

Shorebirds Survey at Koh Kapik Ramsar Site, Cambodia

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Abstract

The Koh Kapik Ramsar site is located in the southwestern coast of Cambodia in Koh Kong Province, not far from the international border with Thailand (Trat). This important area of coastal wetlands, consisting of extensive areas of coastal mangroves and intertidal mudflats was designated as a Ramsar site since 1999 under criteria 1 (representative or unique wetlands), criteria 2 (rare and endangered species) and criteria 8 (fish spawning ground, nursery and/or migration path) (Srey S., 2012). The site was also identified as an Important Bird and Biodiversity Area by BirdLife International (IBA criteria A1, A4i) in 2003 supporting significant populations of Nordmann's Greenshank *Tringa guttifer* and Asian Dowitcher *Limnodromus semipalmatus*. The Koh Kapik Ramsar site currently covers an area of 12,000 hectares. It provides important ecosystem services to coastal communities in Koh Kong province, and is especially crucial in maintaining water quality and flood control, and sequestering large amount of carbon in its mangrove forests and peatlands; on top of providing a variety of shorebirds with wintering grounds.

The Spoon-billed Sandpiper *Calidris pygmaea*, is a Critically Endangered shorebird species (IUCN 2016), which had an estimated global breeding population in 2014 of 210 to 228 pairs (Nigel *et al.*, 2016). This Critically Endangered shorebird breeds in the Russian Arctic and migrates through North and South Korea, China and small numbers through Japan along the East Asian-Australasian Flyway to their wintering grounds in coastal regions or estuaries in South-East Asia.

The survey aimed to confirm the presence Spoon-billed Sandpiper and other migratory shorebirds in Koh Kapik Ramsar site. It is expected that outcome of this survey will be useful to various governmental and non-governmental institutions, including researchers, and policy makers for developing future conservation and management strategies in Koh Kapik Ramsar Site. Moreover, it will also raise the international profile of Koh Kapik as a wetland in its importance to the Spoon-billed Sandpiper, widely recognized as one of Asia's most endangered waterbird.

Shorebird surveys were conducted from 06h00 to 17h00 daily over a total 11 days from December 2017 to May 2018. Prior to the surveys, we went to recce areas of sand bars exposed at high tide, as identified by rangers, which are used as high tide roosts by many shorebirds when mudflats are not exposed by the receding tide. Through consultation with the rangers, it was

noted that small shorebirds are more strongly associated with these sandbars while larger shorebirds with longer bills tend to forage or rest inside the mangrove forests at the fringes of the mudflats at high tide.

Due to difficulty in access and unfavorable tidal conditions, we could not survey the tidal channels and creeks in the mangrove forest although we were able to identify a flock of Common Redshank *Tringa totanus* on an open clearing in the mangrove forest during high tide. We also surveyed the southwestern coastline of the Koh Kapik Ramsar site during high tide and we observed flocks of waders roosted under the young growth mangrove and was waiting for low tide when mudflat exposed. At low tide, we surveyed the areas of exposed mudflats at the southwestern shore (Koh Kapik mudflat) of Koh Kapik Ramsar site and mudflat close to Cham Yeam. Our survey also covered the southeast part of the Ramsar site (Chrouy Pras), which was identified in topographic maps to be an area of extensive mudflats, but could not be found by our team, even during the low tide period. According to the site manager, the area might be converted by sand mining, however the Cambodian government has banned sand export from Koh Kong Province in 2017 (The Phnom Penh Post, 2017 & Ministry of Mines and Energy, 2017). We recorded 2 Great Knot *Calidris tenuirostris* (non-breeding plumage), 1 Asian Dowitcher *Limnodromus semipalmatus* (breeding plumage) and 3 Grey-tailed Tattler *Tringa brevipes* (non-breeding plumage) were feeding on that mudflat.

We did not detect Spoon-billed Sandpiper during our four surveys even though the species was recorded at the Koh Kapik Ramsar Site in 2014 (Nielsen *et al.*, 2014). Our survey recorded 20 shorebird species with approximately 1,247 migratory shorebirds counted. The largest proportion of shorebirds were Sandpipers, *Charadrius* spp. estimated at about 64% of total shorebird numbers. The number of shorebirds counted were based on the maximum count per day of each species from all surveys. We split the counting during high and low tides to avoid over counting the same birds.

Table 1: Summary of migratory shorebird counts from surveys

Species	IUCN Red List status	Bird counts	Proportion
Asian Dowitcher <i>Limnodromus semipalmatus</i>	Least Concern	1	0.001
Bar-tailed Godwit <i>Limosa lapponica</i>	Near Threatened	41	0.033
Black-tailed Godwit <i>Limosa limosa</i>	Near Threatened	1	0.001
Broad-billed Sandpiper <i>Calidris falcinellus</i>	Least Concern	20	0.016
Common Sandpiper <i>Actitis hypoleucos</i>	Least Concern	6	0.005
Common Greenshank <i>Tringa nebularia</i>	Least Concern	2	0.002

Common Redshank <i>Tringa tetanus</i>	Least Concern	58	0.047
Curlew Sandpiper <i>Calidris ferruginea</i>	Near Threatened	30	0.024
Eurasian Curlew <i>Numenius arquata</i>	Near Threatened	5	0.004
Great Knot <i>Calidris tenuirostris</i>	Endangered	7***	0.006
Greater Sandplover <i>Charadrius leschenaultia</i>	Least Concern	160**	0.129
Grey Plover <i>Pluvialis squatarola</i>	Least Concern	40	0.032
Grey-tailed Tattler <i>Tringa brevipes</i>	Near Threatened	7	0.006
Kentish Plover <i>Charadrius alexandrinus</i>	Least Concern	75	0.060
Lesser Sandplover <i>Charadrius mongolus</i>	Least Concern	640*	0.514
Nordmann's Greenshank <i>Tringa guttifer</i>	Endangered	13	0.010
Red-necked Stint <i>Calidris feruginea</i>	Near Threatened	50	0.016
Terek Sandpiper <i>Xenus cinereus</i>	Least Concern	20	0.016
White-faced Plover <i>Charadrius dealbatus</i>	Data Deficient	1	0.001
Whimbrel <i>Numenius phaeopus</i>	Least Concern	70	0.056

During the survey, we observed the push-net fishing practice along the shoreline of Koh Kapik where the mudflat was exposed during low tide. The push-net fishing technique is illegal and possibly destroys the mudflat. Combined with the encroachment from the newly recruited mangrove trees on the mudflat, this results in a decreasing area of open mudflat, reducing the habitat used by shorebirds. In addition, there are more than ten wooden posts along the mudflat in Koh Kapik Ramsar Site which need to be further investigated as they may be fishing post or bird hunters nets. However, our informal interviews with local people suggested that hunting of birds using nets especially targeting large waders for food were being carried out. Also plastic waste was found almost everywhere on the beach. A recommended immediate action should include:

- Awareness raising activities on migratory birds to local villagers, students, and local authorities,
- Action of engaging local people and local authority in law enforcement and
- Providing other alternative livelihood such as bird watching, wetland education center or ecotourism to communities.

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Non-breeding Migratory Waterbird at Pantai Cemara, Jambi : Status, Population and Abundance

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Pantai Cemara is one of the most potential site for migratory waterbird in Indonesia. It's regularly visited by more than ten of thousands of migratory waterbirds every year. Migratory waterbird survey at Pantai Cemara were conducted on 20th until 30th of November 2019 during the non-breeding period, 31 species of migratory waterbird were recorded with total more than thirty-thousands of migratory waterbird occur during the monitoring period. Based on the maximum count during the monitoring period, there were five most abundant species recorded, Bar-tailed Godwit (NT) (4,200), Black-tailed Godwit (NT) (3,500), Great Knot (EN) (2,980), Greater Sand Plover (LC) (2,580), and Lesser Sand Plover (LC) (1,800). Endangered species also found on the monitoring site, the three endangered species that emerged are Far Eastern Curlew (36), Nordmann's Greenshank (28), and Great Knot (2,980). From the total count species, it was found that several species are more than 1% of the species global population, and those species are Asian Dowitcher (NT) (2.45%), Nordmann's Greenshank (EN) (2.15%), and Great Knot (EN) (1.1%). We also spotted the IUCN Data Deficient species, White-faced Plover with total three individuals maximum count recorded during the monitoring period. Sumatra is both terminus for some migrant, as well as a passage zone for waterbirds migrating towards eastern Indonesia or probably Australia. With the result described above we should agree that Pantai Cemara is one of the most important site for migratory waterbirds that should be protected and better managed to maintain the site.

Theme: Monitoring

Preferred option: Oral Presentation

Monitoring of some waders of the forest-steppe of southwestern part of the Western Siberia

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Our research forest-steppe on carried out from 1973 to 2019 in the south-western part of the Western Siberia and to describe their number and distribution by J.S. Ravkina's technique (1967).

Lapwing *Vanellus vanellus*. Nesting migrant species. Now at the beginning of the XXI century on average, it is common during migration and in nesting period, at the end of this period its abundance increases by 1.7 times.

Ruff *Philomachus pugnax*. Is a migrant species. Now during migration (II half of May) is numerous on the low-salt lakes and is two times less numerous on the Omsk flood-land marshes. In this season it is common far from the Omsk. In the first half of June migration continues but not so intensively. It is common on the low-land marshes. Starting from the first half of July Ruff flies back and is observed on the low-salt lakes. It is common here in the end of July and in the beginning of August.

Black-tailed Godwit *Limosa limosa*. It is a nesting migrant species. At the end of the XIX century was seen near Omsk in the summer (Slovsov, 1881). Now on average, in summer it is common on low-salt lakes and meadow and marsh landscapes.

Curlew *Numenius arquata*. It is a nesting migrant species. At the end of the XIX century is numerous near Omsk (Slovsov, 1881). Now two birds were observed on September 11, 2005 on a small lake (northern forest-steppe).

Whimbrel *Numenius phaeopus*. Is a migrant species. At the beginning of the XX century, it was rare on migration in the vicinity of Omsk (Shukhov, 1948).

Splender-billed Curlew *Numenius tenuirostris* Is a migrant, previously possibly nesting species. We met a «light» curlew less than a crow, indefinite to sight, on a flight on the evening of August 28, 2004 on a small lake (northern forest-steppe). Also, perhaps we observed one flying Splender-billed Curlewin the specially protected natural area, the natural «Bird Harbor» in the Irtysh River valley in Omsk, on April 18, 2019 in the evening.

Theme: Monitoring

Preferred Option: Oral Presentation

20-year shorebird population trend in Mai Po Nature Reserve and Inner Deep Bay, Hong Kong, China

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Monitoring bird population change is fundamental to assessing the conservation status and performance of related conservation actions. In the East Asian-Australasian Flyway (EAAF), some of the steepest and most widespread declines of shorebirds have been reported. To evaluate bird trends in the whole Flyway, it is critical to assess and exchange information on bird trends in different areas and latitudes along the Flyway. Systematic monthly monitoring of shorebirds has been conducted by the Hong Kong Bird Watching Society since 1997 as part of the Waterbird Monitoring Programme of Agriculture, Fisheries and Conservation Department, Hong Kong SAR Government in the Mai Po Inner Deep Bay Ramsar Site, one of the key staging and non-breeding grounds in the EAAF. Data collected in the past 20 years allows examination of both recent and long-term trends but its relations to the regional and Flyway-wide bird trends are yet to be explored. The resultant patterns may give insights to the migratory shorebird population changes in South China as well. Therefore, in this study, we analyze the migratory shorebird trends in the Mai Po Nature Reserve, a well-protected area managed by WWF-Hong Kong since 1983, and the Inner Deep Bay as a whole by fitting linear models to regularly recorded shorebird species data using TRIM (Trend & Indices for Monitoring data). Alert system will be implemented to reveal species with strong and moderate decline in different time scale and the potential factors affecting the trends will be further discussed.

Theme: Monitoring

Preferred Option: Oral Presentation