidly decreasing due to coastal wetland development throughout Asia for industry, infrastructure and aquaculture, and the degradation of its breeding habitat in Russia by grazing Reindeer *Rangifer tarandus* (BirdLife International 2012).

Mostly Nordmann's Greenshanks have been recorded in very small numbers throughout Southeast Asia, and there are few places where it has been reported regularly. In Myanmar, for example, it was rediscovered after a gap of almost 129 years. The total count recorded by the Asian Waterbird Census (AWC) in 2006 for Myanmar was 28 birds with 14 being the largest number at a single locality (Naing 2007). In 2011–2012, Nordmann's Greenshank was found three times in Sumatera Utara province, N Sumatra. First, a flock of 13 birds was recorded on 17 Nov 2011 at Tanjung Rejo village (3°44'N, 98°46'E), Percut Sei Tuan Subdistrict. The other two records both relate to birds seen just 8 km from the first site at Sei Tuan village (3°42'N, 98°50'E), Pantai Labu Subdistrict three on 15 Dec 2011, and four on 13 Jan 2012 (Abdillah, Hasri and M. Iqbal, 2012).

During Far Eastern Curlew Survey, November 2019, we recorded 28 individuals of Nordmann's Greenshank at Pantai Cemara, Jambi. This showed the potency of Pantai Cemara as one important site for Nordmann's Greenshank in Indonesia.

## Objective

- Provide an updated data of Nordmann's Greenshank population at Pantai Cemara Jambi
- Identify the potencies and threats at Pantai Cemara as stopping site for Nordmann's Greenshank species
- Do the survey with local team to increase their identification ability

## Ecosystem Essential Area, Pantai Cemara, Desa Sungai Cemara, Tanjung Jabung Timur Region, Jambi

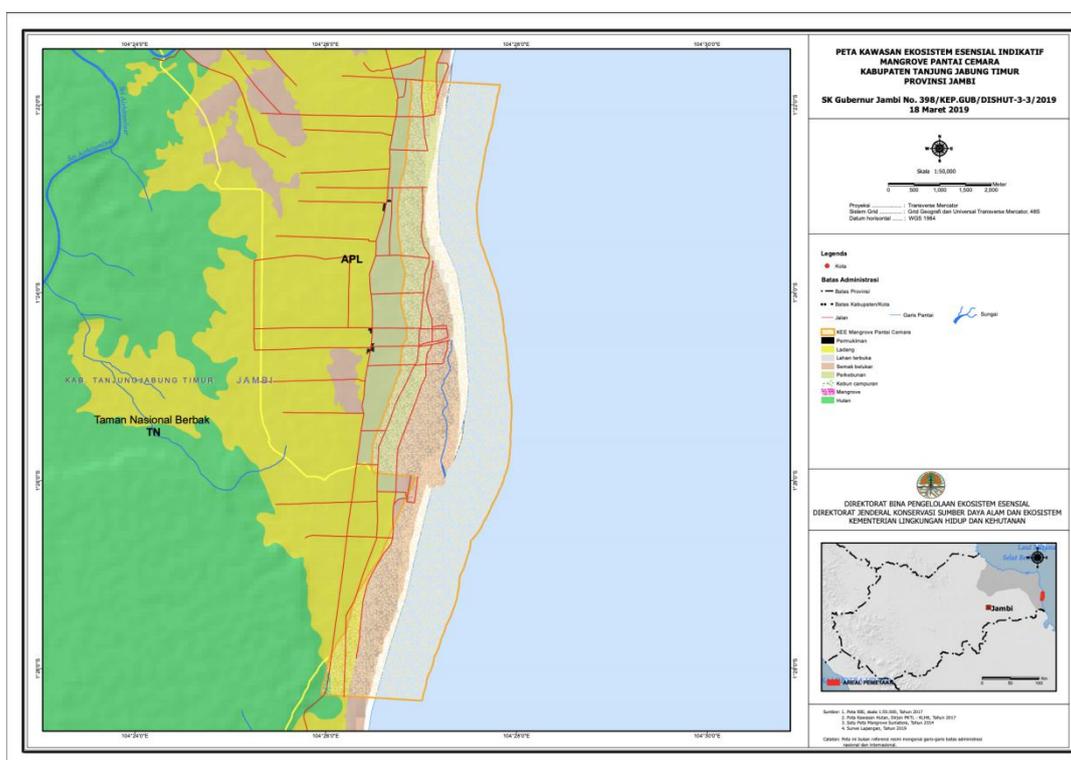


Fig 01. Map of Pantai Cemara - Essential Ecosystem Area, Jambi (Ministry of Environment and Forestry Republic of Indonesia, 2019)

## Site Status :

- Protected as Ecosystem Essential Area (Managed by Forestry Department of Jambi Province)
- currently in the process to be proposed as Flyway Site Network

## Potency :

- This site was visited by more than ten thousands of migratory shorebirds which searching for feeding and roosting ground during their migratory journey (Unpublished data of Migratory Shorebird Survey at Pantai Cemara, Jambi 2019).
- Local people in this site are eager to learn and involving them self to be the part of

- migratory shorebirds conservation. They see these birds as the potency of their village.
- Local government fully support the development and conservation activities for this site

Threat :

Direct threat

- Forest fire (but the effect are not as big as Sembilang NP)
- Natural Predator (Eagle observed prey on Charadrius mongolus during the monitoring)
- Plastic waste
- Massive growth of Ipomea sp. and Avicennia sp.



Fig 02. Observation point at Pantai Cemara - Essential Ecosystem Area (Google Earth 2020)

### Survey Method

We did our survey from November 17<sup>th</sup>, 2020 to November 21<sup>st</sup>, 2020 (5 days). We determine one observation point which will be able to access the wide beach with mixed sandy beach substrate type. We did the monitoring and training to the local people and local ranger during the monitoring activity. We reach the observation point by boat, and continue by foot.

### Note about the habitat condition

There are massive growth of grass, Ipomea sp. and Avicennia sp. from 2019 (Fig.03).



Fig 03. Massive growth of grass, Ipomea sp., and Avicenna sp.

## Survey Result

Table 01 : Result of Survey Activity at Pantai Cemara, Jambi between November 17<sup>th</sup>, 2020 - November 21<sup>st</sup>, 2020.

NO	Spesies	English Name	Local Name	Population Trend	IUCN Status	17	18	19	20	21
1	<i>Egretta eulopotes</i>	Chinese Egret	Kuntul Cina	Decreasing	VU	1	1	1	1	1
2	<i>Charadrius dealbatus</i>	White-Faced Plover		Unknown	DD (Data Deficient)	2	0	1	1	1
3	<i>Charadrius leschenaultii</i>	Greater Sandplover	Cerek Pasir Besar	Decreasing	LC	412	4	89	368	438
4	<i>Pluvialis squatarola</i>	Grey Plover	Cerek Besar	Decreasing	LC	48	28	17	7	34
5	<i>Charadrius mongolus</i>	Lesser Sandplover	Cerek Pasir Mongolia	Unknown	LC	239	337	354	535	476
6	<i>Pluvialis fulva</i>	Pacific Golden Plover	Cerek Krenyut	Decreasing	LC	8	13	2	7	4
7	<i>Charadrius alexandrinus</i>	Kentish Plover	Cerek Tilil	Decreasing	LC	0	0	0	0	0
8	<i>Charadrius peronii</i>	Malay Plover	Cerek Melayu	Decreasing	NT	1	0	1	1	0
9	<i>Charadrius javanicus</i>	Javan Plover	Cerek Jawa	Decreasing	NT	2	2	1	2	0
10	<i>Hydropogone caspia</i>	Caspian Tern	Dara Laut Caspia	Increasing	LC	32	20	23	41	44
11	<i>Sterna hirundo</i>	Common Tern	Dara Laut Biasa	Decreasing	LC	0	0	0	0	0
12	<i>Gelochelidon nilotica</i>	Common Gull-billed Tern	Dara Laut Tiram	Decreasing	LC	0	0	0	0	0
13	<i>Thalasseus bergii</i>	Greater Crested Tern	Dara Laut Jambul	Stable	LC	19	20	14	0	10
14	<i>Stenula albifrons</i>	Little Tern	Dara Laut Kecil	Decreasing	LC	35	30	27	38	27
15	<i>Calidris tenuirostris</i>	Great Knot	Kedidi Besar	Decreasing	EN	20	38	301	366	138
16	<i>Numenius madagascariensis</i>	Far Eastern Curlew	Gajahan Timur	Decreasing	EN	35	8	18	11	24
17	<i>Tringa guttifer</i>	Spotted Greenshank	Trinil Nordmann	Decreasing	EN	21	11	6	0	5
18	<i>Tringa stagnatilis</i>	Marsh Sandpiper	Trinil Rawa	Decreasing	LC	26	20	22	16	17
19	<i>Xenus cinereus</i>	Terek Sandpiper	Trinil Bedaran	Decreasing	LC	87	74	125	36	26

20	<i>Tringa totanus</i>	Common Redshank, Redshank	Trinil Kaki Merah	Unknown	LC	30	38	29	4	17
21	<i>Numenius phaeopus</i>	Whimbrel	Gajahan Penggala	Decreasing	LC	17	21	18	24	20
22	<i>Actitis hypoleucos</i>	Common Sandpiper	Trinil Pantai	Decreasing	LC	1	1	1	1	1
23	<i>Arenaria interpres</i>	Rudy Turnstone	Trinil Pembalik Batu	Decreasing	LC	2	2	2	0	0
24	<i>Tringa nebularia</i>	Common Greenshank	Trinil Kaki Hijau	Stable	LC	21	24	24	18	16
25	<i>Calidris alba</i>	Sanderling	Kedidi Putih	Unknown	LC	1	1	2	1	1
26	<i>Limnodromus semipalmatus</i>	Asian Dowitcher	Trinil Lumpur Asia	Decreasing	NT	125	234	70	78	68
27	<i>Limosa limosa</i>	Black-tailed Godwit	Biru Laut Ekor Hitam	Decreasing	NT	5	525	220	328	469
28	<i>Limosa lapponica</i>	Bar-tailed Godwit	Biru Laut Ekor Blorok	Decreasing	NT	520	485	562	569	368
29	<i>Calidris canutus</i>	Red Knot	Kedidi Merah	Decreasing	NT	0	0	0	0	0
30	<i>Numenius arquata</i>	Eurasian Curlew	Gajahan Besar	Decreasing	NT	44	25	14	26	77
31	<i>Calidris ruficollis</i>	Red Necked Stint	Kedidi Leher Merah	Decreasing	NT	270	248	130	137	278
32	<i>Calidris ferruginea</i>	Curlew Sandpiper	Kedidi Gol-Gol	Decreasing	NT	183	174	159	201	230
33	<i>Glareola maldivarum</i>	Oriental Pratincole	Terik Asia		LC	0	0	0	0	1
						2207	2384	2233	2817	2791

Table 02 : Maximum Count of Far Eastern Curlew at Pantai Cemara, Jambi

	Maximum Count of Nordmann's Greenshank
2019	28
2020	21

Table 03 : Maximum Count of Migratory Waterbird recorded at Pantai Cemara, Jambi

	Maximum Count of Migratory Waterbirds recorded
2019	17,032
2020	2,817

Table 04 : Maximum Count of Godwit recorded at Pantai Cemara, Jambi

	Maximum Count of Black-tailed Godwit	Maximum Count of Bar-tailed Godwit	Maximum Count of Asian Dowitcher	Maximum Count of Great Knot	Maximum Count of Far Eastern Curlew
2019	3,700	2,700	564	1950	38
2020	525	520	234	366	35

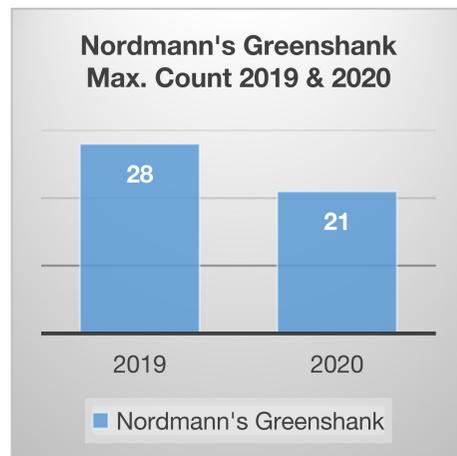


Fig 04. Chart of Nordmann's Greenshank Max. Count Data 2019 and 2020 (unpublished data, EKSAI)

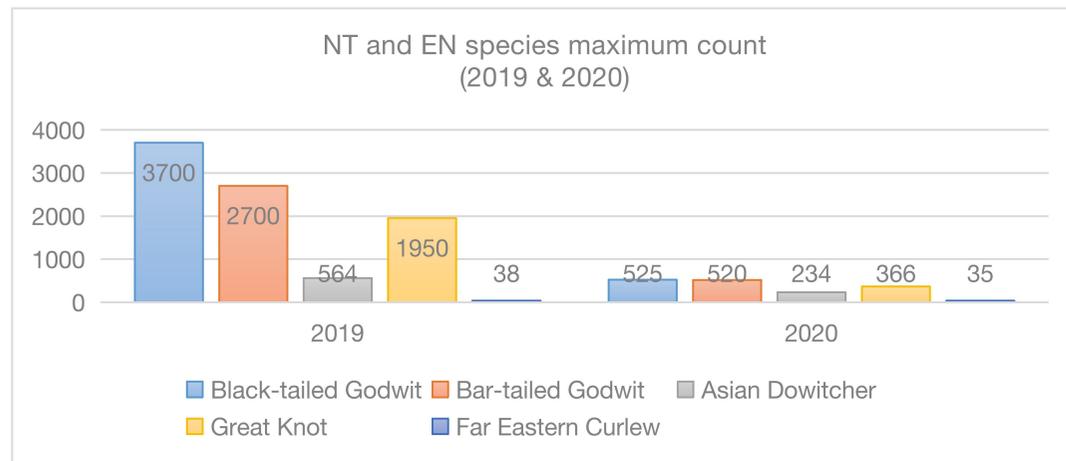


Fig 05. Chart of Near Threatened and Endangered Species at Pantai Cemara (2019 & 2020) (unpublished data, EKSAI).

Pantai Cemara located at Desa Sungai Cemara, Tanjung Jabung Timur Region, Jambi Province. It is designated as Essential Ecosystem Area in 2018 by the Governor of Jambi Province. This site known as one of the most important site for migratory shorebird along Sumatra Island. With mixed sandy beach texture of it's substrate, this site used by more than ten thousands migratory shorebirds from 32 species (unpublished data, EKSAI Foundation).

In 2019 we also recorded three endangered species of migratory shorebird roosting and feeding on this site. We recorded 28 individuals of Spotted Greenshank (more than 1% of it's population), 38 individuals of Far Eastern Curlew and 1950 individuals of Great Knot. This result showed the potency of this site as one of the most important site for migratory shorebirds in Indonesia. Generally, this numbers are declining on 2020 as we seen on table 01 and table 04.

If we see table 02, the number of Nordmann's Greenshank also declining this year, even not drastically declining like Godwit.

The major change of Pantai Cemara mudflat is a massive growth of it's vegetation (Ipomea sp., unidentified grass, mangroves and sea pine). During the survey, we notice that Nordmann's Greenshank and other large shorebirds like Godwit, Curlew, and Asian Dowitcher and Great Knot never roost or foraging on mudflat with vegetation. Open mudflat without vegetation provide a better access to their prey (Finn et al, 2008). Despite the habitat change, Pantai Cemara still provide a suitable non-breeding site for more than 1% of Nordmann's Greenshank global population. As it describe at Zocker et al (2018), Nordmann's Greenshank usually recorded on softer mudflats sheltered by mangrove near with sandier mudflats. This habitat description are suitable with the condition and substrate type of Pantai Cemara estuarine inter-tidal mudflat. Despite the suitable condition of Pantai Cemara as non-breeding site for Nordmann's Greenshank, the massive growth of it's vegetation need to be watched and control so it will not disturbing the birds.



Fig 06. Nordmann's Greenshank (personal documentation, 2020)

During the survey we trained local youth team to improve their identification skill for Nordmann's Greenshank (Fig 06). In five days we evaluate their ability to distinguish Nordmann's Greenshank from other species and after five days training and evaluation, they are be able to identify the species correctly with minimum mistakes.



Fig 06. Nordmann's Greenshank Identification training for local youth team (personal documentation, 2020)

## Conclusion

- Despite the declining of numbers of migratory shorebirds at Pantai Cemara, maximum numbers of Nordmann's Greenshank are stable, and Pantai Cemara still support more than 1% of Nordmann's Greenshank population.
- The massive growth of vegetation at Pantai Cemara should become a concern to be managed, because it's already affect the numbers of migratory shorebirds at Pantai Cemara.
- The local youth team's skill to identify Nordmann's Greenshank are hihgly improve during the training, and they will continue the monthly monitoring at Pantai Cemara.

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