



Far Eastern Curlew (*Numenius madagascariensis*) Census

Pamarawan, Malolos City, Bulacan, Philippines

October 28, 2022 and November 27, 2022

Irene Dy and Virtito Natural Jr.

Site Info

Pamarawan is one the coastal barangays in the City of Malolos, the capital of Bulacan Province situated in the Central Luzon region of the Philippines.

The wetlands in these areas are part of Manila Bay which supports thousands of important and critical species of shorebirds as well as other species.

Residents from these areas mostly rely on fishing, fishpond farming, and salt farming, among others, as their main sources of income.



Figure 1. Site location in reference with the whole Philippine Archipelago

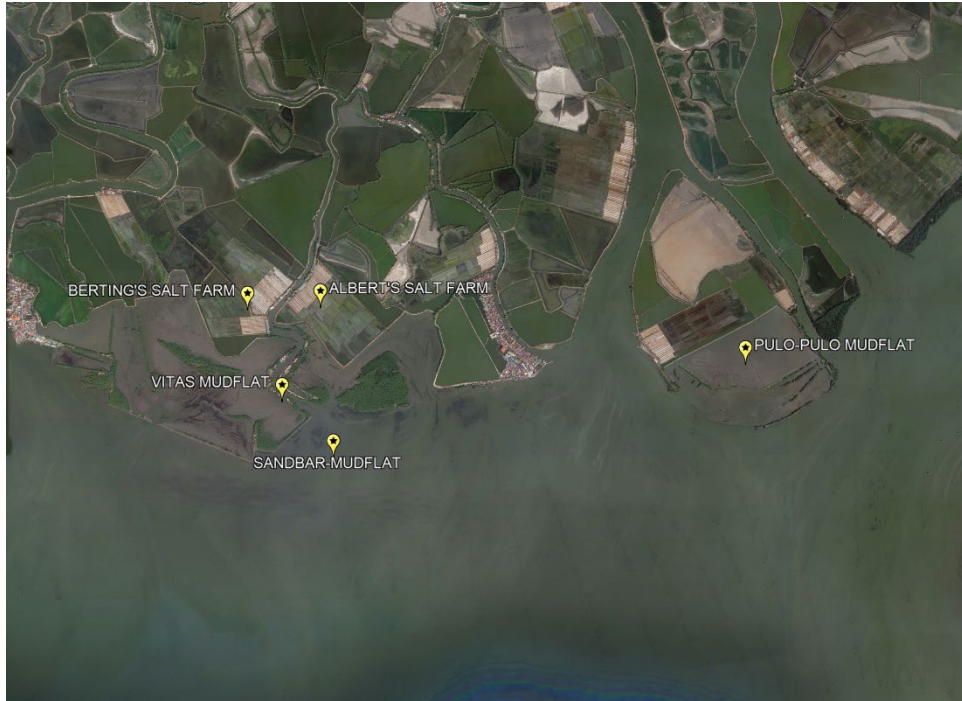


Figure 2. Site map showing Pamarawan wetlands

Site coordinates:

14.757627, 120.803061 (VITAS MUDFLAT)

14.754947, 120.805450 (SANDBAR-MUDFLAT)

14.758665, 120.825366 (PULO-PULO MUDFLAT)

14.761929, 120.801504 (BERTING'S SALT FARM)

14.761936, 120.805018 (ALBERT'S SALT FARM)



Figure 3. Sandbar-Mudflat area



Figure 4. Sta-Cruz and Pamarawan wetland



Figure 5. Mudflat in front of Berting's Salt Farm



Figure 6. Mangrove area of Vitas

Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) were used to identify the species.

Results and Discussion

Five sites were visited on October 28, 2022 and November 27, 2022 to conduct census of Far Eastern Curlew (*Numenius madagascariensis*).

Only one male individual was recorded from Pulo-Pulo Mudflat on November 27 although the species is sighted annually in Pamarawan and Caliliwagan wetlands as well as nearby areas.



Figure 7. Record shot of the Far Eastern Curlew (*Numenius madagascariensis*) recorded in Pulo-Pulo mudflat

A total of 45 species of birds were recorded throughout the survey periods, 13 of which are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include Endangered species such as Far Eastern Curlew (*Numenius madagascariensis*), Nordmann's Greenshank (*Tringa guttifer*), and Great Knot (*Calidris tenuirostris*), the Vulnerable species Chinese Egret (*Egretta eulophotes*), as well as Near-



Threatened species such as Eurasian Curlew (*Numenius arquata*), Asian Dowitcher (*Limnodromus semipalmatus*), Red Knot (*Calidris canutus*), Black-tailed Godwit (*Limosa limosa melanuroides*), Black-tailed Godwit ssp. *bohaili* (*Limosa limosa bohaili*), Bar-tailed Godwit (*Limosa lapponica*), Grey-tailed Tattler (*Tringa brevipes*), Curlew Sandpiper (*Calidris ferruginea*), and Red-necked Stint (*Calidris ruficollis*).

Table 1. List of species recorded in Pamarawan wetlands

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Resident	Least Concern
2	Nankeen Night Heron	<i>Nycticorax caledonicus</i>	Resident	Least Concern
3	Striated Heron	<i>Butorides striata</i>	Resident, Migrant	Least Concern
4	Grey Heron	<i>Ardea cinerea</i>	Migrant	Least Concern
5	Purple Heron	<i>Ardea purpurea</i>	Resident	Least Concern
6	Great Egret	<i>Ardea alba</i>	Resident, Migrant	Least Concern
7	Intermediate Egret	<i>Ardea intermedia</i>	Resident, Migrant	Least Concern
8	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
9	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
10	Black-winged Stilt	<i>Himantopus himantopus</i>	Migrant	Least Concern
11	Pied Avocet	<i>Recurvirostra avosetta</i>	Migrant	Least Concern
12	Pacific Golden Plover	<i>Pluvialis fulva</i>	Migrant	Least Concern
13	Grey Plover	<i>Pluvialis squatarola</i>	Migrant	Least Concern
14	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern
15	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern
16	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
17	Asian Dowitcher	<i>Limnodromus semipalmatus</i>	Migrant	Near Threatened
18	Black-tailed Godwit	<i>Limosa limosa melanuroides</i>	Migrant	Near Threatened
19	Black-tailed Godwit (ssp. <i>bohaili</i>)	<i>Limosa limosa bohaili</i>	Migrant	Near Threatened
20	Bar-tailed Godwit	<i>Limosa lapponica</i>	Migrant	Near Threatened
21	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern
22	Far Eastern Curlew	<i>Numenius madagascariensis</i>	Migrant	Endangered
23	Eurasian Curlew	<i>Numenius arquata</i>	Migrant	Near Threatened
24	Common Redshank	<i>Tringa totanus</i>	Migrant	Least Concern
25	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Migrant	Least Concern
26	Common Greenshank	<i>Tringa nebularia</i>	Migrant	Least Concern
27	Nordmann's Greenshank	<i>Tringa guttifer</i>	Accidental	Endangered
28	Grey-tailed Tattler	<i>Tringa brevipes</i>	Migrant	Near Threatened
29	Terek Sandpiper	<i>Xenus cinereus</i>	Migrant	Least Concern
30	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern

31	Ruddy Turnstone	<i>Arenaria interpres</i>	Migrant	Least Concern
32	Great Knot	<i>Calidris tenuirostris</i>	Migrant	Endangered
33	Red Knot	<i>Calidris canutus</i>	Migrant	Near Threatened
34	Broad-billed Sandpiper	<i>Calidris falcinellus</i>	Migrant	Least Concern
35	Curlew Sandpiper	<i>Calidris ferruginea</i>	Migrant	Near Threatened
36	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
37	Dunlin	<i>Calidris alpina</i>	Accidental	Least Concern
38	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Migrant	Least Concern
39	Gull-billed Tern	<i>Gelochelidon nilotica</i>	Migrant	Least Concern
40	Common Tern	<i>Sterna hirundo</i>	Migrant	Least Concern
41	Caspian Tern	<i>Hydroprogne caspia</i>	Migrant	Least Concern
42	Greater Crested Tern	<i>Thalasseus bergii</i>	Resident	Least Concern
43	Little Tern	<i>Sternula albifrons</i>	Resident, Migrant	Least Concern
44	Whiskered Tern	<i>Chlidonias hybrida</i>	Migrant	Least Concern
45	White-winged Tern	<i>Chlidonias leucopterus</i>	Migrant	Least Concern

The *melanuroides* race of Black-tailed Godwit (*Limosa limosa melanuroides*) had the highest maximum total count of individuals with a total of 5,941, followed by Great Knot (*Calidris tenuirostris*) with a maximum count of 1,599 individuals, and Greater Crested Tern (*Thalasseus bergii*) with maximum count of 1,137 individuals.

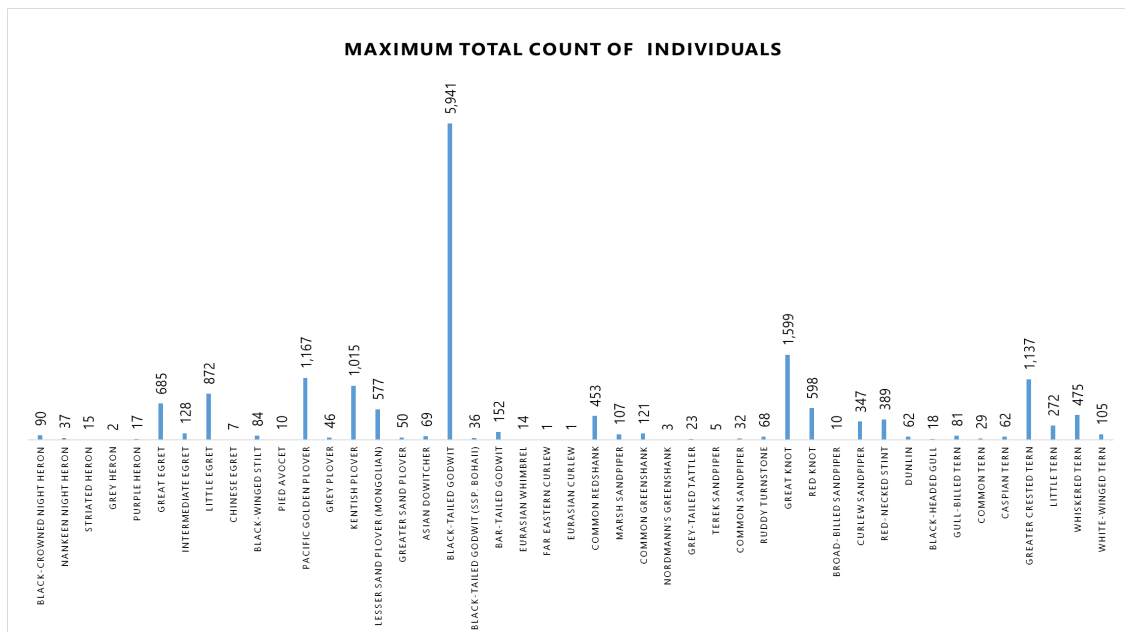


Figure 7. Maximum total number of individuals counted per species across sites

Records of Black-tailed Godwit (*Limosa limosa bohaii*) in Pamarawan is very significant in the Philippines due its migration range and current conservation status.

There were four species recorded with leg flag and leg rings: Great Knot (*Calidris tenuirostris*), Greater Crested Tern (*Thalasseus bergii*), Black-tailed Godwit (*Limosa limosa*), and Asian Dowitcher (*Limnodromus semipalmatus*).

For Great Knot, there were two individuals with black over yellow leg flag and two individuals with black over discolored white leg flag. There were Greater Crested Terns recorded with five red ring which known to have come from Tiedun Daom Jiushan Island. Sightings were reported to Simba Chan. Aside from that, there were Greater Crested Terns with one green ring, one blue ring, and one blue flag. One individual of Black-tailed Godwit had a Mongolian flag and one individual of Asian Dowitcher also had a leg flag.

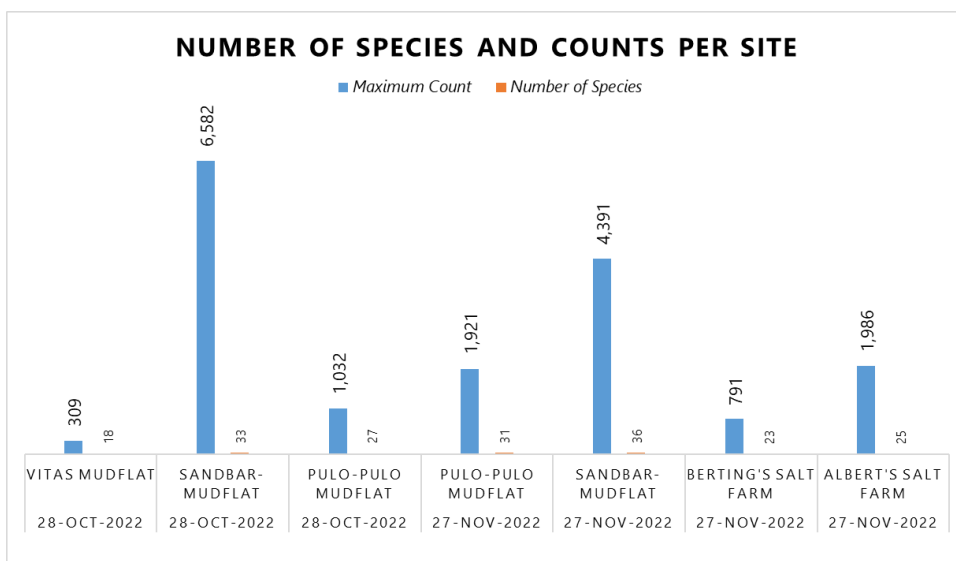


Figure 8. Number of species and individual counts per site throughout the survey period

Sandbar-Mudflat area had the highest number of birds recorded with 6,582 individuals and the highest number of species recorded with 36 species (see Figure 8).

On November 28, one individual of Far Eastern Curlew was observed in Pamarawan. The said individual had a satellite tag attached to its back.

Species Photos



Black-tailed Godwits (*Limosa limosa melanuroides*)



Mixed species of shorebirds in Pamarawan

Greater Crested Terns with Little Terns and a Lesser San Plover (Siberian)





Banded Greater Crested
Tern (China band)



Another Greater Crested
Tern in Pamarawan with
leg band (Taiwan flag)

Threats, Issues, and Concerns

- Lack of management system to protect and conserve the wetlands of Manila Bay including Pamarawan wetlands
- Proposed New Manila International Airport pose a major threat not only to Pamarawan wetlands but also to the locals thriving in these areas, and aviation safety. Thousands of wintering shorebirds as well as resident birds will be displaced and deprived of their breeding, foraging, and/or wintering site.
- Conversion of salt farms and fishponds into private lands for commercial purposes
- Flooding due to tidal fluctuations causing changes to the mudflats
- Solid waste and water pollution



- Continuous planting of mangrove species on the mudflat displaces shorebirds with their feeding grounds

Suggestions and Recommendations

- Further surveys to continuously assess in transit and wintering Far Eastern Curlews
- Leg flag banding of Far Eastern Curlew and other species in terms of their ecological importance and conservation status
- Satellite tagging of Far Eastern Curlew and other species in the confirmed wintering sites

Partner Individuals and/or Organizations

- **Nial Moores, Ph. D**
Director, Birds Korea (Republic of Korea)
Conservation Avian Biodiversity
IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group & Threatened Waterfowl Specialist Group
- **Dave Bakewell**
Species identification, verification, and confirmation.
Provision of reference photos

References

- Comparison Guide for Far Easter Curlew based from The Australian Bird Guide (Menkhorst et al., 2017)
- Field Guide to the Waterbirds of ASEAN (Lee et al., 2018)
- The IUCN Red List of Threatened Species (2022). Version 2022-2. <<https://www.iucnredlist.org>>



Far Eastern Curlew (*Numenius madagascariensis*) Census

Tanza, Navotas City, National Capital Region, Philippines

October 31, 2022 and November 01, 2022

Irene Dy and Virtito Natural Jr.

Site Info

Tanza is one of the urban coastal localities in Navotas City found in the National Capital Region. The locality is composed of two barangays, Tanza 1 and Tanza 2. Majority of the barangays are composed of fishponds which is the main source of livelihood for locals.

This area is part of the Manila Bay wetlands which supports thousands of important and critical species of shorebirds as well as other species.

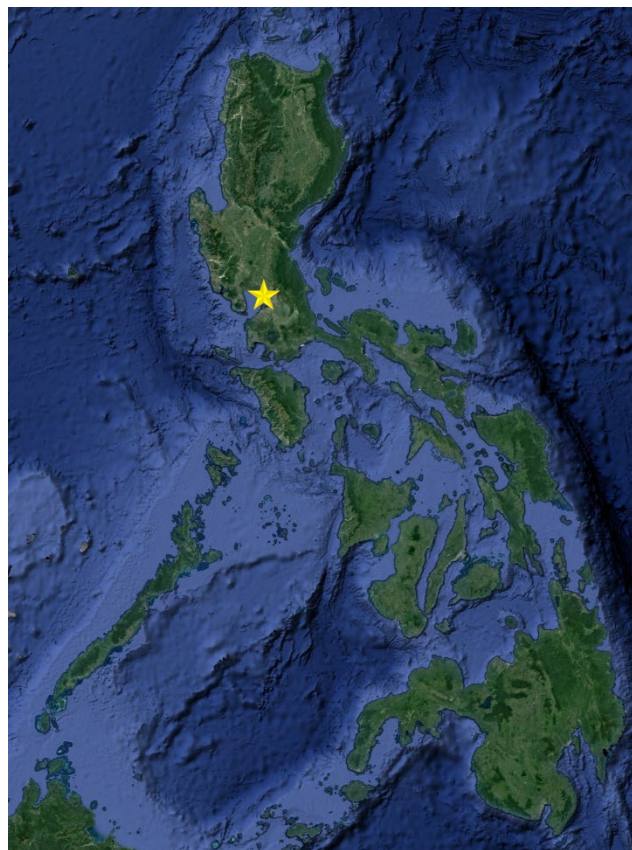


Figure 1. Site location in reference with the whole Philippine Archipelago



Figure 2. Site map showing Tanza wetland and the growing human settlements

Site coordinates:

14.685854, 120.931047 (Tanza wetland)



Figure 3. Tanza wetland showing the vegetation and the numerous shorebirds



Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) were used to identify the species.

Results and Discussion

One site was visited on October 31, 2022 and November 01, 2022 to conduct census of Far Eastern Curlew (*Numenius madagascariensis*).

On October 31, 91 individuals of Far Eastern Curlew were recorded. Out of the 91 individuals, 28 were adult females. No juvenile was recorded. Tide level was mid-tide to low tide from 11:30AM to 04:15PM. The Far Eastern Curlew flock spread across the water edge of mudflat and the drier part near the mangrove area. Individuals were observed to be either resting, sleeping, foraging, actively vocalizing in the mudflat, duetting in pairs while in flight, or actively vocalizing flock while in flight from mudflat going to the mouth of the river.

On November 01, eight individuals of Far Eastern Curlew were observed.

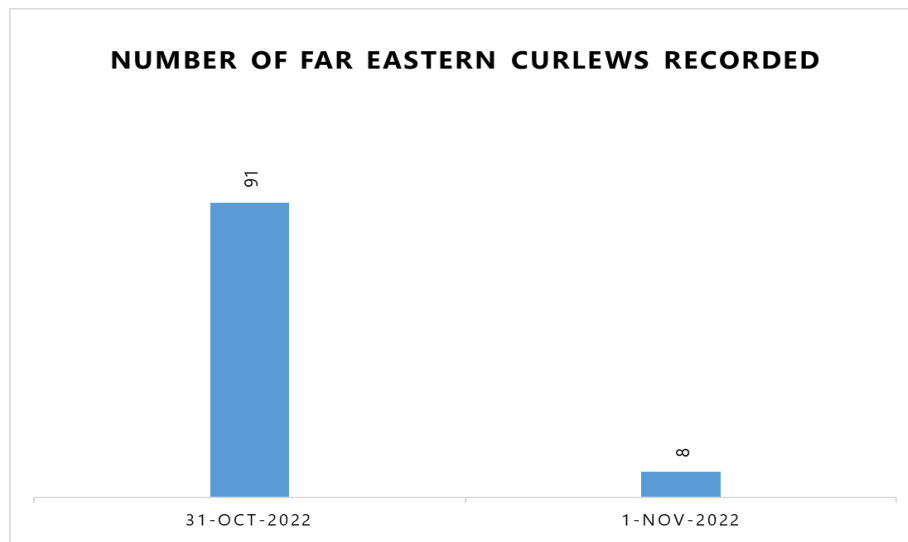


Figure 4. Far Eastern Curlew (*Numenius madagascariensis*) sightings

Figure 5.
Far Eastern Curlews
(*Numenius
madagascariensis*) of Tanza



Figure 6.
Far Eastern Curlews
(*Numenius
madagascariensis*) in
flight

Figure 7.
Far Eastern Curlews
(*Numenius
madagascariensis*) with
Navotas City dumpsite
in the background



Figure 8.
Far Eastern Curlews
(*Numenius
madagascariensis*)
together with Great
Knots and other
shorebirds



Figure 9.
Far Eastern Curlews
(*Numenius
madagascariensis*) in
flight

Accounting all sightings, a total of 44 species of birds were recorded throughout the survey period (Table 1). Out of the 44 species, 12 are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include Endangered species such as Far Eastern Curlew (*Numenius madagascariensis*) and Great Knot (*Calidris tenuirostris*), the Vulnerable species Chinese Egret (*Egretta eulophotes*), as well as Near-Threatened species: Eurasian Curlew (*Numenius arquata*), Asian Dowitcher (*Limnodromus semipalmatus*), Red Knot (*Calidris canutus*), Black-tailed Godwit (*Limosa limosa melanuroides*), Black-tailed Godwit ssp. *bohaili* (*Limosa limosa bohaili*), Bar-tailed Godwit (*Limosa lapponica*), Grey-tailed Tattler (*Tringa brevipes*), Curlew Sandpiper (*Calidris ferruginea*), and Red-necked Stint (*Calidris ruficollis*).



Table 1. List of species recorded in Tanza wetland

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Resident	Least Concern
2	Striated Heron	<i>Butorides striata</i>	Resident	Least Concern
3	Purple Heron	<i>Ardea purpurea</i>	Resident	Least Concern
4	Great Egret	<i>Ardea alba</i>	Resident, Migrant	Least Concern
5	Intermediate Egret	<i>Ardea intermedia</i>	Resident, Migrant	Least Concern
6	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
7	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
8	Black-winged Stilt	<i>Himantopus himantopus</i>	Migrant	Least Concern
9	Pied Avocet	<i>Recurvirostra avosetta</i>	Migrant	Least Concern
10	Pacific Golden Plover	<i>Pluvialis fulva</i>	Migrant	Least Concern
11	Grey Plover	<i>Pluvialis squatarola</i>	Migrant	Least Concern
12	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern
13	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern
14	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
15	Asian Dowitcher	<i>Limnodromus semipalmatus</i>	Migrant	Near Threatened
16	Black-tailed Godwit	<i>Limosa limosa melanuroides</i>	Migrant	Near Threatened
17	Black-tailed Godwit (ssp. <i>bohài</i>)	<i>Limosa limosa bohài</i>	Migrant	Near Threatened
18	Bar-tailed Godwit	<i>Limosa lapponica</i>	Migrant	Near Threatened
19	Ruff	<i>Calidris pugnax</i>	Migrant	Least Concern
20	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern
21	Far Eastern Curlew	<i>Numenius madagascariensis</i>	Migrant	Endangered
22	Eurasian Curlew	<i>Numenius arquata</i>	Migrant	Near Threatened
23	Common Redshank	<i>Tringa totanus</i>	Migrant	Least Concern
24	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Migrant	Least Concern
25	Common Greenshank	<i>Tringa nebularia</i>	Migrant	Least Concern
26	Grey-tailed Tattler	<i>Tringa brevipes</i>	Migrant	Near Threatened
27	Terek Sandpiper	<i>Xenus cinereus</i>	Migrant	Least Concern
28	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern
29	Great Knot	<i>Calidris tenuirostris</i>	Migrant	Endangered
30	Red Knot	<i>Calidris canutus</i>	Migrant	Near Threatened
31	Broad-billed Sandpiper	<i>Calidris falcinellus</i>	Migrant	Least Concern
32	Curlew Sandpiper	<i>Calidris ferruginea</i>	Migrant	Near Threatened
33	Long-toed Stint	<i>Calidris subminuta</i>	Migrant	Least Concern
34	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
35	Sanderling	<i>Calidris alba</i>	Migrant	Least Concern
36	Dunlin	<i>Calidris alpina</i>	Migrant	Least Concern

37	Little Stint	<i>Calidris minuta</i>	Migrant	Least Concern
38	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	Migrant	Least Concern
39	Gull-billed Tern	<i>Gelochelidon nilotica</i>	Migrant	Least Concern
40	Common Tern	<i>Sterna hirundo</i>	Migrant	Least Concern
41	Greater Crested Tern	<i>Thalasseus bergii</i>	Migrant	Least Concern
42	Little Tern	<i>Sternula albifrons</i>	Migrant	Least Concern
43	Whiskered Tern	<i>Chlidonias hybrida</i>	Migrant	Least Concern
44	White-winged Tern	<i>Chlidonias leucopterus</i>	Migrant	Least Concern

Whiskered Tern (*Chlidonias hybrida*) was the most numerous species with a maximum total count of 2,730 individuals, followed by Great Knot (*Calidris tenuirostris*) with a maximum total of 2,154 individuals, and Lesser Sand Plover (*Charadrius mongolus*) with a maximum total of 2,050 individuals.

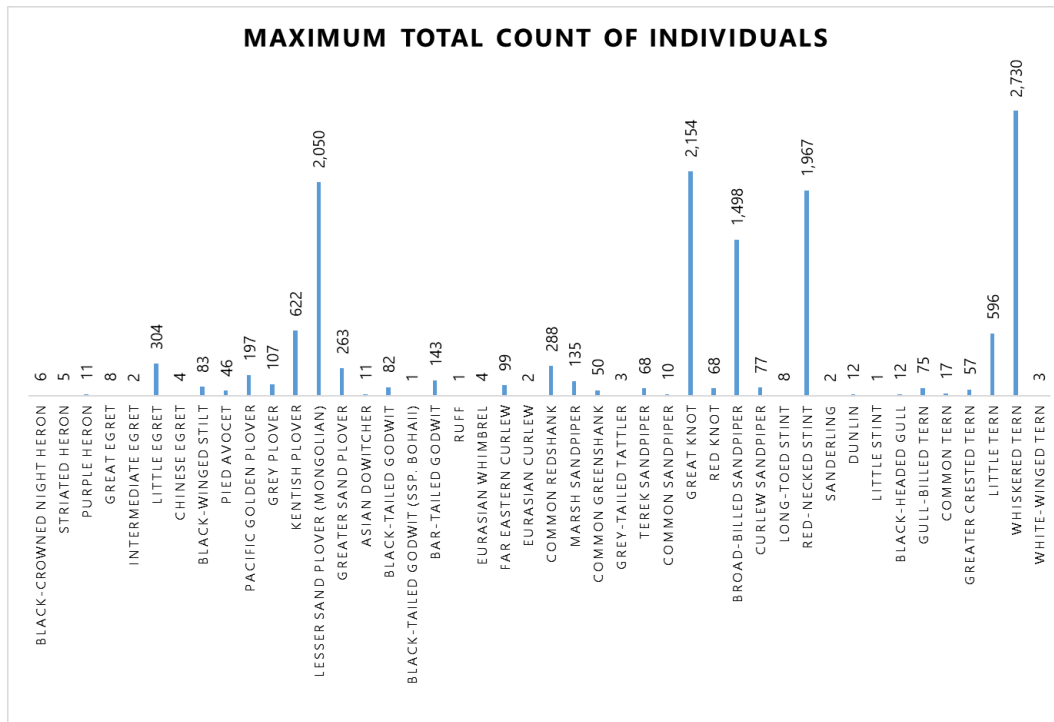


Figure 10. Maximum total number of individuals counted per species

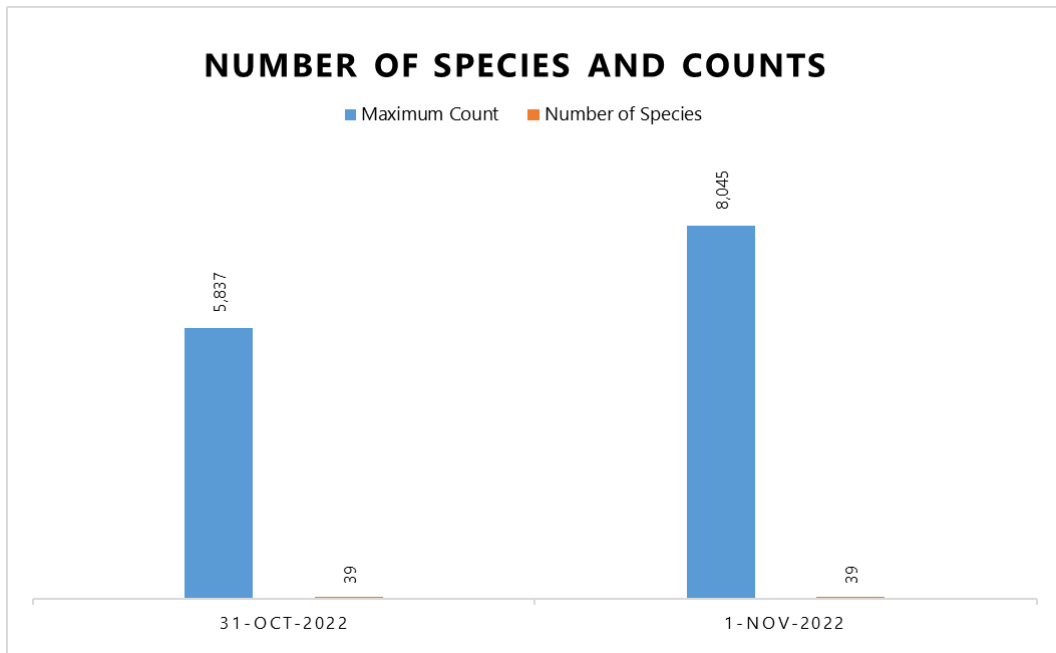


Figure 11. Number of species and individual counts throughout the survey period

Threats, Issues, and Concerns

- Lack of management system to protect and conserve the wetlands of Manila Bay including Tanza wetlands
- Conversion of fishponds into private lands for commercial purposes
- Quarrying of dried seashells, muds, and rocks for reclamation purposes
- Alteration of natural shoreline depth for reclamation purposes
- Flooding due to tidal fluctuations causing changes to the mudflats
- Solid waste and water pollution including medical waste

Suggestions and Recommendations

- Further surveys to continuously assess in transit and wintering Far Eastern Curlews
- Leg flag banding of Far Eastern Curlew and other species in terms of their ecological importance and conservation status
- Satellite tagging of Far Eastern Curlew and other species in the confirmed wintering sites

Partner Individuals and/or Organizations

- **Nial Moores, Ph. D**
Director, Birds Korea (Republic of Korea)
Conservation Avian Biodiversity



IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group & Threatened Waterfowl Specialist Group

- **Dave Bakewell**

Species identification, verification, and confirmation.

Provision of reference photos

References

- Comparison Guide for Far Eastern Curlew based from The Australian Bird Guide (Menkhorst et al., 2017)
- Field Guide to the Waterbirds of ASEAN (Lee et al., 2018)
- The IUCN Red List of Threatened Species (2022). Version 2022-2. <<https://www.iucnredlist.org>>



Far Eastern Curlew (*Numenius madagascariensis*) Census

Mandaue City, Cebu, Philippines

November 12-13, 2022

Irene Dy and Virtito Natural Jr.

Site Info

Mandaue City in the Province of Cebu is a highly urbanized city situated in the Central Visayas region of the Philippines. It is part of the Cebu Metropolitan Area.

Sites visited were some of the remaining critical wetlands of Mandaue City supporting several species of birds and other wildlife.



Figure 1. Site location in reference with the whole Philippine Archipelago

Site coordinates:

10.333043, 123.964395 (FISHPONDS)

10.341473, 123.977088 (MUDFLAT 1A)

10.344942, 123.975716 (MUDFLAT 1B)

10.346833, 123.967401 (MUDFLAT 1C)



Figure 2. Map showing Mandaue City wetland

FISHPONDS

Private fishponds that were located at the back of mudflat in Mandaue city. Mudflat has an ongoing construction of new bridge but no information was gathered as to where the bridge will connect. Bridge is being built in the mudflat. Fishponds contained a mix of shrimp and fish produce.

MUDFLAT 1A

Soft deep mudflat that was waist deep. Not walkable. Observed on board a motorized boat. It was difficult to stabilize the view from boats with balancing beam close enough to the mudflat. Unable to stand on mudflat due to the mud being waist deep and too soft to walk on.



Figure 3. On board the motorized boat to conduct observations at Mudflat 1A

Best way to observe the site is to gain access from private property owners in the mangrove side but path might also consist of soft mud. Has great potential for shorebirds especially with a fishpond roost on tide days that are higher than 1.3 meters.

MUDFLAT 1B

Viewed from northernmost part of Cansaga Bay Bridge at the back of private shipyards. Best way to observe the shorebirds is to secure access from private shipyard companies and position the viewing near the coastal area or from the parked shipping vessels to view the entire mudflat for a much closer observation. Part of Mudflat 1A can be seen from vantage point.



Figure 4. Vantage point from northernmost part of Cansaga Bay Bridge to observe shorebirds at Mudflat 1B

MUDFLAT 1C

Mudflat in Mandaue City in front of mangrove forest. Water surrounding mudflat is a shipyard.

Mudflat was too soft to walk onto (waist-deep mud). Mudflat exposes at 0.4m to 0.7 m. Mudflat is situated on the other side of fishponds.

Figure 5. Vantage point from Cansaga Bay Bridge to observe shorebirds at Mudflat 1C





Based from observations, if water level is not higher than 1m to 1.2m, the mudflat is not submerged enough for Far Eastern Curlews to fly into the fishponds to roost. Portion of the mudflat in the mangrove pocket is high enough to still have exposed mud on a 0.7 to 0.9m tide level.

Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) were used to identify the species.

Results and Discussion

Four sites were observed from November 12 to November 13 to conduct census of Far Eastern Curlew (*Numenius madagascariensis*).

The maximum count of Far Eastern Curlew was 24 individuals, observed at Mudflat 1B (see Figure 6). Out of the 24 individuals, two large-sized individuals looked like females based from the distant views. Part of Mudflat 1A can be seen from Mudflat 1B and the vantage point gave a different view of the mudflat.

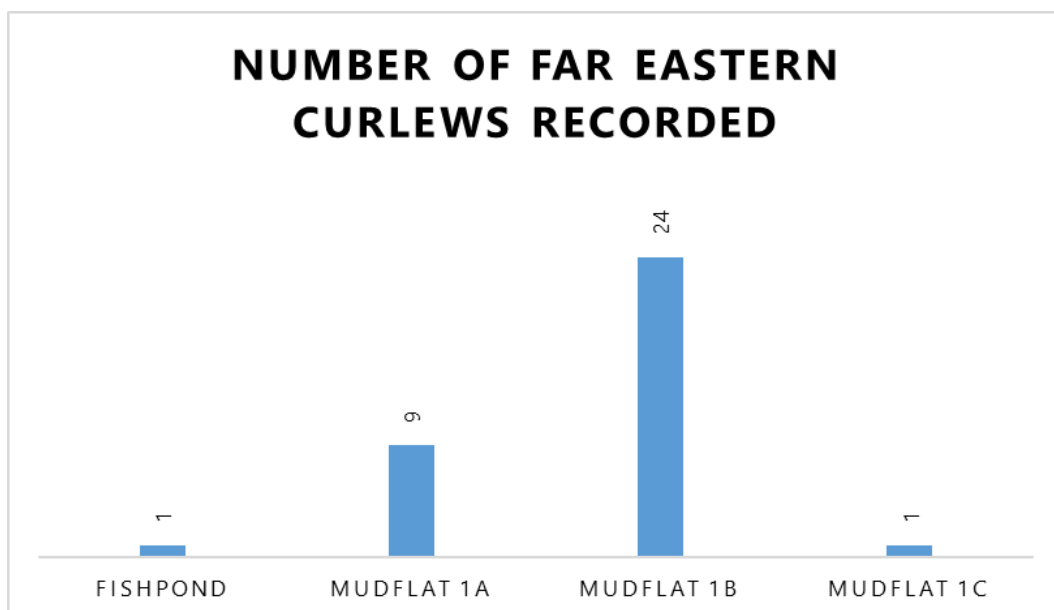


Figure 6. Far Eastern Curlew (*Numenius madagascariensis*) sightings across sites



Figure 7. Far Eastern Curlews (*Numenius madagascariensis*) from Mudflat 1B as seen from the northernmost part of Cansaga Bay Bridge

In the fishponds, Far Easter Curlews were only heard.

At Mudflat 1A as viewed on board the boat, only 9 individuals were seen. View on board the motorized boat where unstable due to the sea waves and levelling of the boat from the water which made it difficult the observing the Far Eastern Curlews and other shorebirds.



Figure 8. Record photo of Far Eastern Curlews (*Numenius madagascariensis*) seen at Mudflat 1A on board a motorized boat

For Mudflat 1C, the lone individual observed was a male (see Figure 8).



Figure 9. Male Far Eastern Curlew (*Numenius madagascariensis*) from Mudflat 1C

On August 18, 2022, large flock of Far Eastern Curlew was seen by Lyndon Grondiano, a local Cebuano birder. He then observed a minimum of 60 individuals of Far Eastern Curlews on November 08-10, 2022. He also observed Far Eastern Curlews in two particular ponds among the many ponds in an area of roughly 10-15 hectares in size.

As an assessment during the survey period, the ponds are high tide roosting sites of the species along with several other species. Site counts are totally tidal dependent. Far Eastern Curlews tend to congregate in large numbers near the ponds inside the mangrove area during high tide. Survey period had low tide level.

On the other hand, a total of 33 species of birds was recorded throughout the survey period, four of which are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include the endangered Far Eastern Curlew (*Numenius madagascariensis*), the vulnerable Chinese Egret (*Egretta eulophotes*), as well as near-threatened species: Grey-tailed Tattler (*Tringa brevipes*) and Red-necked Stint (*Calidris ruficollis*).

Table 1. List of species recorded in Mandaue City wetlands

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Resident	Least Concern
2	Nankeen Night Heron	<i>Nycticorax caledonicus</i>	Resident	Least Concern
3	Striated Heron	<i>Butorides striata</i>	Resident, Migrant	Least Concern



4	Javan Pond Heron	<i>Ardeola speciosa</i>	Resident	Least Concern
5	Great Egret	<i>Ardea alba</i>	Resident, Migrant	Least Concern
6	Intermediate Egret	<i>Ardea intermedia</i>	Resident, Migrant	Least Concern
7	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
8	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
9	Eastern Cattle Egret	<i>Bubulcus coromandus</i>	Resident, Migrant	Least Concern
10	Barred Rail	<i>Hypotaenidia torquata</i>	Resident	Least Concern
11	Pacific Golden Plover	<i>Pluvialis fulva</i>	Migrant	Least Concern
12	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern
13	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern
14	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
15	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern
16	Far Eastern Curlew	<i>Numenius madagascariensis</i>	Migrant	Endangered
17	Common Redshank	<i>Tringa totanus</i>	Migrant	Least Concern
18	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Migrant	Least Concern
19	Common Greenshank	<i>Tringa nebularia</i>	Migrant	Least Concern
20	Grey-tailed Tattler	<i>Tringa brevipes</i>	Migrant	Near Threatened
21	Terek Sandpiper	<i>Xenus cinereus</i>	Migrant	Least Concern
22	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern
23	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
24	Whiskered Tern	<i>Chlidonias hybrida</i>	Migrant	Least Concern
25	Unidentified Pond Heron sp.	<i>Ardeola sp.</i>		Least Concern
26	Golden-bellied Gerygone	<i>Gerygone sulphurea</i>	Resident	Least Concern
27	Pacific Swallow	<i>Hirundo tahitica</i>	Resident	Least Concern
28	Grey-rumped Swiftlet	<i>Collocalia marginata</i>	Endemic	Least Concern
29	Philippine Pied Fantail	<i>Rhipidura nigritorquis</i>	Endemic	Least Concern
30	Asian Glossy Starling	<i>Aplonis panayensis</i>	Resident	Least Concern
31	Chestnut Munia	<i>Lonchura atricapilla</i>	Resident	Least Concern
32	Common Kingfisher	<i>Alcedo atthis</i>	Migrant	Least Concern
33	Collared Kingfisher	<i>Todiramphus chloris</i>	Resident	Least Concern

Whiskered Tern (*Chlidonias hybrida*) had the highest maximum total count of 577 individuals, followed by Asian Glossy Startlings (*Aplonis panayensis*) in the fishpond area with a maximum count of 150 individuals, and the resident Pacific Swallow (*Hirundo tahitica*) tied with the Easter Cattle Egret (*Bubulcus coromansus*) with maximum counts of 50 individuals each.

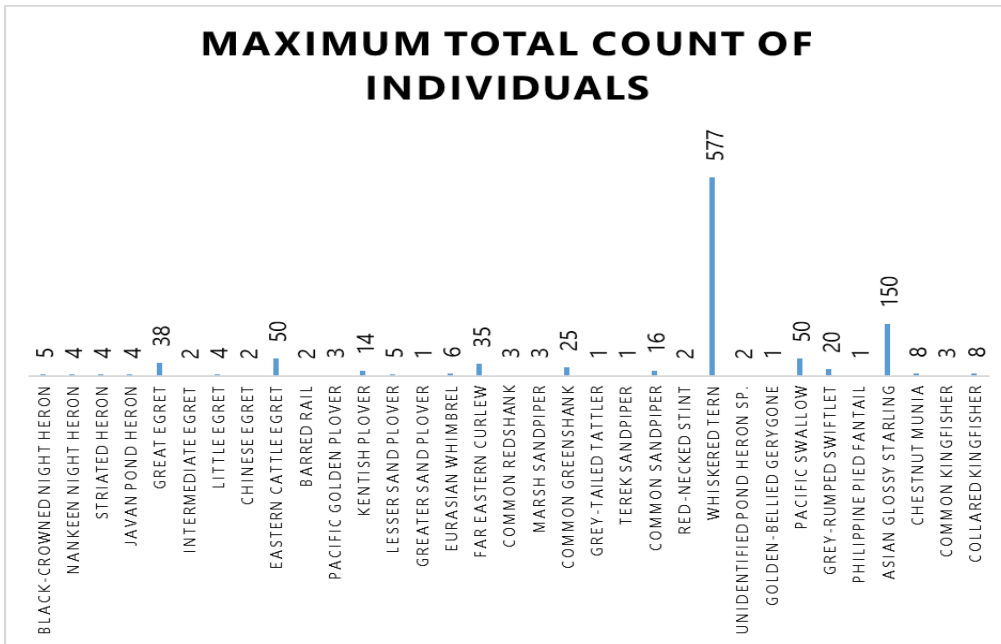


Figure 10. Maximum total number of individuals counted per species across sites

One individual of Red-neck Stint (*Calidris ruficolis*) observed had a leg flag. Unfortunately, it flew off and was not documented and photographed.

Mudflat 1A had the most number of individuals counted while fishpond site had the most of number of species recorded including coastal and mangrove species such as the endemic Philippine Pied Fantail (*Rhipidura nigritorquis*) and Grey-rumped Swiftlet (*Collocalia marginata*), among others (see Figure 11).

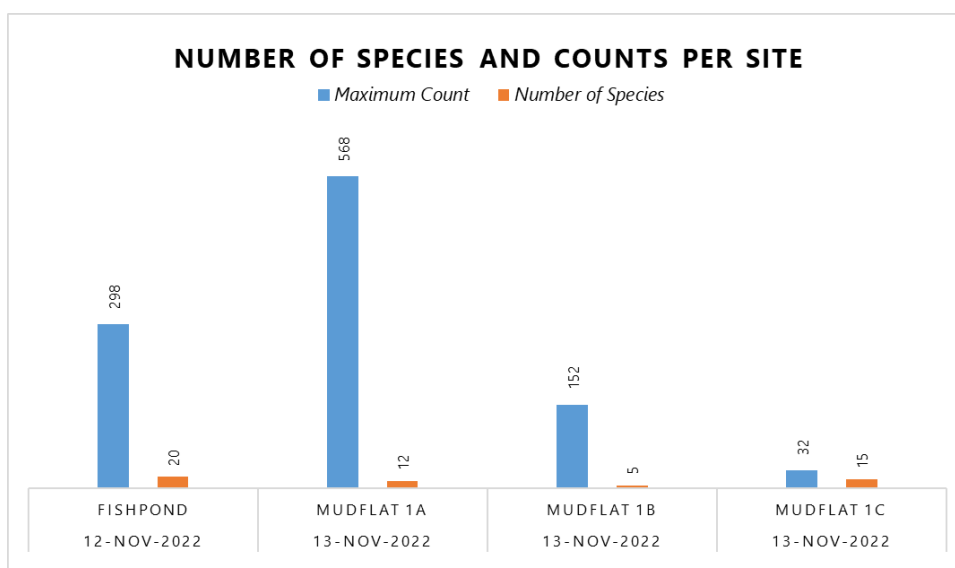


Figure 11. Number of species and individual counts per site throughout the survey period



Threats, Issues, and Concerns

- Lack of management system to protect and conserve the remaining critical wetlands of Mandaue City
- Disturbances due to urban activities of locals and regular shipping activities
- Infrastructure development within the mudflats
- Solid waste and water pollution
- Possibility of oil spills

Suggestions and Recommendations

- Further surveys to continuously assess in transit and wintering Far Eastern Curlews
- DENR to include Mandaue wetlands in their AWC sites
- Leg flag banding of Far Eastern Curlew and other species in terms of their ecological importance and conservation status
- Satellite tagging of Far Eastern Curlew and other species in the confirmed wintering sites

Partner Individuals and/or Organizations

- **Lyndon S. Grondiano**
Cebu-based Birder
- **Nial Moores, Ph. D**
Director, Birds Korea (Republic of Korea)
Conservation Avian Biodiversity
IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group & Threatened Waterfowl Specialist Group
- **Dave Bakewell**
Species identification, verification, and confirmation.
Provision of reference photos

References

- Comparison Guide for Far Easter Curlew based from The Australian Bird Guide (Menkhorst et al., 2017)
- Field Guide to the Waterbirds of ASEAN (Lee et al., 2018)
- The IUCN Red List of Threatened Species (2022). Version 2022-2. <<https://www.iucnredlist.org>>



Far Eastern Curlew (*Numenius madagascariensis*) Census
Negros Occidental Coastal Wetlands Conservation Area (NOCWCA)
Barangays Tibsoc and Nayon, San Enrique
Barangay Tapong, Pulupandan
Barangays Bocana and Andulauan, Ilog
Negros Occidental, Negros Island Region, Philippines
November 15-18, 2022

Irene Dy and Virtito Natural Jr.

Site Info

Negros Occidental Coastal Wetlands Conservation Area (NOCWCA) is one of the eight recognized Ramsar sites in the Philippines.

The site lies along the 11 kilometers of coastline in the mid-western part of Negros Island Region covering 52 coastal barangays, three cities (Bago, Himamaylan and Kabankalan) and seven municipalities (Pulupandan, Valladolid, San Enrique, Pontevedra, Hinigaran, Binalbagan and Ilog).

Three major areas were surveyed within NOCWCA: Barangays Tibsoc and Nayon in San Enrique; Barangay Tapong in Pulupandan; and Barangays Bocana and Andulauan in Ilog (Figures 2-8).



Figure 1. Site location in reference with the whole Philippine Archipelago

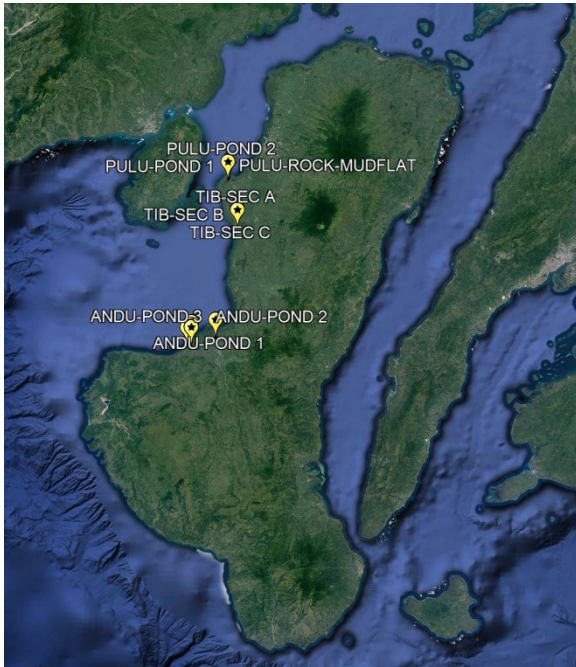


Figure 2. NOCWCA areas surveyed in reference with the whole Negros Island Region

Brgys. Tibsoc and Nayon, San Enrique, Negros Occidental

- 10.391498, 122.859524 (TIB-SEC A)
- 10.393435, 122.858601 (TIB-SEC B)
- 10.395287, 122.856882 (TIB-SEC C)
- 10.402323, 122.856833 (TIB-SEC D)
- 10.402657, 122.855088 (TIB-SEC E)
- 10.401449, 122.855522 (TIB-SEC F)
- 10.405693, 122.85634 (NAY-SEC A)
- 10.404453, 122.854423 (NAY-SEC B)



Figure 3. NOCWCA areas surveyed in Tibsoc and Nayon



These sites are part of Barangays Tibsoc and Nayon in the town of San Enrique, Negros Occidental.

The mudflats were divided into sections to better understand each section and map out sightings of Far Eastern Curlews.

Figure 4. Mudflats TIB-SEC A and TIB-SEC B at Tibsoc



Brgy. Tapong, Pulupandan, Negros Occidental

10.547642, 122.823533 (PULU-POND 1)

10.544765, 122.822931 (PULU-POND 2)

10.550901, 122.827601 (PULU-ROCK-MUDFLAT)

Figure 5. NOCWCA areas surveyed in Pulupandan

These sites are part of Pulupandan town in the northern part of the Ramsar site.



Figure 6. Fishpond NOCWCA survey site in Pulupandan town



Figure 7. Rocky-mudflat NOCWCA survey site in Pulupandan town

Barangays Bocana and Andulauan, Ilog, Negros Occidental

10.017561, 122.718015 (BOC-SEC A)

10.008038, 122.709512 (BOC-SEC B)

10.008706, 122.70853 (BOC-SEC C)

10.025304, 122.723174 (BOC-SEC D)

10.01082, 122.723315 (BOC-FIELD A)

10.009065, 122.7233 (BOC-FIELD B)

10.037266, 122.801598 (ANDU-POND 1)

10.036182, 122.80142 (ANDU-POND 2)

10.03706, 122.802329 (ANDU-POND 3)



Figure 8. NOCWCA areas surveyed in Ilog

In Barangay Bocana, Sections A-D are mudflats while Fields A and B are sugarcane fields. The site in Barangay Andulauan are fishponds.

Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) were used to identify the species.

Results and Discussion

Maximum count of ten Far Eastern Curlew (*Numenius madagascariensis*) was recorded throughout the survey period. Six individuals from Tibsoc, a lone individual from Pulpandan, and three individuals from Ilog (see Figure 8).

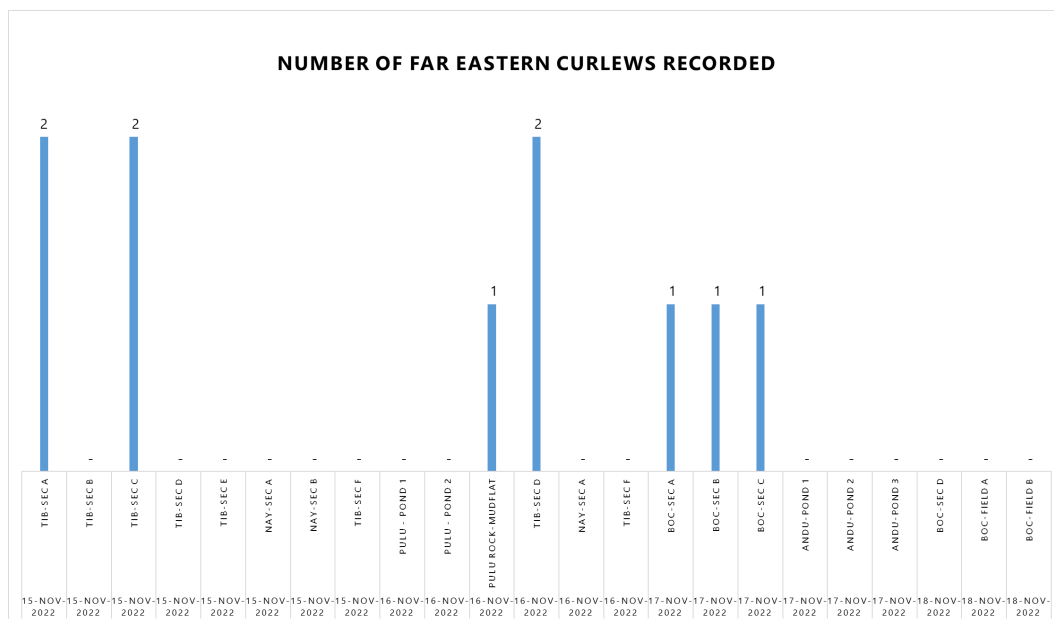


Figure 9. Far Eastern Curlew (*Numenius madagascariensis*) sightings across sites and throughout the survey period

Tibsoc

On November 15, two individuals were recorded from TIB-SEC A (10.391498, 122.859524), one of the individuals was a juvenile. Also, two individuals from TIB-SEC C (10.395287, 122.856882) were recorded.

On November 16, two individuals were recorded TIB-SEC D (10.402323, 122.856833): a male and a juvenile with shorter bill.



Figure 10. Map showing sightings of Far Eastern Curlews (*Numenius madagascariensis*) in Tibsoc

Pulupandan

A small male individual was recorded from the Rock-mudflat area (10.550901, 122.827601) on November 16.



Figure 11. Map showing sighting of Far Eastern Curlew (*Numenius madagascariensis*) in Pulupandan

Figure 12. Photo of the lone male Far Eastern Curlew (*Numenius madagascariensis*) from Rock-mudflat area of Pulupandan





On the other hand, a total of 54 species of birds was recorded throughout the survey period, 12 of which are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include the endangered Far Eastern Curlew (*Numenius madagascariensis*) and Great Knot (*Calidris tenuirostris*), the vulnerable Chinese Egret (*Egretta eulophotes*) and Philippine Duck (*Anas luzonica*), as well as near-threatened species: Eurasian Curlew (*Numenius arquata*), Asian Dowitcher (*Limnodromus semipalmatus*), Red Knot (*Calidris canutus*), Black-tailed Godwit (*Limosa limosa melanuroides*), Bar-tailed Godwit (*Limosa lapponica*), Curlew Sandpiper (*Calidris ferruginea*), Grey-tailed Tattler (*Tringa brevipes*) and Red-necked Stint (*Calidris ruficollis*).

Table 1. List of species recorded in Negros Occidental Coastal Wetlands Conservation Area (NOCWCA) – Barangays Tibsoc and Nayon, San Enrique, Negros Occidental; Pulupandan, Negros Occidental; and Barangays Bocana and Andulauan, Ilog, Negros Occidental

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Philippine Duck	<i>Anas luzonica</i>	Endemic	Vulnerable
2	Wandering Whistling Duck	<i>Dendrocyna arcuata</i>	Resident	Least Concern
3	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Resident	Least Concern
4	Javan Pond Heron	<i>Ardeola speciosa</i>	Resident	Least Concern
5	Striated Heron	<i>Butorides striata</i>	Resident, Migrant	Least Concern
6	Purple Heron	<i>Ardea purpurea</i>	Resident	Least Concern
7	Great Egret	<i>Ardea alba</i>	Resident, Migrant	Least Concern
8	Intermediate Egret	<i>Ardea intermedia</i>	Resident, Migrant	Least Concern
9	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
10	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
11	Barred Rail	<i>Hypotaenidia torquata</i>	Resident	Least Concern
12	Black-winged Stilt	<i>Himantopus himantopus</i>	Migrant	Least Concern
13	Pacific Golden Plover	<i>Pluvialis fulva</i>	Migrant	Least Concern
14	Grey Plover	<i>Pluvialis squatarola</i>	Migrant	Least Concern
15	Little Ringed Plover	<i>Charadrius dubius</i>	Resident, Migrant	Least Concern
16	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern
17	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern
18	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
19	Asian Dowitcher	<i>Limnodromus semipalmatus</i>	Migrant	Near Threatened
20	Black-tailed Godwit	<i>Limosa limosa melanuroides</i>	Migrant	Near Threatened
21	Bar-tailed Godwit	<i>Limosa lapponica</i>	Migrant	Near Threatened
22	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern



23	Far Eastern Curlew	<i>Numenius madagascariensis</i>	Migrant	Endangered
24	Eurasian Curlew	<i>Numenius arquata</i>	Migrant	Near Threatened
25	Common Redshank	<i>Tringa totanus</i>	Migrant	Least Concern
26	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Migrant	Least Concern
27	Common Greenshank	<i>Tringa nebularia</i>	Migrant	Least Concern
28	Grey-tailed Tattler	<i>Tringa brevipes</i>	Migrant	Near Threatened
29	Terek Sandpiper	<i>Xenus cinereus</i>	Migrant	Least Concern
30	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern
31	Ruddy Turnstone	<i>Arenaria interpres</i>	Migrant	Least Concern
32	Great Knot	<i>Calidris tenuirostris</i>	Migrant	Endangered
33	Red Knot	<i>Calidris canutus</i>	Migrant	Near Threatened
34	Broad-billed Sandpiper	<i>Calidris falcinellus</i>	Migrant	Least Concern
35	Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	Migrant	Least Concern
36	Curlew Sandpiper	<i>Calidris ferruginea</i>	Migrant	Near Threatened
37	Long-toed Stint	<i>Calidris subminuta</i>	Migrant	Least Concern
38	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
39	Wood Sandpiper	<i>Tringa glareola</i>	Migrant	Least Concern
40	Sanderling	<i>Calidris alba</i>	Migrant	Least Concern
41	Gull-billed Tern	<i>Gelochelidon nilotica</i>	Migrant	Least Concern
42	Common Tern	<i>Sterna hirundo</i>	Migrant	Least Concern
43	Greater Crested Tern	<i>Thalasseus bergii</i>	Migrant	Least Concern
44	Little Tern	<i>Sternula albifrons</i>	Migrant	Least Concern
45	Whiskered Tern	<i>Chlidonias hybrida</i>	Migrant	Least Concern
46	White-winged Tern	<i>Chlidonias leucopterus</i>	Migrant	Least Concern
47	Collared Kingfisher	<i>Todiramphus chloris</i>	Resident	Least Concern
48	Philippine Tailorbird	<i>Orthotomus castaneiceps</i>	Endemic	Least Concern
49	Philippine Coucal	<i>Centropus viridis</i>	Endemic	Least Concern
50	Olive-backed Sunbird	<i>Cinnyris jugularis</i>	Resident	Least Concern
51	Golden-bellied Gerygone	<i>Gerygone sulphurea</i>	Resident	Least Concern
52	Arctic Warbler	<i>Phylloscopus borealis</i>	Migrant	Least Concern
53	White-browed Crake	<i>Poliolimnas cinereus</i>	Resident	Least Concern
54	Common Moorhen	<i>Gallinula chloropus</i>	Resident, Migrant	Least Concern

Whiskered Tern (*Chlidonias hybrida*) was the most numerous with a maximum total count of 490 individuals, followed by Kentish Plover (*Chlidonias hybrida*) with a maximum count of 477 individuals, and Black-winged Stilt (*Himantopus himantopus*) with a maximum count of 436 individuals (see Figure 13).

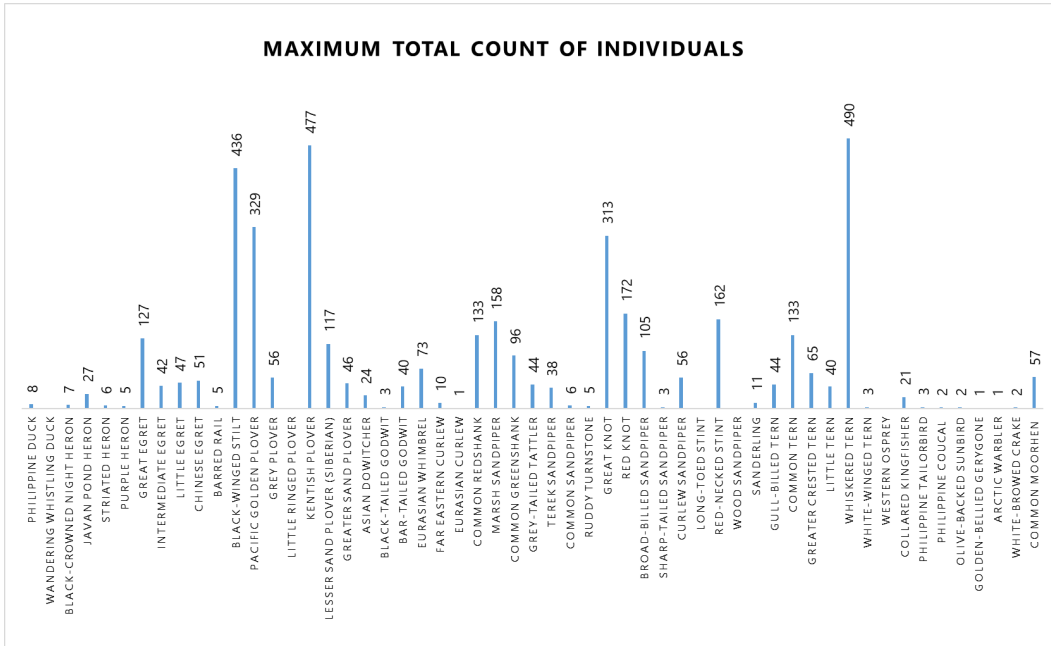


Figure 13. Maximum total number of individuals counted per species across sites

NAY-SEC A in Barangay Nayon, San Enrique had the most number of individuals recorded while TIB-SEC A in Barangay Tibsoc, San Enrique had the most number of species recorded (Figure 14).

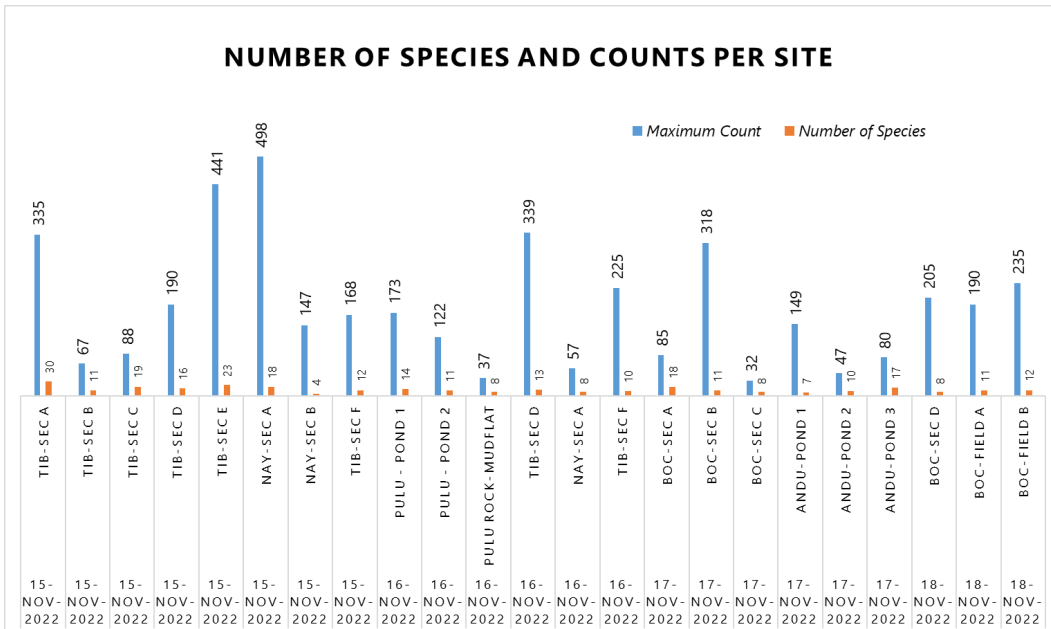


Figure 14. Number of species and maximum count of individuals recorded per site throughout the survey period



Two species were also recorded having leg flags. One individual of Great Knot (*Calidris tenuirostris*) had an orange flag (Australia) and a Curlew Sandpiper (*Calidris ferruginea*) had a black over yellow leg flag in its right tibia.

Threats, Issues, and Concerns

- Continuous planting of mangrove species on the mudflat
- Possibility of resort establishments being developed inside the Ramsar site
- Minimal solid waste pollution

Suggestions and Recommendations

- Further surveys to continuously assess in transit Far Eastern Curlews

Partner Individuals and/or Organizations

- **Hon. Rose Faith Paas**
Birder / Barangay Kagawad, Brgy. Tibsoc, San Enrique, Negros Occidental
- **Kim Castañares**
Sports Chief, Ilog, Negros Occidental
- **Nial Moores, Ph. D**
Director, Birds Korea (Republic of Korea)
Conservation Avian Biodiversity
IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group & Threatened Waterfowl Specialist Group
- **Dave Bakewell**
Species identification, verification, and confirmation.
Provision of reference photos

References

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- Field Guide to the Waterbirds of ASEAN (Lee et al., 2018)
- The IUCN Red List of Threatened Species (2022). Version 2022-2. <<https://www.iucnredlist.org>>
- Negros Occidental Coastal Wetlands Conservation Area (NOCWCA). 2022, December 12. Ramsar Sites Information Service. <<https://rsis.Ramsar.org/ris/2271>>



Far Eastern Curlew (*Numenius madagascariensis*) Census

Barangays Balibago and Bitoon, Jaro District

Barangay Hinactacan, Lapaz District

Iloilo City, Iloilo Province, Philippines

November 19-20, 2022

Irene Dy and Virtito Natural Jr.

Site Info

Iloilo City is a highly urbanized city and the capital of Iloilo Province in the Western Visayas region of the Philippines. It is situated within Panay Island, the sixth largest island in the Philippines.

Three main areas were surveyed: Barangays Balibago and Bitoon in Jaro District and Barangay Hinactacan in Lapaz District.



Figure 1. Site location in reference with the whole Philippine Archipelago

Barangay Balabago, Jaro District

10.739069, 122.585152 (BAL-POND 1)

10.73944, 122.585659

(BAL-POND 2)

10.738433, 122.585526

(BAL-POND 3)

10.736823, 122.585675

(BAL-POND 4)

10.737483, 122.5864

(BAL-POND 5)

10.738581, 122.587506

(BAL-POND 6)

10.740634, 122.591221

(BAL-MUDFLAT A)



Figure 2. Balabago Fishponds



Figure 3. Fishpond owner's son looking through the scope at Balabago fishponds

Barangay Bitoon, Jaro District

10.74595, 122.589413 (BIT-MUDFLAT A)
 10.753753, 122.592356 (BIT-MUDFLAT B)
 10.745688, 122.597255 (BIT-MUDFLAT C)



Figure 4. Fishpond in Balabago

Barangay Hinactacan, Lapaz District

10.735361, 122.589317 (HIN-POND 1)
 10.734765, 122.589647 (HIN-POND 2)
 10.740504, 122.595405 (HIN-MUDFLAT A)



Figure 5. Areas surveyed in Iloilo City

Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) were used to identify the species.

Results and Discussion

Maximum count of 36 Far Eastern Curlews (*Numenius madagascariensis*) was recorded from November 19-20. Twenty-three (23) individuals were recorded from Balabago, 11 individuals from Bitoon, and two individuals from Hinactacan (see Figure 6).

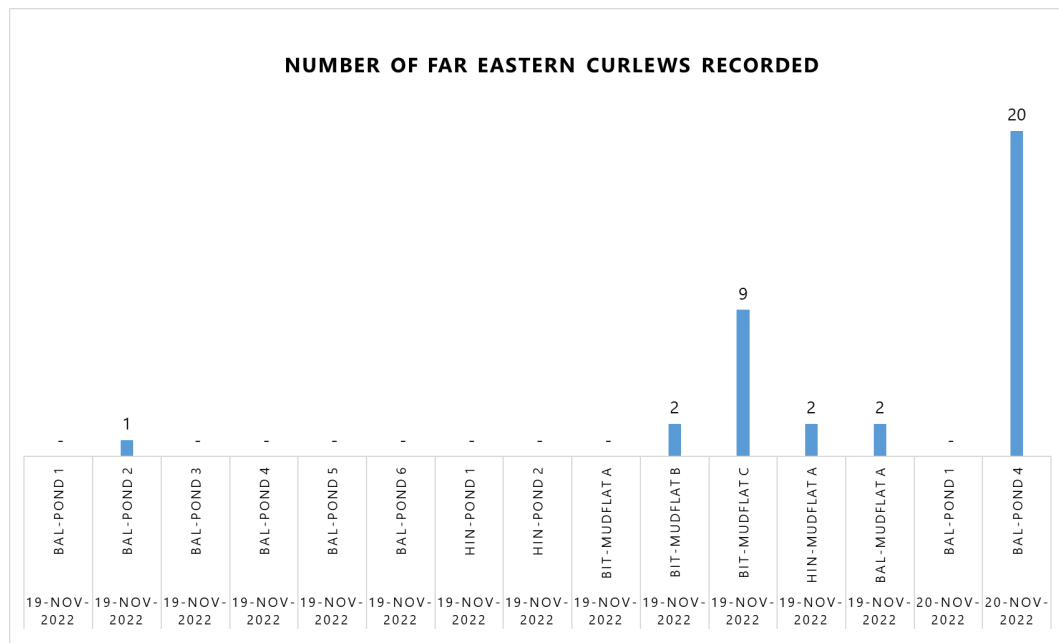


Figure 6. Far Eastern Curlew (*Numenius madagascariensis*) sightings across sites and throughout the survey period

On November 19, a total of 16 Far Eastern Curlews was recorded. One individual was recorded at Pond 2 of Balabago, two moulting male individuals from Mudflat B in Bitoon, nine individuals from Mudflat C in Bitoon, four of which were females, two individuals from Mudflat A in Balabago, and two individuals from Mudflat A in Hinactacan.

Figure 7. Flock consisting of 16 Far Eastern Curlews (*Numenius madagascariensis*), some of which are moulting; and 2 Eurasian Curlews (*Numenius arquata*)



On November 20, a total of 20 Far Eastern Curlews was recorded, all from Pond 4 of Balabago. Seven of which were moulting individuals. Individuals observed looked like males due to their size and bill length. They were observed flying in flock together with Eurasian Curlews (see Figure 7).



Figure 8. Far Eastern Curlews (*Numenius madagascariensis*) observed at Pond 4 of Balabago





Figure 9. Far Eastern Curlews (*Numenius madagascariensis*) in mudflat

On the other hand, a total of 54 species of birds was recorded throughout the survey period, four of which are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include the endangered Far Eastern Curlew (*Numenius madagascariensis*), the vulnerable Chinese Egret (*Egretta eulophotes*), as well as near-threatened species: Eurasian Curlew (*Numenius arquata*) and Red-necked Stint (*Calidris ruficollis*).

Table 1. List of species recorded in Iloilo City wetlands

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Resident	Least Concern
2	Javan Pond heron	<i>Ardeola speciosa</i>	Migrant	Least Concern
3	Striated Heron	<i>Butorides striata</i>	Resident, Migrant	Least Concern
4	Grey Heron	<i>Ardea cinerea</i>	Migrant	Least Concern
5	Purple Heron	<i>Ardea purpurea</i>	Resident	Least Concern
6	Great Egret	<i>Ardea alba</i>	Resident, Migrant	Least Concern
7	Intermediate Egret	<i>Ardea intermedia</i>	Resident, Migrant	Least Concern
8	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
9	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
10	Black-winged Stilt	<i>Himantopus himantopus</i>	Migrant	Least Concern
11	Pacific Golden Plover	<i>Pluvialis fulva</i>	Migrant	Least Concern
12	Grey Plover	<i>Pluvialis squatarola</i>	Migrant	Least Concern
13	Little Ringed Plover	<i>Charadrius dubius</i>	Migrant	Least Concern
14	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern



15	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern
16	Lesser Sand Plover (Tibetan)	<i>Charadrius mongolus atrifrons</i>	Migrant	Least Concern
17	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
18	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern
19	Far Eastern Curlew	<i>Numenius madagascariensis</i>	Migrant	Endangered
20	Eurasian Curlew	<i>Numenius arquata</i>	Migrant	Near Threatened
21	Common Redshank	<i>Tringa totanus</i>	Migrant	Least Concern
22	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Migrant	Least Concern
23	Common Greenshank	<i>Tringa nebularia</i>	Migrant	Least Concern
24	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern
25	Wood Sandpiper	<i>Tringa glareola</i>	Migrant	Least Concern
26	Broad-billed Sandpiper	<i>Calidris falcinellus</i>	Migrant	Least Concern
27	Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	Migrant	Least Concern
28	Long-toed Stint	<i>Calidris subminuta</i>	Migrant	Least Concern
29	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
30	Whiskered Tern	<i>Chlidonias hybrida</i>	Migrant	Least Concern
31	Golden-bellied Gerygone	<i>Gerygone sulphurea</i>	Resident	Least Concern
32	Chestnut Munia	<i>Lonchura atricapilla</i>	Resident	Least Concern
33	Common Kingfisher	<i>Alcedo atthis</i>	Migratory	Least Concern
34	Collared Kingfisher	<i>Todiramphus chloris</i>	Resident	Least Concern
35	Philippine Tailorbird	<i>Orthotomus castaneiceps</i>	Endemic	Least Concern
36	Golden-headed Cisticola	<i>Cisticola exilis</i>	Resident	Least Concern
37	Olive-backed sunbird	<i>Cinnyris jugularis</i>	Resident	Least Concern
38	Striated Grassbird	<i>Megalurus palustris</i>	Resident	Least Concern
39	Common Moorhen	<i>Fulica atra</i>	Resident, Migrant	Least Concern
40	Barred Rail	<i>Hypotaenidia torquata</i>	Resident	Least Concern
41	White-browed Crake	<i>Poliolimnas cinereus</i>	Resident	Least Concern
42	Yellow Bittern	<i>Ixobrychus sinensis</i>	Resident	Least Concern
43	Philippine Pied Fantail	<i>Rhipidura nigritorquis</i>	Endemic	Least Concern
44	Clamorous Reed Warbler	<i>Acrocephalus stentoreus</i>	Resident	Least Concern
45	Middendorf Grasshopper Warbler	<i>Helopsaltes ochotensis</i>	Migratory	Least Concern
46	Yellow-vented Bulbul	<i>Pycnonotus goiavier</i>	Resident	Least Concern

Lesser Sand Plover (Siberian) (*Charadrius mongolus*) had the most number of individuals with a maximum count of 712 individuals, followed by Pacific Golden Plover (*Pluvialis fulva*) with a maximum count of 392, then Red-necked Stint (*Charadrius ruficollis*) with a maximum count of 358.

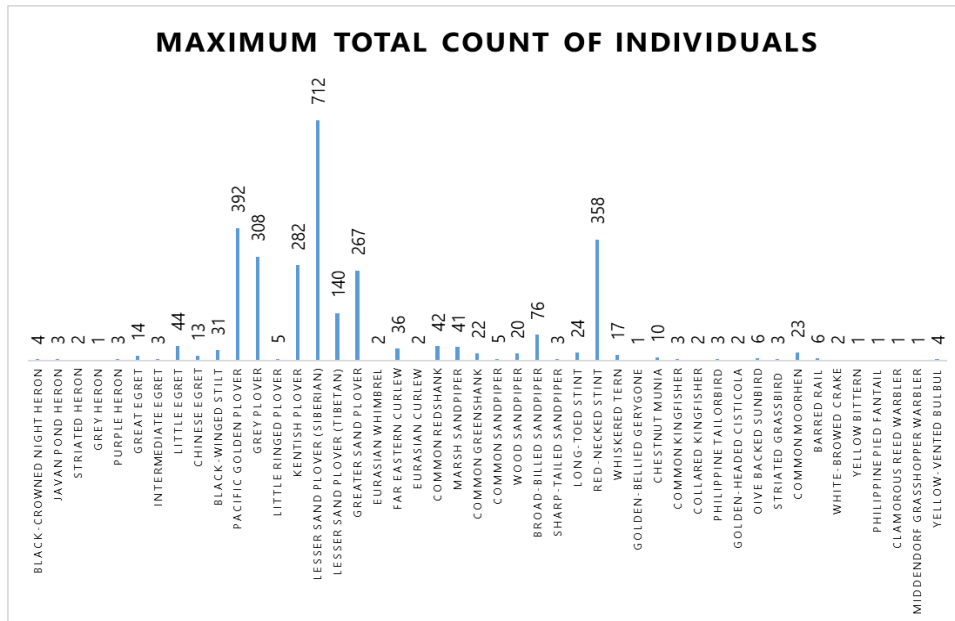


Figure 10. Maximum total number of individuals counted per species across sites

Within the Philippines, this site has one of the most numerous sightings of Lesser Sand Plover (Tibetan) (*Charadrius mongolus atrifons*) hence the record during the survey was very significant.

Pond 4 in Balabago had the most number of individuals counted as well as the most number of species recorded (see Figure 11).

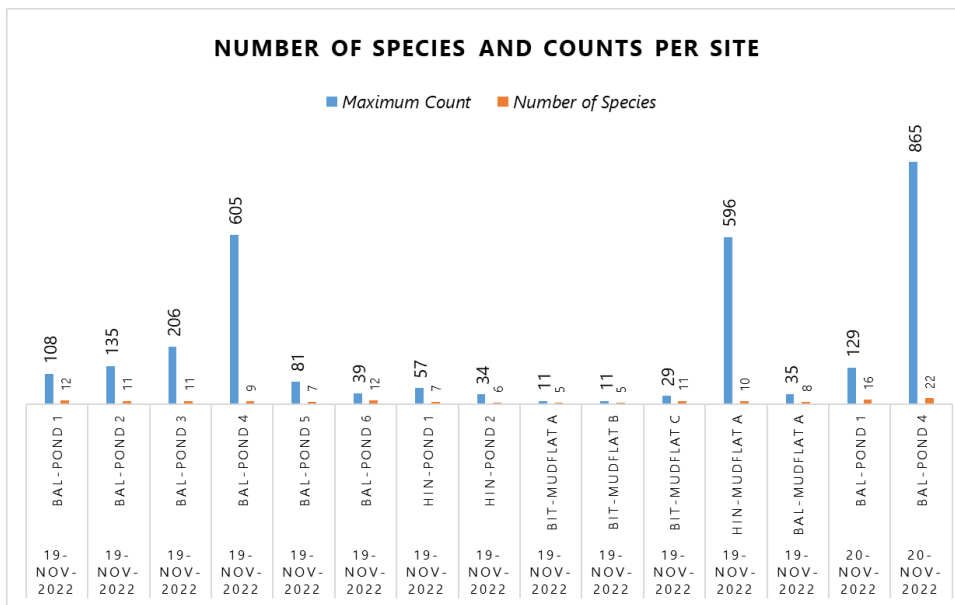


Figure 11. Number of species and maximum count of individuals recorded per site throughout the survey period



Mudflat count of Pacific Golden Plover (*Pluvialis fulva*) is way higher than in fishpond areas. This may suggest that the ponds in Hinactacan could hold a higher count of shorebirds during high tide.

Flock of Far Eastern Curlews flew in near Tigum River. Ponds at Ingore, Lapaz District (10.729004, 122595782) has to be monitored during peak high tide and low end of high tide.

Species Photos

Lesser Sand Plover (Tibetan)
(*Charadrius mongolus atrifrons*)



© Irene Dy



Kentish Plover (*Charadrius alexandrinus*) in breeding plumage (center, bottom)



Mixed species of shorebirds in Iloilo City wetlands

Threats, Issues, and Concerns

- No shorebird surveys have been conducted in the mudflats prior to the survey
- Mudflats are not included in the Annual Asian Waterbird Census (AWC) conducted by the Department of Environment and Natural Resources (DENR) offices
- Disturbances due to urban activities of locals
- Real estate development
- Solid waste and water pollution

Suggestions and Recommendations

- Further surveys to continuously assess wintering Far Eastern Curlews
- Survey of fishponds and mudflat areas of Dumangas
- Survey of nearby ponds and mudflats e.g. Ingore ponds in Lapaz District



- Leg flag banding of Far Eastern Curlew and other species in terms of their ecological importance and conservation status
- Satellite tagging of Far Eastern Curlew and other species in the confirmed wintering sites

Partner Individuals and/or Organizations

- **Nial Moores, Ph. D**
Director, Birds Korea (Republic of Korea)
Conservation Avian Biodiversity
IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group & Threatened Waterfowl Specialist Group
- **Dave Bakewell**
Species identification, verification, and confirmation.

References

- Comparison Guide for Far Easter Curlew based from The Australian Bird Guide (Menkhorst et al., 2017)
- Field Guide to the Waterbirds of ASEAN (Lee et al., 2018)
- The IUCN Red List of Threatened Species (2022). Version 2022-2. <<https://www.iucnredlist.org>>



Far Eastern Curlew (*Numenius madagascariensis*) Census

Masbate City and Cawayan

Province of Masbate, Bicol Region, Philippines

November 23-25, 2022

Irene Dy and Virtito Natural Jr.

Site Info

Masbate is part of the Bicol Region of the Philippines. It is the last province in the eastern part of Luzon.

Mangrovetum and Pawa Mangrove Park are situated within Masbate City. They are both locally-managed by the local government unit.

Naro Island is a proclaimed wildlife sanctuary under Proclamation No. 317, s. 2000.

Most of the locals from these areas rely on fishing and agricultural farming as their sources of livelihood.

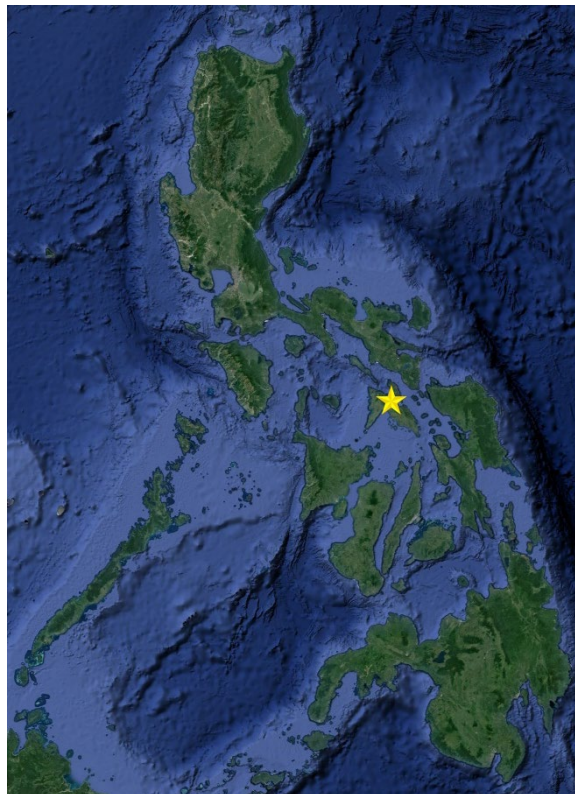


Figure 1. Site location in reference with the whole Philippine Archipelago

Figure 2. Areas surveyed in reference with the main island of Masbate Province



Site coordinates:

Masbate City, Masbate

12.374227, 123.636624 (MANGROVETUM) – Mangrovetum Park, Brgy. Nursery, Masbate City, Masbate Province

Rocky and sandy coastal wetland

12.351837, 123.575541 (PAWA 1) – Pawa Mangrove Park, Brgy. Pawa, Masbate City, Masbate Pond area

12.374227, 123.636624 (PAWA 2) - Pawa Mangrove Park, Brgy. Pawa, Masbate City, Masbate Boardwalk area

12.373201, 123.635343 (MAS-POND 1) - Brgy. Nursery, Masbate City, Masbate Province
Fishpond in front of Mangrovetum Park with rocky formations

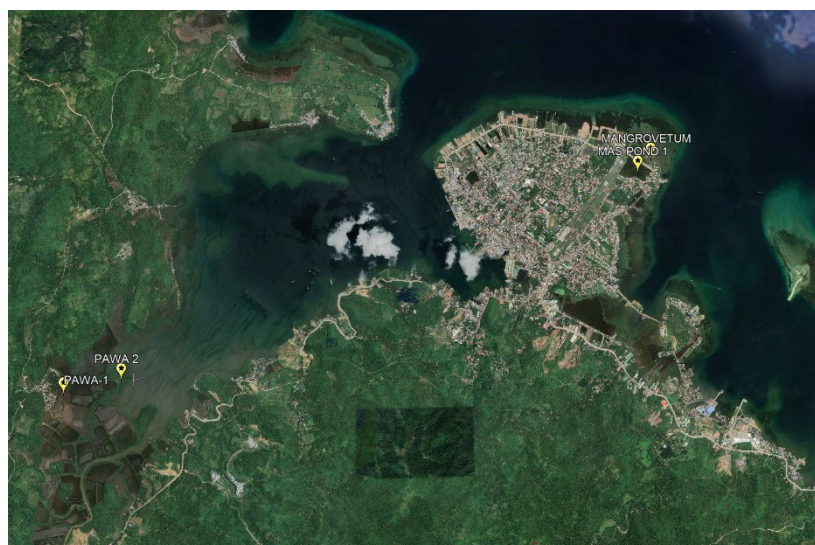


Figure 3. Map showing areas surveyed in Masbate City, Masbate

Naro Island Wildlife Sanctuary, Cawayan, Masbate

11.902958, 123.658614 (NARO 1) – Naro Island, Cawayan Town, Masbate Province

Sandy wetland

11.896114, 123.654663 (NARO 2) – Naro Island, Cawayan Town, Masbate Province

Sandy wetland

11.892314, 123.65435 (NARO 3) – Naro Island, Cawayan Town, Masbate Province

Sandy wetland

11.897461, 123.657506 (NARO 4) – Naro Island, Cawayan Town, Masbate Province

Composed of sandbars and seagrass beds

11.905075, 123.670925 (NARO 5) – Naro Island, Cawayan Town, Masbate Province

Composed of sandbars and seagrass beds

11.903198, 123.664321 (NARO-POND 1) – Naro Island, Cawayan Town, Masbate Province

Fishpond

11.902493, 123.663256 (NARO-POND 2) – Naro Island, Cawayan Town, Masbate Province

Fishpond



Figure 4. Map showing areas surveyed in Naro Island Wildlife Sanctuary, Cawayan, Masbate

Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) were used to identify the species.

Results and Discussion

Areas in Masbate City and Cawayan in Masbate Province were surveyed from November 23-25 to conduct census of Far Eastern Curlew (*Numenius madagascariensis*).

Only 1 individual of Far Eastern Curlew (*Numenius madagascariensis*) was recorded throughout the survey period. It was documented at Naro Island Wildlife Sanctuary in Cawayan town (see Figure 5 & 6).



Figure 5. A male Far Eastern Curlew (*Numenius madagascariensis*) recorded in Naro Island



Figure 6. Far Eastern Curlew with Chinese Egret and Pacific Reef Heron in Naro Island



Throughout the survey, a total of 47 species of birds was recorded, six of which are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include the endangered Far Eastern Curlew (*Numenius madagascariensis*) and Visayan Hornbill (*Penelopides panini*), vulnerable species: Chinese Egret (*Egretta eulophotes*), as well as Near Threatened species: Bar-tailed Godwit (*Limosa lapponica*), Grey-tailed Tattler (*Tringa brevipes*), and Red-necked Stint (*Calidris ruficollis*).

Table 1. List of species recorded in Masbate City and Cawayan, Province of Masbate

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	Resident	Least Concern
2	Nankeen Night Heron	<i>Nycticorax caledonicus</i>	Resident	Least Concern
3	Javan Pond heron	<i>Ardeola speciosa</i>	Resident	Least Concern
4	Striated Heron	<i>Butorides striata</i>	Resident, Migrant	Least Concern
5	Purple Heron	<i>Ardea purpurea</i>	Resident	Least Concern
6	Pacific Reef Heron	<i>Egretta sacra</i>	Resident	Least Concern
7	Great Egret	<i>Ardea alba</i>	Resident, Migrant	Least Concern
8	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
9	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
10	Pacific Golden Plover	<i>Pluvialis fulva</i>	Migrant	Least Concern
11	Grey Plover	<i>Pluvialis squatarola</i>	Migrant	Least Concern
12	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern
13	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern
14	Lesser Sand Plover (Tibetan)	<i>Charadrius mongolus atrifrons</i>	Migrant	Least Concern
15	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
16	Bar-tailed Godwit	<i>Limosa lapponica</i>	Migrant	Near Threatened
17	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern
18	Far Eastern Curlew	<i>Numenius madagascariensis</i>	Migrant	Endangered
19	Common Redshank	<i>Tringa totanus</i>	Migrant	Least Concern
20	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Migrant	Least Concern
21	Common Greenshank	<i>Tringa nebularia</i>	Migrant	Least Concern
22	Grey-tailed Tattler	<i>Tringa brevipes</i>	Migrant	Near Threatened
23	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern
24	Ruddy Turnstone	<i>Arenaria interpres</i>	Migrant	Least Concern
25	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
26	Greater Crested Tern	<i>Thalasseus bergii</i>	Migrant	Least Concern
27	Whiskered Tern	<i>Chlidonias hybrida</i>	Migrant	Least Concern

28	White-winged Tern	<i>Chlidonias leucopterus</i>	Migrant	Least Concern
29	Golden-bellied Gerygone	<i>Gerygone sulphurea</i>	Resident	Least Concern
30	Pacific Swallow	<i>Hirundo tahitica</i>	Resident	Least Concern
31	Philippine Pied Fantail	<i>Rhipidura nigritorquis</i>	Endemic	Least Concern
32	Asian Glossy Starling	<i>Aplonis panayensis</i>	Resident	Least Concern
33	Chestnut Munia	<i>Lonchura atricapilla</i>	Resident	Least Concern
34	Common Kingfisher	<i>Alcedo atthis</i>	Resident	Least Concern
35	Collared Kingfisher	<i>Todiramphus chloris</i>	Resident	Least Concern
36	Olive-backed sunbird	<i>Cinnyris jugularis</i>	Resident	Least Concern
37	Lowland White-eye	<i>Zosterops meyeri</i>	Near Endemic	Least Concern
38	Grey Wagtail	<i>Motacilla cinerea</i>	Migrant	Least Concern
39	Western Osprey	<i>Pandion haliaetus</i>	Migrant	Least Concern
40	Large-billed Crow	<i>Corvus macrorhynchos</i>	Resident	Least Concern
41	Brahminy Kite	<i>Haliastur indus</i>	Resident	Least Concern
42	Black-naped monarch	<i>Hypothymis azurea</i>	Resident	Least Concern
43	Black-naped Oriole	<i>Oriolus chinensis</i>	Resident	Least Concern
44	Kamchatka Leaf Warbler	<i>Phylloscopus examinandus</i>	Migrant	Least Concern
45	Arctic Warbler	<i>Phylloscopus borealis</i>	Migrant	Least Concern
46	Visayan Hornbill	<i>Penelopides panini</i>	Endemic	Endangered
47	Philippine Nightjar	<i>Caprimulgus manillensis</i>	Endemic	Least Concern

Eurasian Whimbrel (*Numenius phaeopus*) was the most numerous with a maximum total count of 122 individuals, followed by Lesser Sand Plover (Siberian) (*Charadrius mongolus*) with a maximum count of 118 individuals, and then Grey-tailed Tattler (*Tringa brevipes*) with a maximum count of 88 individuals.

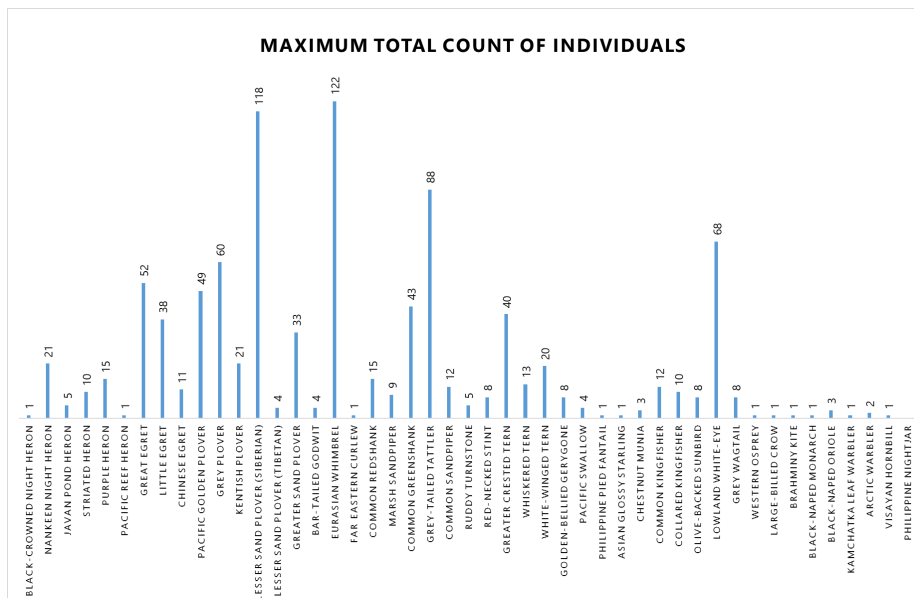


Figure 7. Maximum total number of individuals counted per species across sites

Mangrovetum Park in Masbate City had the most number of individuals counted while Naro Island had the most number of species recorded (see Figure 8).

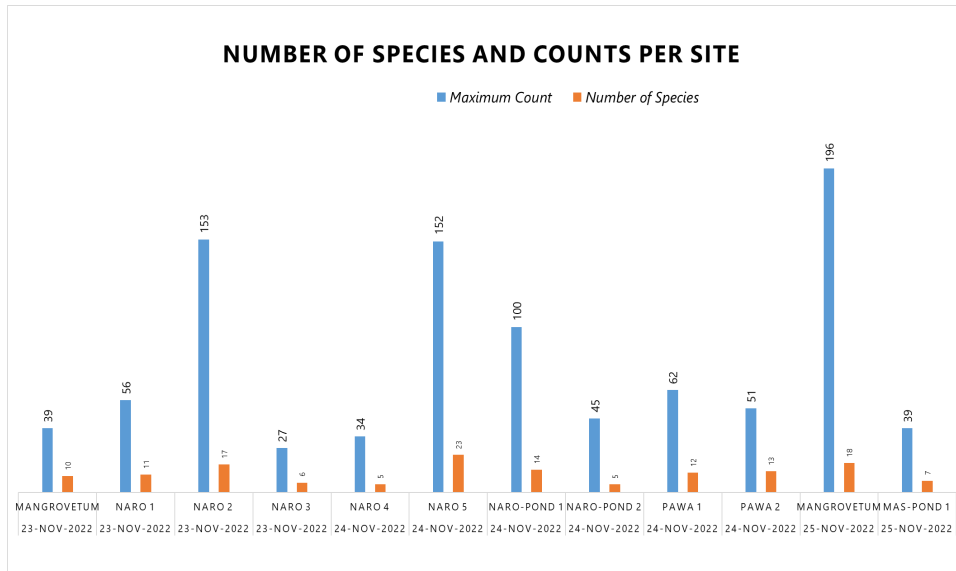


Figure 8. Number of species and individual counts per site throughout the survey period

Aside from the Far Eastern Curlew sighting, it was very significant to record the Visayan Hornbill (*Penelopides panini*) during the survey. The species is severely threatened by habitat loss in Masbate and is a very rare species in the island. One individual was heard in the boardwalk area of Pawa Mangrove Park (PAWA 2) on November 24, 2022.

Species Photos



Lesser Sand Plover (Siberian) (Charadrius mongolus) with leg flag from Jiangu, China



Threats, Issues, and Concerns

- Solid waste pollution
- Seashells collection for food
- Unregulated boat docking
- Climate change – sea level rise

Suggestions and Recommendations

- Further surveys to continuously assess wintering Far Eastern Curlews at Naro Island Wildlife Sanctuary
- Further survey needed to determine if the area is a northward transit site of Far Eastern Curlew and other shorebirds
- Surveys to assess Far Eastern Curlew presence in other areas in Masbate (Chico Island Wildlife Sanctuary, islets within Masbate Province, Burias and Ticao Islands, Masbate Bay wetlands and other potential mudflats in mainland Masbate)
- Protection and conservation measures for MAS-POND 1 being a critical habitat, foraging area, and resting area of shorebirds especially during high tides.
- Satellite tagging of Far Eastern Curlews seen in the island

Partner Individuals and/or Organizations

- **Romela Balingasa**
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- **Rushday S. Bacolod**
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Forest Ranger



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- **Christian Seminiano**

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- **Nial Moores, Ph. D**

Director, Birds Korea (Republic of Korea)

Conservation Avian Biodiversity

IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group &

Threatened Waterfowl Specialist Group

- **Dave Bakewell**

Species identification, verification, and confirmation.

Provision of reference photos

References

- Comparison Guide for Far Easter Curlew based from The Australian Bird Guide (Menkhorst et al., 2017)
- Field Guide to the Waterbirds of ASEAN (Lee et al., 2018)
- The IUCN Red List of Threatened Species (2022). Version 2022-2. <<https://www.iucnredlist.org>>



Far Eastern Curlew (*Numenius madagascariensis*) Census

Silonay and Maidlang Wetlands, Calapan City

Pola Wetlands, Pola

Oriental Mindoro, Philippines

November 28-30, 2022

Irene Dy and Virtito Natural Jr.

Site Info

Oriental Mindoro is one of the provinces in the island of Mindoro, under MIMAROPA Region. It is situated in the southwest part of Luzon.

Silonay and Maidlang are two of the barangays in Calapan City, capital of Oriental Mindoro. These barangays are in the northern part of Oriental Mindoro. Pola on the other hand is in upper mid-western part of Oriental Mindoro.

Most of the locals from these areas rely on fishing and agricultural farming as their sources of livelihood.



Figure 1. Site location in reference with the whole Philippine Archipelago

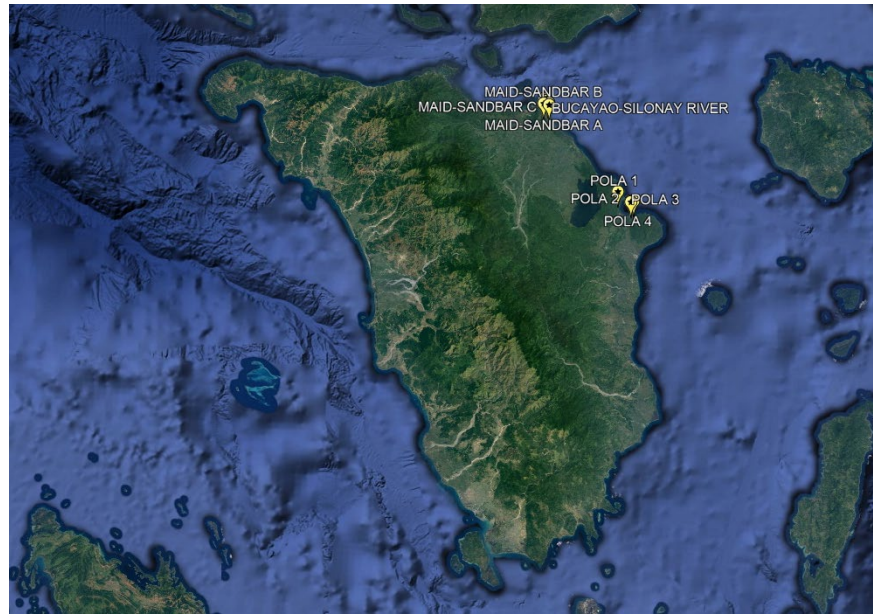


Figure 2. Site location in reference with the whole Mindoro Island

Site coordinates:

Barangays Silonay and Maidlang, Calapan City

13.404908, 121.229081 (SIL-SANDBAR)

13.388075, 121.242245 (MAID-SANDBAR A)

13.393191, 121.41748 (MAID-SANDBAR B)

13.395153, 121.239001 (MAID-SANDBAR C)

13.399854, 121.236968 (MAID-SANDBAR D)

13.394587, 121.231035 (BUCAYAO-SILONAY RIVER MOUTH)



Figure 3. Map of Silonay and Maidland wetlands

Silonay and Maidlang Wetlands

Silonay and Maidlang coastal wetlands are composed of sandbars as well as mangrove forests and islands which are submersible during high tide. Bucayao-Silonay River flows out going to these wetlands.

Figure 4. Silonay Sandbar



Figure 5. Maidlang Wetland

Pola

13.162968, 121.434118 (POLA 1)

13.138761, 121.46897 (POLA 2)

13.136332, 121.469991 (POLA 3)

13.138894, 121.477398 (POLA 4)



Figure 6. Map of Pola wetlands

Pola Wetlands

Mostly consist of sandy coastal wetlands



Figure 7. One of the Pola wetlands

Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) and were used to identify the species.



Results and Discussion

Two major areas (Calapan City and Pola) in Oriental Mindoro were surveyed from November 28 to November 30 to conduct census of Far Eastern Curlew (*Numenius madagascariensis*).

Unfortunately, no Far Eastern Curlew was documented during the survey period.

Upon assessment of sites visited, areas comprised mostly of sandbars near mangroves. Food availability for curlews as well as tide level might contributed to the absence of the species.

Recent records of Far Eastern Curlew in Oriental Mindoro were from Mahal na Pangalan Marine Park (13.411196, 121.150059) in Calapan City. Two individuals were documented on October 09, 2021 and one individual was recorded on November 20, 2021 by Mindoro-local and birder, Pauline Carmel Eje.

Throughout the survey, a total of 33 species of birds was recorded, six of which are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include vulnerable species: Chinese Egret (*Egretta eulophotes*), the endemic Philippine Duck (*Anas luzonica*), Common Pochard (*Aythya ferina*), as well as near-threatened species: Grey-tailed Tattler (*Tringa brevipes*), Red-necked Stint (*Calidris ruficollis*), and the endemic Pink-bellied Imperial Pigeon (*Ducula poliocephala*).

Table 1. List of species recorded in Calapan City and Pola, Oriental Mindoro

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Philippine Duck	<i>Anas luzonica</i>	Endemic	Vulnerable
2	Northern Shoveler	<i>Spatula clypeata</i>	Migrant	Least Concern
3	Common Pochard	<i>Aythya ferina</i>	Migrant	Vulnerable
4	Striated Heron	<i>Butorides striata</i>	Resident, Migrant	Least Concern
5	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
6	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
7	Western Osprey	<i>Pandion haliaetus</i>	Migrant	Least Concern
8	White-bellied Sea Eagle	<i>Haliaeetus leucogaster</i>	Resident	Least Concern
9	Brahminy Kite	<i>Haliastur indus</i>	Resident	Least Concern
10	Peregrine Falcon	<i>Falco peregrinus</i>	Resident, Migrant	Least Concern
11	Grey Plover	<i>Pluvialis squatarola</i>	Migrant	Least Concern
12	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern
13	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern

14	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
15	Grey-tailed Tattler	<i>Tringa brevipes</i>	Migrant	Near Threatened
16	Terek Sandpiper	<i>Xenus cinereus</i>	Migrant	Least Concern
17	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern
18	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern
19	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
20	Pacific Swallow	<i>Hirundo tahitica</i>	Resident	Least Concern
21	Middendorff Grasshopper Warbler	<i>Helopsaltes ochotensis</i>	Migrant	Least Concern
22	Clamorous Reed Warbler	<i>Acrocephalus stentoreus</i>	Resident	Least Concern
23	Golden-headed Cisticola	<i>Cisticola exilis</i>	Resident	Least Concern
24	Philippine Coucal	<i>Centropus viridis mindorensis</i>	Endemic	Least Concern
25	Zebra Dove	<i>Geopelia striata</i>	Resident	Least Concern
26	Collared Kingfisher	<i>Todiramphus chloris</i>	Resident	Least Concern
27	Brown-breasted Kingfisher	<i>Halcyon gularis</i>	Endemic	Least Concern
28	Asian Koel	<i>Eudynamys scolopaceus</i>	Resident	Least Concern
29	Philippine Pied Fantail	<i>Rhipidura nigritorquis</i>	Endemic	Least Concern
30	Black-naped Oriole	<i>Oriolus chinensis</i>	Resident	Least Concern
31	Pink-bellied Imperial Pigeon	<i>Ducula poliocephala</i>	Endemic	Near Threatened
32	Lowland White-eye	<i>Zosterops meyeri</i>	Near Endemic	Least Concern
33	Olive-backed Sunbird	<i>Cinnyris jugularis</i>	Resident	Least Concern

Kentish Plover (*Charadrius alexandrinus*) was the most numerous with a maximum total count of 1,928 individuals, followed by Lesser Sand Plover (Siberian) (*Charadrius mongolus*) with a maximum count of 734 individuals, and then the endemic Philippine Duck (*Anas luzonica*) with a maximum count of 302 individuals.

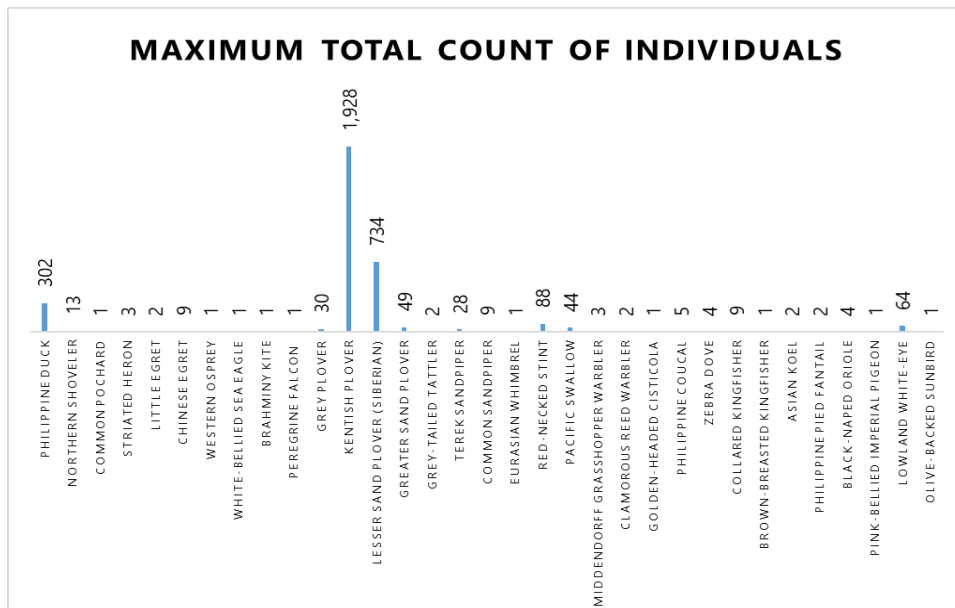


Figure 8. Maximum total number of individuals counted per species across sites

Maidlang Sandbar C had the most number of individuals recorded while Silonay Sandbar A had the most number of species recorded (see Figure 9).

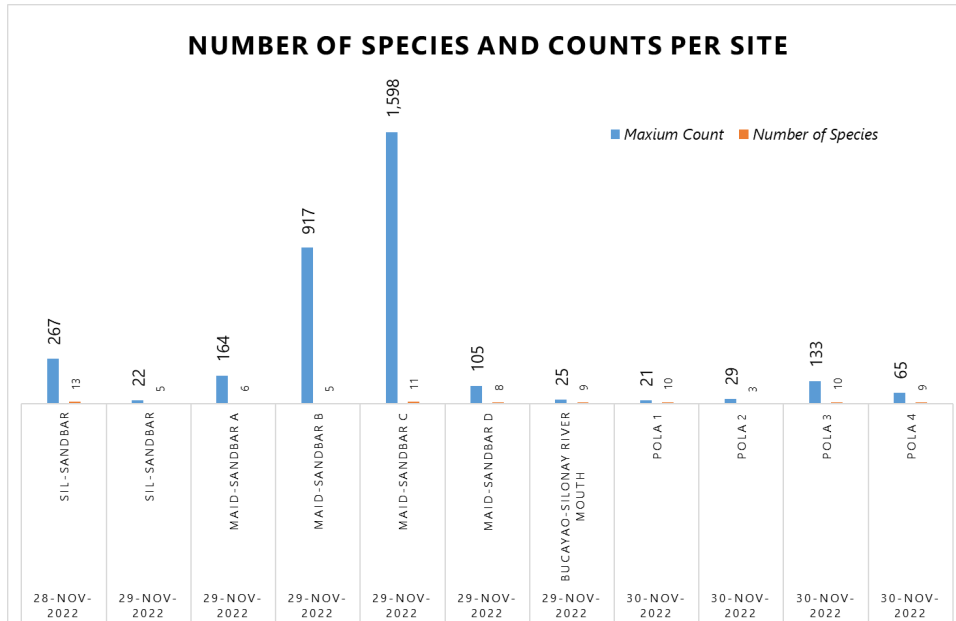


Figure 9. Number of species and individual counts per site throughout the survey period

Notes

13.205467, 121.445146 in Pola was also visited on November 30 but there were no birds recorded

Species Photos



Philippine Ducks (Anas luzonica) in Maidlang wetland



Juvenile Philippine Sailfin Lizard (Hydrosaurus pustulatus) in Maidlang wetland

Threats, Issues, and Concerns

- Illegal hunting of birds for food
- Solid waste and water pollution

Suggestions and Recommendations

- Further surveys to continuously assess Far Eastern Curlews during their wintering period in other confirmed sites in Oriental Mindoro (Mahal na Pangalan wetland) as well as Occidental Mindoro (San Jose wetlands)
- Further surveys in Silonay and Maidlang wetlands in other months to confirm presence of Far Eastern Curlews

Partner Individuals and/or Organizations

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- **Nial Moores, Ph. D**

Director, Birds Korea (Republic of Korea)

Conservation Avian Biodiversity

IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group & Threatened Waterfowl Specialist Group

- **Dave Bakewell**

Species identification, verification, and confirmation.

Provision of reference photos

References

- Comparison Guide for Far Easter Curlew based from The Australian Bird Guide (Menkhorst et al., 2017)
- Field Guide to the Waterbirds of ASEAN (Lee et al., 2018)
- The IUCN Red List of Threatened Species (2022). Version 2022-2. <<https://www.iucnredlist.org>>



Far Eastern Curlew (*Numenius madagascariensis*) Census

Sto. Tomas and Agoo
La Union, Philippines
December 26-28, 2022

Site Info

La Union province is located in the Ilocos Region of the Philippines. It is situated in the western part of north-central Luzon.

Coastal localities in the municipalities of Sto. Tomas and Agoo were surveyed.

Most of these areas rely on fishpond farming, commercial fishing, and agricultural farming as their sources of livelihood.



Figure 1. Site location in reference with the whole Philippine Archipelago

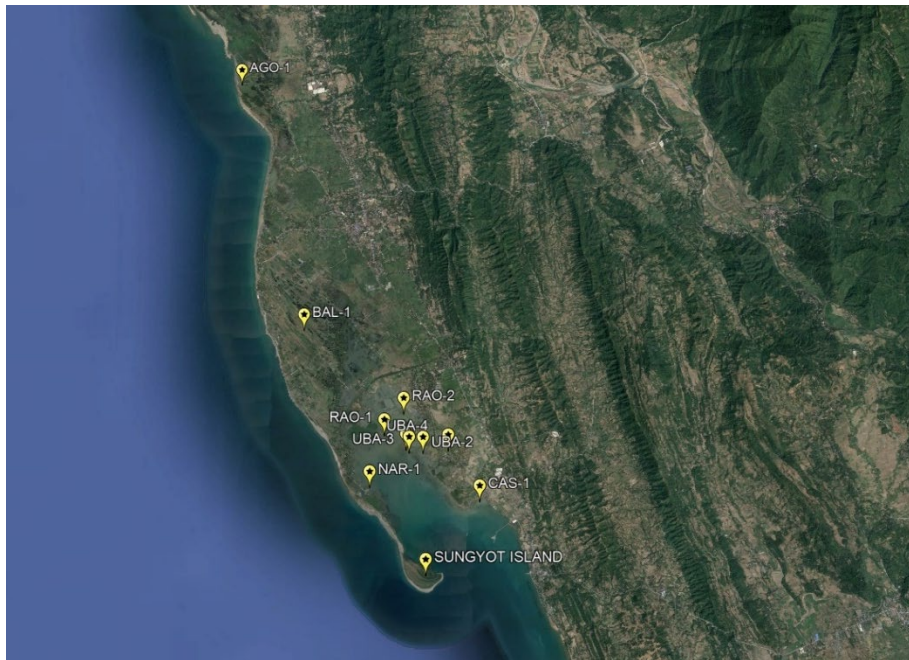


Figure 2. Areas surveyed in Sto. Tomas and Agoo, La Union

Site coordinates:

Sto. Tomas and Agoo, La Union

16.256338, 120.392373 (CAS-1) – Brgy. Casantaan, Sto. Tomas, La Union

Sandy beach

16.268769, 120.35831 (UBA-1) – Brgy. Ubagan, Sto. Tomas, La Union

Fishpond

16.267745, 120.379408 (UBA-2) - Brgy. Ubagan, Sto. Tomas, La Union

Fishpond

16.268423, 120.375859 (UBA-3) - Brgy. Ubagan, Sto. Tomas, La Union

Mudflat

16.268225, 120.375923 (UBA-4) - Brgy. Ubagan, Sto. Tomas, La Union

Mudflat with fishpen poles

16.297247, 120.351526 (BAL-1) - Brgy. Balaoc, Sto. Tomas, La Union

Rice fields

16.260321, 120.366618 (NAR-1) - Brgy. Narvacan, Sto. Tomas, La Union

Mudflat

16.240406, 120.379190 (SUNGYOT ISLAND) – Brgy. Narvacan, Sto. Tomas, La Union

Sandy islet

16.272038, 120.37035 (RAO-1) - Brgy. Raois, Sto. Tomas, La Union

Mudflat with oyster farm

16.276868, 120.375072 (RAO-2) - Brgy. Raois, Sto. Tomas, La Union

Fishpond

16.358926, 120.336285 (AGO-1) – Brgy. Sta. Rita Central, Agoo, La Union
Sandy pond



Figure 3. Mudflat site in Sitio Abagatan-Bulog, Brgy. Raois, Sto. Tomas



Figure 4. Shorebird tracks in Narvacan, Sto. Tomas

Methodology

Ocular of prospective sites during low tide period using spotting scope and/or binoculars. The Comparison Guide for Far Eastern Curlews based from The Australian Bird Guide (Menkhorst et al., 2017) and Field Guide to the Waterbirds of ASEAN (Lee et al., 2018) were used to identify the species.

Results and Discussion

Nine sites in Sto. Tomas, La Union and one site in Ago, La Union were surveyed from December 26-28 to conduct census of Far Eastern Curlew (*Numenius madagascariensis*).

A total of eight Far Eastern Curlew (*Numenius madagascariensis*) was recorded throughout the survey period.

On December 26, three individuals were recorded at Ubagan Mudflat 3 (UBA-3). One of the individuals was an adult female, and the two individuals were both male. And on December 27, five individuals were recorded at Raois Mudflat 1 (RAO-1) (see Figure 5).

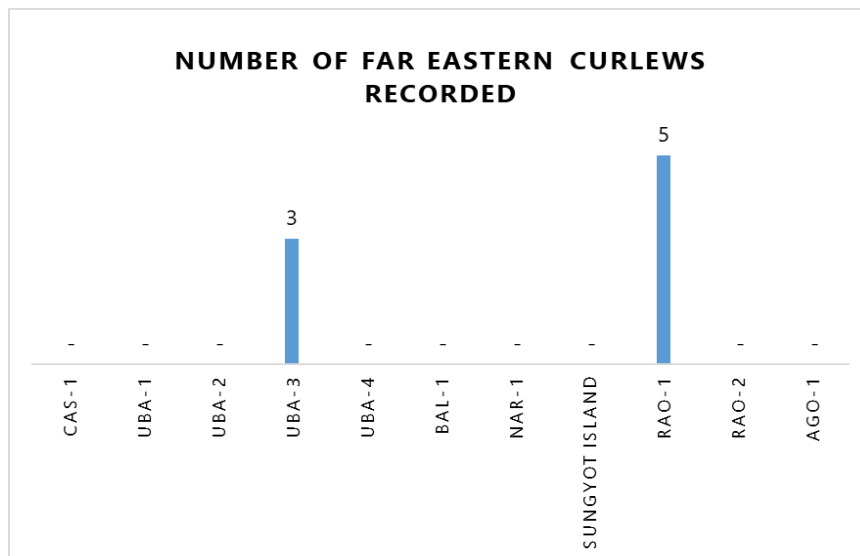


Figure 5. Far Eastern Curlew (*Numenius madagascariensis*) sightings across sites



Figure 6. Far Eastern Curlew in Ubagan mudflat



Figure 7. Far Eastern Curlews in Raois mudflat

Throughout the survey, a total of 42 species of birds was recorded, seven of which are assessed as threatened or near threatened species by the International Union for the Conservation of Nature (IUCN).

Threatened species include the endangered Far Eastern Curlew (*Numenius madagascariensis*) and Java Sparrow (*Padda oryzivora*), vulnerable species: Chinese Egret (*Egretta eulophotes*) and Philippine Duck (*Anas luzonica*), as well as Near Threatened species: Bar-tailed Godwit (*Limosa lapponica*), Eurasian Curlew (*Numenius arquata*), and Red-necked Stint (*Calidris ruficollis*).

Table 1. List of species recorded in Sto. Tomas and Agoo, La Union

NO.	ENGLISH NAME	SCIENTIFIC NAME	RESIDENCE STATUS	IUCN STATUS
1	Philippine Duck	<i>Anas luzonica</i>	Endemic	Vulnerable
2	Javan Pond heron	<i>Ardeola speciosa</i>	Migrant	Least Concern
3	Striated Heron	<i>Butorides striata</i>	Resident, Migrant	Least Concern
4	Grey Heron	<i>Ardea cinerea</i>	Migrant	Least Concern
5	Purple Heron	<i>Ardea purpurea</i>	Migrant	Least Concern
6	Great Egret	<i>Ardea alba</i>	Resident, Migrant	Least Concern
7	Intermediate Egret	<i>Ardea intermedia</i>	Resident, Migrant	Least Concern
8	Little Egret	<i>Egretta garzetta</i>	Resident, Migrant	Least Concern
9	Chinese Egret	<i>Egretta eulophotes</i>	Migrant	Vulnerable
10	Eastern Cattle Egret	<i>Bubulcus coromandus</i>	Resident, Migrant	Least Concern
11	Barred Rail	<i>Hypotaenidia torquata</i>	Resident	Least Concern



12	Black-winged Stilt	<i>Himantopus himantopus</i>	Migrant	Least Concern
13	Pacific Golden Plover	<i>Pluvialis fulva</i>	Migrant	Least Concern
14	Grey Plover	<i>Pluvialis squatarola</i>	Migrant	Least Concern
15	Kentish Plover	<i>Charadrius alexandrinus</i>	Migrant	Least Concern
16	Lesser Sand Plover (Siberian)	<i>Charadrius mongolus</i>	Migrant	Least Concern
17	Greater Sand Plover	<i>Charadrius leschenaultii</i>	Migrant	Least Concern
18	Bar-tailed Godwit	<i>Limosa lapponica</i>	Migrant	Near Threatened
19	Eurasian Whimbrel	<i>Numenius phaeopus</i>	Migrant	Least Concern
20	Far Eastern Curlew	<i>Numenius madagascariensis</i>	Migrant	Endangered
21	Eurasian Curlew	<i>Numenius arquata</i>	Migrant	Near Threatened
22	Common Redshank	<i>Tringa totanus</i>	Migrant	Least Concern
23	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Migrant	Least Concern
24	Terek Sandpiper	<i>Xenus cinereus</i>	Migrant	Least Concern
25	Common Greenshank	<i>Tringa nebularia</i>	Migrant	Least Concern
26	Common Sandpiper	<i>Actitis hypoleucos</i>	Migrant	Least Concern
27	Red-necked Stint	<i>Calidris ruficollis</i>	Migrant	Near Threatened
28	Black-tailed Gull	<i>Larus crassirostris</i>	Migrant	Least Concern
29	Common Tern	<i>Sterna hirundo</i>	Migrant	Least Concern
30	Greater Crested Tern	<i>Thalasseus bergii</i>	Migrant	Least Concern
31	Whiskered Tern	<i>Chlidonias hybrida</i>	Migrant	Least Concern
32	Pacific Swallow	<i>Hirundo tahitica</i>	Resident	Least Concern
33	Chestnut Munia	<i>Lonchura atricapilla</i>	Resident	Least Concern
34	Scaly-breasted Munia	<i>Lonchura punctulata</i>	Resident	Least Concern
35	Common Kingfisher	<i>Alcedo atthis</i>	Migrant	Least Concern
36	Collared Kingfisher	<i>Todiramphus chloris</i>	Resident	Least Concern
37	Java Sparrow	<i>Padda oryzivora</i>	Introduced	Endangered
38	Black Bittern	<i>Ixobrychus flavicollis</i>	Resident	Least Concern
39	Yellow Bittern	<i>Ixobrychus sinensis</i>	Resident	Least Concern
40	Paddyfield Pipit	<i>Anthus rufulus</i>	Resident	Least Concern
41	Grey Wagtail	<i>Motacilla cinerea</i>	Migrant	Least Concern
42	Oriental Pratincole	<i>Glareola maldivarum</i>	Resident, Migrant	Least Concern

Little Egret (*Egretta garzetta*) was the most numerous with a maximum total count of 301 individuals, followed by Greater Crested Tern (*Thalasseus bergii*) with a maximum count of 175 individuals, and then Black-winged Stilt (*Himantopus himantopus*) with a maximum count of 138 individuals (see Figure 8).

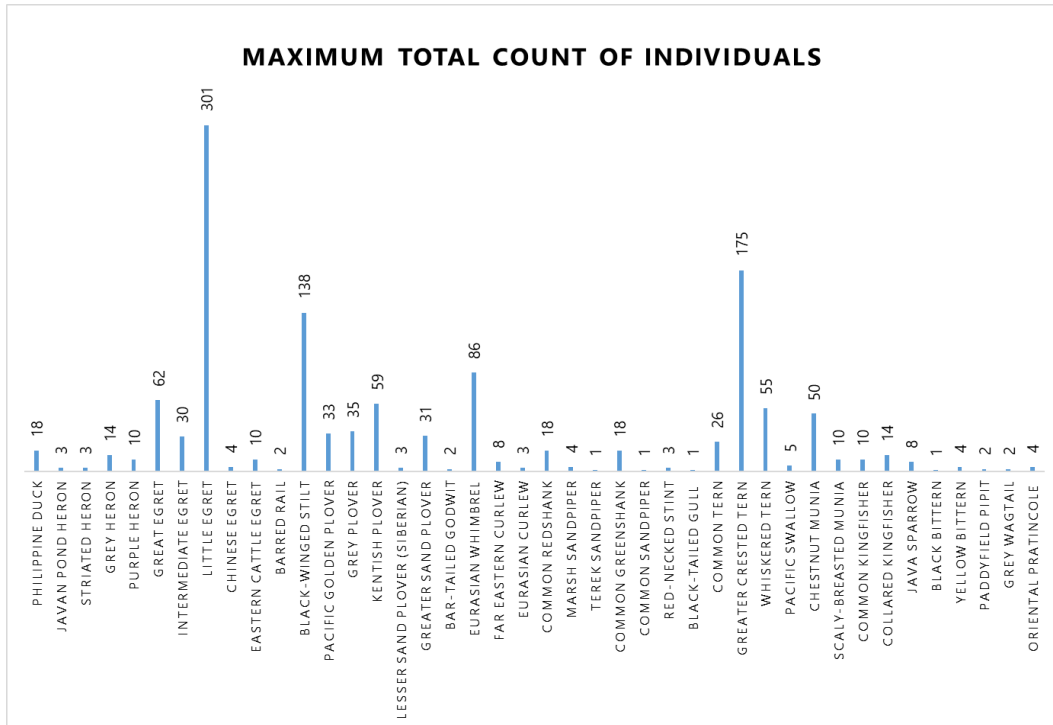


Figure 8. Maximum total number of individuals counted per species across sites

Balaoc in Sto. Tomas had the most number of individuals with 544 individuals counted while Raois had the most number of species recorded (see Figure 9).

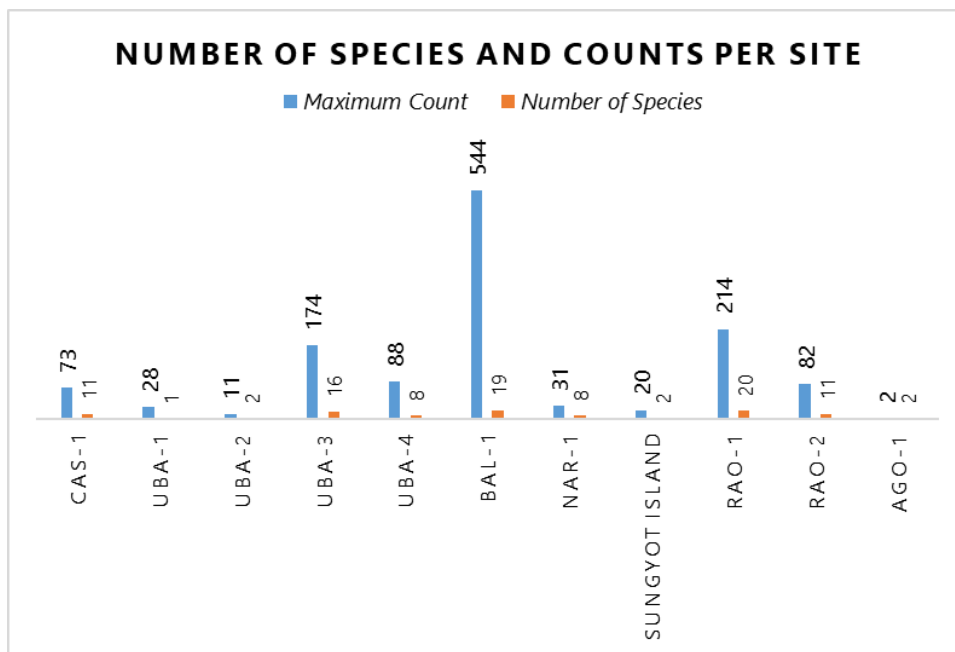
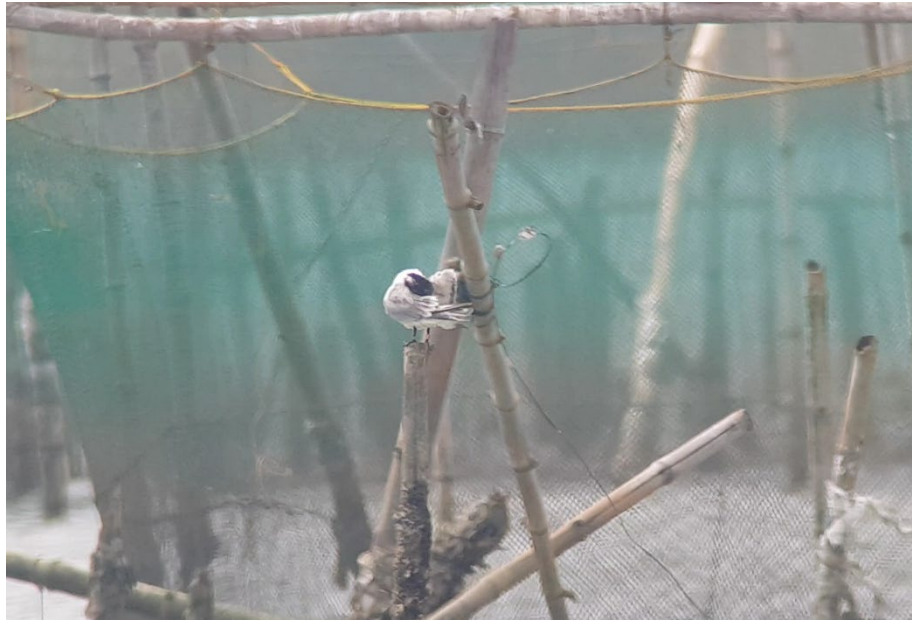


Figure 9. Number of species and individual counts per site throughout the survey period

One adult individual of Greater Crested Tern (*Thalasseus bergii*) had a red ring (China). Species was seen perched on bamboo pole.



Ringed adult Greater Crested Tern (*Egretta eulophotes*)

Species Photos



Black-tailed Gull (*Larus crassirostris*) in Ubagan together with other shorebirds



Chinese Egret (*Egretta eulophotes*) in Ubagan

Notes

16.21225, 120.41428

A floating seaweed area at Brgy. Casantaan, Sto. Tomas.

Visited on December 26, 2022

No birds were recorded at the time of the survey

16.250343, 120.371404

A sandy beach area in Brgy. Narvacan, Sto. Tomas

Visited on December 27, 2022

No birds were seen during the survey period but many small waders' footprints were seen extending around 1km (possibly sand plovers, Kentish Plovers) – possibly an evening or a high tide roosting area

On the morning of December 28, Brgy. Raois was also visited but the weather restricted the survey.

Threats, Issues, and Concerns

- Commercial fishing practices
- Quarrying of black sand for commercial purposes (large quarrying shipping vessel was observed during the survey)
- Beach resort developments



- Solid waste and water pollution

Suggestions and Recommendations

- Conduct surveys during high tide on fishponds surrounding the mudflat
- LGU coordination with local fishpond owners not to install thin thread as deterring device for birds
- Satellite tagging of Far Eastern Curlew and other species

Partner Individuals and/or Organizations

- **Nial Moores, Ph. D**
Director, Birds Korea (Republic of Korea)
Conservation Avian Biodiversity
IUCN SSC Member: Wetlands International & IUCN SSC Duck Specialist Group & Threatened Waterfowl Specialist Group
- **Dave Bakewell**
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