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Republic of the Philippines  
Department of Environment and Natural Resources  
**PROVINCIAL ENVIRONMENT AND NATURAL RESOURCES OFFICE**  
MIMAROPA Region

FEB 16 2023

**MEMORANDUM**

FOR : The Regional Executive Director  
1515 DENR By the Bay Building,  
Roxas Boulevard,  
Barangay 668, Ermita, Manila

THRU : The ARD for Technical Services

FROM : The PENR Officer

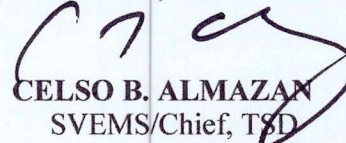
SUBJECT : 2023 ASIAN WATERBIRD CENSUS (AWC) IN APO REEF  
NATURAL PARK OF CENRO SABLAYAN, OCCIDENTAL  
MINDORO

Forwarded herewith is the memorandum dated February 13, 2023 of CENRO Sablayan regarding the conducted Asian Waterbird Census in Apo Reef Natural Park on January 14 to 16, 2023.

Attached are the AWC Report, filled out AWC Form, photo documentation of their activity.

For your information and consideration.

For the OIC, PENR Officer:

  
**CELSO B. ALMAZAN**  
SVEMS/Chief, TSD





Republic of the Philippines  
Department of Environment and Natural Resources  
MIMAROPA Region  
**COMMUNITY ENVIRONMENT AND NATURAL RESOURCES OFFICE**

February 13, 2023

**MEMORANDUM**

FOR : The Regional Executive Director  
1515 DENR By the Bay Building, Roxas Boulevard,  
Barangay 668, Ermita, Manila

THRU : The OIC, PENR Officer  
Mamburao, Occidental Mindoro

FROM : The CENR Officer

SUBJECT : 2023 ASIAN WATERBIRD CENSUS (AWC) IN APO REEF  
NATURAL PARK

Respectfully forwarded is the report of the 2023 AWC in Apo Reef Natural Park (ARNP) conducted last January 14 to 16, 2023. The activity was conducted by personnel from ARNP – Protected Area Management Office, Mindoro Biodiversity Conservation Foundation Inc. (MBCFI), and the Municipal Environment and Natural Resource Office of Sablayan. Seven (7) species of waterbirds were recorded during the AWC in ARNP including the nationally threatened Greater Crested Tern (*Thalasseus bergii*) and Brown Booby (*Sula leucogaster*).

Attached herewith are the 2023 AWC Report and a duly accomplished AWC Count Form.

For information and record.

  
FOR. ANASTACIO A. SANTOS, MPA







**Department of Environment and Natural Resources**  
**MIMAROPA Region**  
**APO REEF NATURAL PARK**  
**Protected Area Management Office**



February 13, 2023

**MEMORANDUM**

**FOR** : The Regional Executive Director  
1515 DENR By the Bay Building, Roxas Boulevard,  
Barangay 668, Ermita, Manila

**THRU** : The OIC, PENR Officer  
Mamburao, Occidental Mindoro  
  
The CENR Officer

**FROM** : The Protected Area Superintendent

**SUBJECT** : 2023 ASIAN WATERBIRD CENSUS (AWC) IN APO REEF  
NATURAL PARK

Respectfully submitted is the report of the 2023 AWC in Apo Reef Natural Park (ARNP). The census was conducted last January 14 to 16, 2023 by personnel from ARNP – Protected Area Management Office, Mindoro Biodiversity Conservation Foundation Inc. (MBCFI), and the Municipal Environment and Natural Resource Office of Sablayan. During the AWC, seven (7) species of waterbirds were recorded during the AWC in ARNP. These include the nationally threatened Greater Crested Tern (*Thalasseus bergii*) and the Brown Booby (*Sula leucogaster*), and three winter visitors namely, the Common Sandpiper (*Actitis hypoleucos*), Peregrine Falcon (*Falco peregrinus calidus*), and Common Kingfisher (*Alcedo atthis*).

Attached herewith are the 2023 AWC Report and a duly accomplished AWC Count Form.

For information and record.

  
**KRYSTAL DAYNE T. VILLANADA**



**ANNUAL ASIAN WATERBIRD CENSUS (AWC) 2023**  
**APO REEF NATURAL PARK**  
Sablayan, Occidental Mindoro  
14-16 January 2023

## **I. Introduction**

Apo Reef Natural Park (ARNP) is a 15,799.23-hectare Marine Protected Area (MPA) located approximately 33 km off the coast of Sablayan, Occidental Mindoro. It features two adjacent atolls and a fringing reef. The MPA is one of the 228 Key Biodiversity Areas (KBAs) and 117 Important Bird Areas (IBAs) in the Philippines (Mallari et al., 2001; Ambal et al., 2012). It hosts a wide range of bird species, from small island specialists to breeding seabirds. To date, 110 bird species have been recorded within the MPA.

The long-term monitoring of birds in ARNP is a joint initiative between the Protected Area Management of ARNP (ARNP-PAMO) and Mindoro Biodiversity Conservation Foundation Inc. (MBCFI). It started as a component of the rapid site assessment conducted by MBCFI in 2014, followed by more frequent bird surveys in the succeeding years. At present, the ARNP-PAMO and MBCFI conduct bird surveys across breeding and non-breeding seasons to assess the status of the waterbird and non-waterbird populations and inform management and conservation actions within the MPA. One of these surveys is conducted within the second and third weeks of January to participate in the Asian Waterbird Census.

The annual AWC is conducted along two major global flyways: the East Asian – Australasian Flyway and Central Asian Flyway. It mainly aims to obtain information on an annual basis of waterbird populations in wetlands in the region during the non-breeding period of most species as a basis for evaluating sites and monitoring populations. Specifically, the AWC in ARNP aims to:

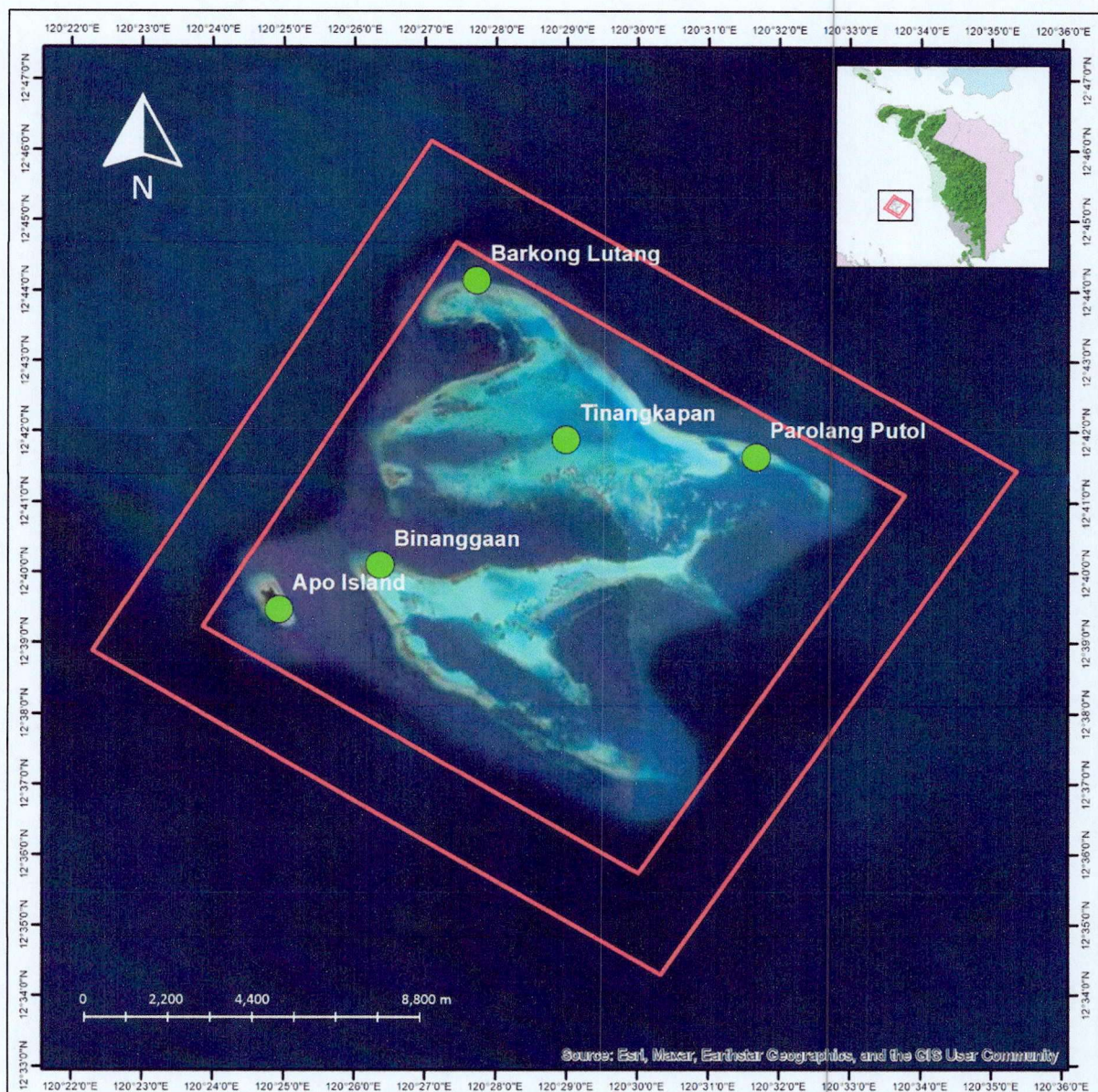
- Obtain information on waterbird populations during southern migration and non-breeding period
- Monitor the status and condition of the recognized wetland area of ARNP; and,
- Discover and document new records of waterbird species, if there is any.

## **II. Methodology**

Transect cruises were done daily from January 14 to 16, 2023. The survey route primarily included the three islets: Apo Island, Apo Menor or Binanggaan, Cajos del Bajo or Tinangkapan. Other roosting sites within the MPA were also surveyed namely, Barkong Lutang and Parolang Putol. Aside from at-sea surveys, counters and recorders walked along the trails in Apo Island from 5:30 AM to 7:00 AM. All waterbirds observed during the surveys were identified and counted. Species of non-waterbirds and their corresponding counts were also noted.

4





**Figure 1.** Apo Reef Natural Park map shows the three major counting sites during the waterbirds survey (Apo Island, Apo Menor, and Cajos del Bajo).

The highest count acquired for each waterbird and non-waterbird species during the three-day survey are presented in this report. Waterbird counts were also reported to Wetlands International using the site and count forms distributed by the DENR-Biodiversity Management Bureau.

### III. Results and Discussion

#### a. Waterbirds

54 individuals of waterbirds from 7 species were recorded during the survey (Table 1). Barred Rail (*Hypotaenidia torquata*) was the most numerous species with 43 individuals. Meanwhile, the other species recorded had three individuals at most. Two of which are nationally threatened seabirds: the Greater Crested Tern (*Thalasseus bergii*) and Brown Booby



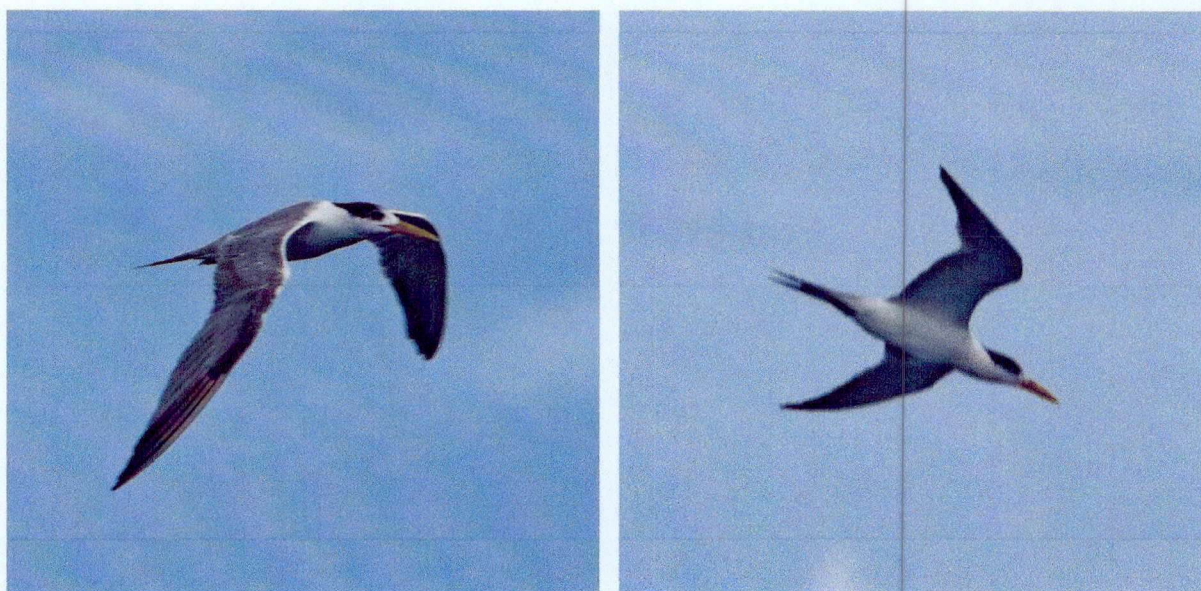
(*Sula leucogaster*). The Greater Crested Tern was recorded displaying foraging movements (Figure 2).

**Table 1.** List of the Waterbird species recorded from January 14 to 16, 2023.

Common Name	Scientific Name	Range	Conservation Status**		Highest Count
			IUCN Red List	PH Red List	
Collared Kingfisher	<i>Todiramphus chloris</i>	R	LC		3
Common Kingfisher	<i>Alcedo atthis</i>	M	LC		3
Peregrine Falcon	<i>Falco peregrinus calidus</i>	M	LC		1
Greater Crested Tern	<i>Thalasseus bergii</i>	R	LC	VU	1
Barred Rail	<i>Hypotaenidia torquata</i>	R	LC		43
Common Sandpiper	<i>Actitis hypoleucos</i>	M	LC		2
Brown Booby	<i>Sula leucogaster</i>	R/M	LC	EN	1

\* R – Resident, M – Migrant, R/M – Resident and Migrant

\*\* LC – Least Concern, VU – Vulnerable, EN – Endangered



**Figure 2.** Greater Crested Tern recorded near Barkong Lutang on January 15, 2023. Photographs by E.H. Tan.

Three of the eight waterbird species are winter visitors to the Philippines based on Allen (2020): the Common Kingfisher (*Alcedo atthis*), Peregrine Falcon (*Falco peregrinus calidus*), Common Sandpiper (*Actitis hypoleucos*) (Figure 3). Notably, only one Peregrine Falcon was also observed during the first AWC of ARNP in 2022. The *calidus* subspecies exhibit high fidelity to its winter ranges (Sokolov et al., 2018) hence, the same individual may have been observed in survey periods.





**Figure 3.** Wintering waterbirds recorded from January 14-16, 2023. A) Common Kingfisher, B) Peregrine Falcon, and C) Common Sandpiper. Photographs by K.J. Zubiri (A) and E. H. Tan (B, C).

#### ***b. Non-waterbirds***

Several non-waterbird species were also encountered during the AWC. A total of 35 individuals from 14 species were recorded (Table 4). Only two of which are nationally threatened: the Philippine Megapode (*Megapodus cumingii*) and Nicobar Pigeon (*Caloenas nicobarica*). Another notable species on the list is the Daurian Redstart (*Phoenicurus auroreus*). This vagrant species was first recorded in Apo Reef Natural Park in November 2021. Both adult female and male individuals have been recorded to date (Figure 4). The male individual sighted during the AWC is presumably the same individual that was recorded by the rangers last December 2022.

*a*

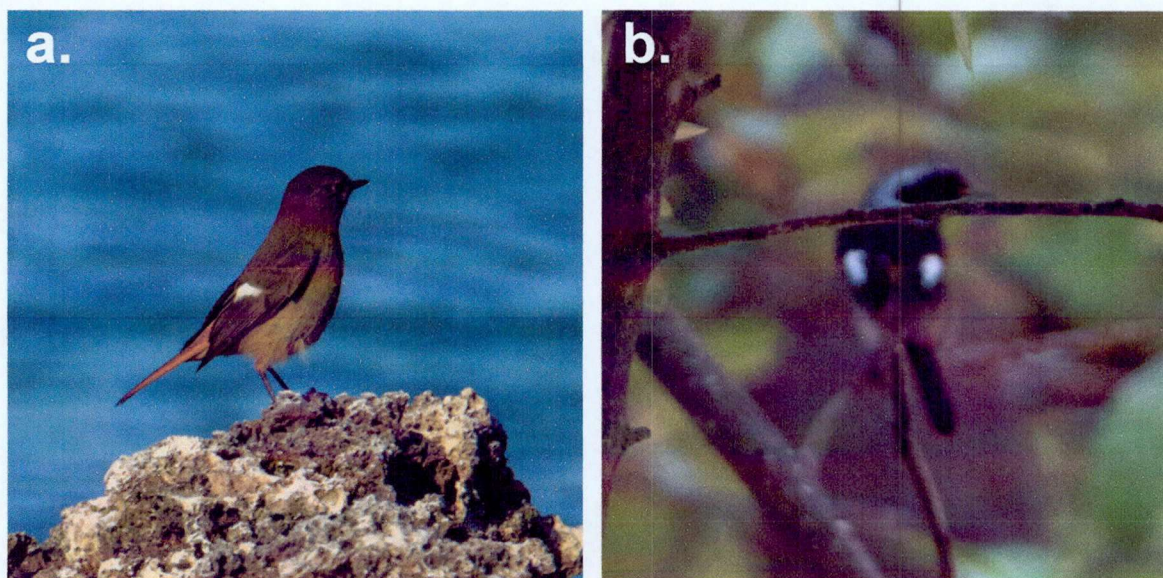


**Table 2.** Non-waterbird species recorded from January 14 to 16, 2023.

Common Name	Scientific Name	Residency Status*	Conservation Status**		Highest Count
			IUCN Red List	PH Red List	
Pied Triller	<i>Lalage nigra</i>	R	LC		2
Nicobar Pigeon	<i>Caloenas nicobarica</i>	R	NT	EN	1
Pied Imperial Pigeon	<i>Ducula bicolor</i>	R	LC		2
Philippine Megapode	<i>Megapodus cumingii</i>	R	LC	VU	1
Asian Koel	<i>Eudynamys scolopaceus</i>	M	LC		2
Barn Swallow	<i>Hirundo rustica</i>	M	LC		1
Daurian Redstart	<i>Phoenicurus aureus</i>	V	LC		1
Olive-backed Sunbird	<i>Cinnyris jugularis</i>	R	LC		3
Black-naped Oriole	<i>Oriolus chinensis</i>	R	LC		8
Eurasian Tree Sparrow	<i>Passer montanus</i>	I	LC		1
Philippine Pied Fantail	<i>Rhipidura nigritorquis</i>	E	LC		4
Leaf-warbler sp.	<i>Phylloscopus</i> sp.				1
White's Thrush	<i>Zoothera aurea</i>	M	LC		1
Swift sp.					7

\* R – Resident, M – Migrant, NE – Near Endemic, I – Introduced, V – Vagrant

\*\* LC – Least Concern, NT – Near Threatened, VU – Vulnerable, EN – Endangered



**Figure 4.** Daurian Redstart individuals recorded in ARNP. A) Female adult recorded in November 2021 and B) male adult recorded in January 2023. Photographs by E. H. Tan (A, B).

h

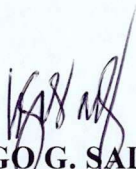


#### **IV. Conclusions and Recommendations**

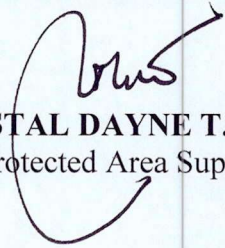
A total of 21 species of birds were recorded during the survey from January 14 to 16, 2023. Seven were species of waterbirds, of which two are nationally threatened species (Greater Crested Tern and Brown Booby) and three are wintering species (Common Kingfisher, Peregrine Falcon, and Common Sandpiper). Similar to the findings of the AWC in the previous year, the waterbird species number and count recorded this year were low. Continuous participation in the AWC is still recommended despite this.

There has been an improvement observed in the capacity of park rangers in conducting the AWC. More adequate birding equipment is now available to the park rangers, including birding camera, binoculars, and field identification guides. Several park rangers have also become more skilled in bird identification, although training activities related to bird surveys should be continued. Future training activities should also include a more in-depth bird photography course. Establishing solid bird photography skills amongst the rangers will allow them to conduct the AWC even without on-site expert supervision thus, reducing the logistical costs of the activity.

**Prepared by:**

  
**HUGO G. SALVADOR**  
CMEMP Extension Officer

**Reviewed and submitted by:**

  
**KRYSTAL DAYNE T. VILLANADA**  
Protected Area Superintendent



## V. References

Allen, D. (2020). *Birds of the Philippines*. Lynx Edicions.

Ambal, R.G.R., Duya, M.V, Cruz, M.A., Coroza, O.G., Vergara, S.G., de Silva, N., ... Tabaranza, B., Jr. (2012). Key Biodiversity Conservation Areas in the Philippines: Priorities for conservation. *Journal of Threatened Taxa*, 4(8), 2788-2796. <https://doi.org/10.11609/JoTT.o2995.2788-96>

Mallari, N.A., Tabaranza, B., Jr., & Crosby, M. (2001). Key conservation sites in the Philippines: A Haribon Foundation & Birdlife International directory of Important Bird Areas. Bookmark, Inc.

Sokolov, V., Sokolov, A., & Dixon, A. (2018). Migratory movements of Peregrine Falcons *Falco peregrinus*, breeding on the Yamal Peninsula, Russia. *Ornis Hungarica* 26(2), 222-231. [https://doi.org/ 10.1515/orhu-2018-0030](https://doi.org/10.1515/orhu-2018-0030)



## VI. Appendices

### Appendix A. Itinerary of the waterbirds survey last January 14 to 16, 2023.

DATE	TIME	ACTIVITY	REMARKS
January 14	08:00 AM	Assembly at ARNP Jump-off, Sablayan, Occidental Mindoro	Breakfast at ARNP Jump-off or boat
	09:00 AM	Travel from Sablayan Mainland to ARNP	Birds encountered during transit were recorded; two islets Apo Menor (Binanggaan) and Cajos del Bajo (Tinangkapan) were also surveyed
	12:00 NN	Lunch	
	03:30 PM	<b>Waterbird Monitoring:</b> <ul style="list-style-type: none"> <li>• Apo Island</li> <li>• Binanggaan</li> <li>• Tinangkapan</li> </ul>	
	06:00 PM	Dinner	
	08:00 PM	Ramsar application review	
January 15	06:30 AM	<b>Waterbird Monitoring:</b> <ul style="list-style-type: none"> <li>• Apo Island</li> <li>• Apo Menor</li> <li>• Cayos del Bajo</li> <li>• Barkong Lutang</li> <li>• Parolang Putol</li> </ul>	
	12:00 NN	Lunch	
	03:45 PM	<b>Waterbird Monitoring:</b> <ul style="list-style-type: none"> <li>• Apo Island</li> <li>• Apo Menor</li> <li>• Cayos del Bajo</li> <li>• Barkong Lutang</li> <li>• Parolang Putol</li> </ul>	
	06:00 PM	Dinner	
	08:00 PM	Ramsar application review	
January 16	05:45 AM	Morning Bird Walk within Apo Island	
	07:00 AM	Breakfast	
	09:30 AM	AWC Refresher ARNP AWC 2023 Results and other activities	Facilitated by Elyza Hazel Tan
	11:00 AM	Travel back from ARNP to Sablayan Mainland	Birds encountered during transit were recorded
	2:00 PN	Lunch at Sablayan Mainland	



**Appendix B.** Count data from the 2023 AWC in Apo Reef Natural Park from January 14 to 16, 2022. Values marked highlighted with yellow are the highest counts per location across survey dates.

Family	Common Name	Scientific Name	Day 1 (July 16)				Day 2 (July 17)				Day 3 (July 18)				Total Highest Count
			AI	TK	BG	IT	AI	TK	BG	IT	AI	TK	BG	IT	
Alcedinidae	Common Kingfisher	<i>Alcedo althis</i>					3								3
Alcedinidae	Collared Kingfisher	<i>Todiramphus chloris</i>	1				2		1		1				3
Apodidae	Swift sp.					5	1	1							7
Campephagidae	Pied Triller	<i>Lalage nigra</i>					1				2				2
Columbidae	Nicobar Pigeon	<i>Caloenas nicobarica</i>									1				1
Columbidae	Pied Imperial Pigeon	<i>Ducula bicolor</i>					2								2
Cuculidae	Asian Koel	<i>Eudynamys scolopaceus</i>					2								2
Falconidae	Peregrine Falcon	<i>Falco peregrinus calidus</i>	1						1						1
Hirundinidae	Barn Swallow	<i>Hirundo rustica</i>									1				1
Laridae	Greater Crested Tern	<i>Thalasseus bergii</i>								1					1
Megapodiidae	Philippine Megapode	<i>Megapodius cumingii</i>					1								1
Muscicapidae	Daurian Redstart	<i>Phoenicurus aureus</i>					1				1				1
Nectariniidae	Olive-backed Sunbird	<i>Cinnyris jugularis</i>					3								3
Oriolidae	Black-naped Oriole	<i>Oriolus chinensis</i>					5				8				8
Passeridae	Eurasian Tree Sparrow	<i>Passer montanus</i>	1												1
Rallidae	Barred Rail	<i>Hypotaenidia torquata</i>	15				30				43				43
Rhipiduridae	Philippine Pied Fantail	<i>Rhipidura nigritorquis</i>					4								4
Scolopacidae	Common Sandpiper	<i>Actitis hypoleucos</i>					2				1				2
Sulidae	Brown Booby	<i>Sula leucogaster</i>												1	2
Sylviidae	Leaf-warbler sp.	<i>Phylloscopus</i> sp.					1								1
Turdidae	White's Thrush	<i>Zoohera aurea</i>									1				1

AI – Apo Island, TK – Tinangkanan, BG – Binanggagan, IT – In transit



**Appendix C.** Photo-documentation of the 2023 AWC in ARNP.



Pied Triller (*Lalage nigra*) observed near the Lighthouse



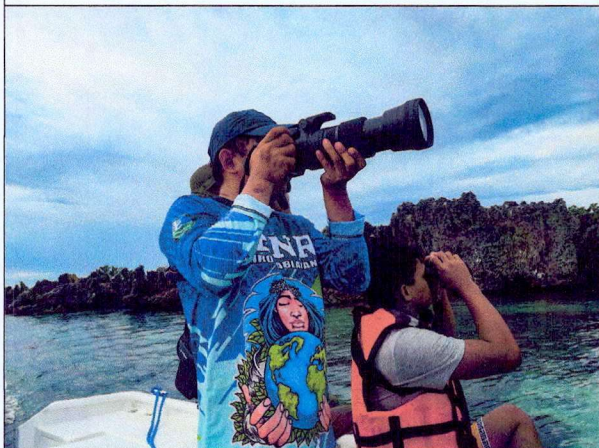
Collared Kingfisher (*Todiramphus chloris*) perching near the Ranger's Station



Silhouette of a Female Asian Koel perching on a tree within the Picnic Ground



Hugo Salvador (left) and Elyza Hazel Tan recording shorebirds in Apo Island



Kelvin John Zubiri (left) taking photographs of birds in Binanggaan



White's Thrush (*Zoothera aurea*) at the Picnic Ground





Monitoring team surveying birds along the trails



Elyza Hazel Tan (left) training Kelvin John Zubiri and Sherwin Benzoza on bird photography



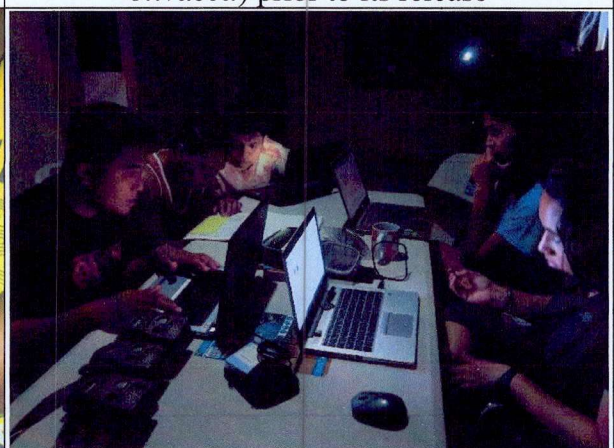
Green Sea Turtle (*Chelonia mydas*) nesting within Bora-boracay



Roberto Beringuela (center) tagging the rescued Olive Ridley Turtle (*Lepidochelys olivacea*) prior to its release



Geoffroy's Rousettes (*Rousettus amplexicaudatus*) observed and measured in Apo Island



Members of the monitoring team reviewing the Ramsar Site Information Sheet (RIS) of Apo Reef Natural Park





Presentation of ARNP AWC 2023 initial results



Participants of the 2023 Asian Waterbird Census in Apo Reef Natural Park



#### **Appendix D. Contributions to the 2023 ARNP AWC Report.**

Data observations:	ARNP AWC Participants
Identification and verification of species:	Bob Natural (Wild Bird Club of the Philippines) Kathy Lene Cielo (MBCFI)
Report Drafting:	Hugo Salvador (ARNP-PAMO)
Report Review:	Elyza Hazel Tan (MBCFI)
Final Review:	Krystal Dayne T. Villanada (ARNP-PASu)



# Asian Waterbird Census (Southeast Asia)



Please return to your National Co-ordinator or Wetland International, 3A39, Kelana Centre Point, No. 3, Jalan SS7/19, Kelana Jaya 47301, MALAYSIA (before March)

Country:

Philippines

Name of Site:

Apo Reef Natural Park

Date:

January 14-16, 2023

Province/State/Prefecture: Occidental Mindoro

Nearest Large Town: Sablayan

Site Code (only for official use):

Type: A - Aerial, **F - On foot**, ~~B - By boat~~, M - Mixed

Coverage: V-25%, **W-25-50%**, X-50-75%, Y-75-99%, Z-100%

Has the site been counted before?

Yes



No



## Waterfowl Counts

Little Grebe *Tachybaptus ruficollis*

### CORMORANTS & DARTERS

Great Cormorant *Phalacrocorax carbo*

Indian Shag *P. fuscicollis*

Little Cormorant *P. niger*

Unidentified cormorants

Oriental Darter *Anhinga melanogaster*

### HERONS & EGRETS

Great Bittern *Botaurus stellaris*

Yellow Bittern *Ixobrychus sinensis*

Schrenck's Bittern *I. eurhythmus*

Cinnamon Bittern *I. cinnamomeus*

Black Bittern *I. flavicollis*

Japanese Night Heron *Gorsachius goisagi*

Malayan Night Heron (Tiger Bittern) *G. melanolophus*

Black-crowned Night Heron *Nycticorax nycticorax*

Rufous Night Heron *N. caledonicus*

Indian Pond Heron *Ardeola grayii*

Chinese Pond Heron *A. bacchus*

Javan Pond Heron *A. speciosa*

Cattle Egret *Bubulcus ibis*

Striated (Little Green) Heron *Butorides striatus*

Eastern Reef Egret *Egretta sacra*

Chinese (Swinhoe's) Egret *E. eulophotes*

Little Egret *E. garzetta*

Intermediate Egret *E. intermedia*

Great Egret *E. alba*

Purple Heron *Ardea purpurea*

Grey Heron *A. cinerea*

Great-billed Heron *A. sumatrana*

Unidentified herons and egrets

### STORKS

Milky Stork *Mycteria cinerea*

Painted Stork *M. leucocephala*

Asian Openbill *Anastomus oscitans*

Black Stork *Ciconia nigra*

Woolly-necked Stork *C. episcopus*

Storm's Stork *C. stormi*

Black-necked Stork *Ephippiorhynchus asiaticus*

Lesser Adjutant *Leptoptilos javanicus*

Greater Adjutant *L. dubius*

Unidentified storks

### IBISES & SPOONBILLS

Black-headed (White) Ibis *Threskiornis melanocephalus*

White-shouldered Ibis *Pseudibis davisoni*

Giant Ibis *Thaumatibis gigantea*

Glossy Ibis *Plegadis falcinellus*

White Spoonbill *Platalea leucorodia*

Black-faced Spoonbill *P. minor*

Unidentified Spoonbills

## GEESE & DUCKS

Spotted Whistling Duck *Dendrocygna guttata*

Fulvous (Large) Whistling Duck *D. bicolor*

Wandering Whistling Duck *D. arcuata*

Lesser Whistling Duck (Lesser Tree Duck) *D. javanica*

Greylag Goose *Anser anser*

Bar-headed Goose *A. indicus*

Ruddy Shelduck *Tadorna ferruginea*

Common Shelduck *T. tadorna*

White-winged Wood Duck *Cairina scutulata*

Comb Duck *Sarkidiornis melanotos*

Indian Cotton Teal *Nettapus coromandelianus*

Eurasian Wigeon *Anas penelope*

Falcated Teal *A. falcata*

Gadwall *A. strepera*

Common (Green-winged) Teal *A. crecca*

Grey Teal *A. gibberifrons*

Mallard *A. platyrhynchos*

Spot-billed Duck *A. poecilorhynchos*

Philippine Duck *A. luzonica*

Northern Pintail *A. acuta*

Garganey *A. querquedula*

Northern Shoveler *A. clypeata*

Red-crested Pochard *Netta rufina*

Common Pochard *Aythya ferina*

Baer's Pochard *A. baeri*

Ferruginous Duck *A. nyroca*

Tufted Duck *A. fuligula*

Goosander *M. merganser*

Unidentified ducks

## CRANES

Common Crane *Grus grus*

Sarus Crane *G. antigone*

## RAILS, GALLINULES & COOTS

Water Rail *Rallus aquaticus*

Slaty-breasted Rail *R. striatus*

Banded Rail *R. philippensis*

43

Barred Rail *R. torquatus*

Red-legged Crake *Rallina fasciata*

Slaty-legged Crake *R. eurizonoides*

Baillon's Crake *Porzana pusilla*

Ruddy Crake *P. fusca*

Band-bellied Crake *P. paykullii*

Spotless Crake *P. tabuensis*

White-browed Crake *P. cinereus (Poliolimnas cinereus)*

Brown Crake *Amaurornis akool*

Bush-Hen *A. olivacea*

White-breasted Waterhen *A. phoenicurus*

Watercock *Gallixrex cinerea*



<p><b>USEFUL SITE INFORMATION:</b> (please circle the relevant figures)</p> <p><u>CONDITION OF WETLAND:</u> <u>Wet (water present)</u> 2 Totally dry, 3. Totally frozen</p> <p><u>PROTECTION</u> By Government (Natural Park)</p>	
<p><u>THREATS AND USES:</u> 0 Unknown, 1 None, 2 Sedimentation, 3 Excessive overgrowth of vegetation, 4 Cutting/clearance of vegetation, 5 Eutrophication, 6 Agriculture along drying margins, 7 Excessive cattle grazing, Pollution by: 8 domestic sewage, 9 solid waste, A industrial waste, <u>B oil</u>, C pesticides, D fertilizers, E Mining, F Hunting/trapping/poaching of birds, G Little fishing, H Large scale fishing, I Partial reclamation, J Complete reclamation, K Dam/barrage construction, <u>L Tourism/recreation</u></p>	
<p><b>TIME OF COUNT:</b> START : 6:00 <u>am</u>pm FINISH : 12:00 <u>am</u>pm</p>	
<p><b>PARTICIPANT(S) NAME (S) AND ADDRESS(ES):</b></p> <p>Elyza Hazel P. Tan, Hugo Ignacio G. Salvador, Sherwin R. Benoza, Kelvin U. Zubiri, Temart E. Rebito, Joshua V. Castillo, Den Mark L. Escala, Gian Melo C. Maranan, Jhunrie A. Nilo</p>	