

## NOTES ON THE BIRDS OF SARANGANI ISLAND, PHILIPPINES

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The Mindanao State University Natural Science Museum conducted two expeditions to Sarangani Island on April 25 to May 22, 1978 and on October 29 to November 8, 1978. The first trip was mainly for collection while the second was intended for a thorough survey of the vegetation types of the island and to observe whatever avian species remained unrecorded. Nineteen species were recorded (16 collected and 3 observed) in April-May and 24 more species were added during the October-November trip. Seven other species reported only by the inhabitants of the island (i.e., no actual encounter by the NSM team members) were also included in the list although they still need verification. The species belong to 13 orders and 25 families. (See Systematic List).

To the writers' knowledge all the species listed in this report are first records for the Sarangani Island. The Large-billed Parrot (*Tanygnathus megalorhynchos*) has been reported to be found only in Balut Island (Fig. 8; an adjacent island of Sarangani Island) according to DuPont (1971) and Delacour and Mayr (1946). This parrot, however, is quite common in Sarangani Island.

The present paper aims to present a systematic list of the Avifauna of Sarangani Island as a result of the inventory conducted, and a little discussion on their affinities. Brief ecological accounts are also discussed.

### Methods of Study

The avian specimens were collected by the use of five Cal. .22 air rifles and no. 10 mesh mist nets. The use of mist nets, however, was

later stopped due to the scarcity of small trees for use as poles and because of the rocky and hilly terrain of the island. The three NSM Field Collectors and two hired assistants would go out every morning at 6:00 o'clock and be back at the camp at about 11:00 to 12:00 noon, then resume hunting at about 3:00 o'clock in the afternoon until 5:00. Taxonomic identifications of the collected specimens were done in the evening after which skinning and stuffing followed. Most of the specimens were collected from the 10-hectare Tumanao original forest and its neighboring areas.

Observations using 10 x 50 mm. binoculars were taken from 5:30 a.m. during the start of every ocular survey of the different vegetation types of the island until late afternoon. A thorough observation was conducted for one week from November 1-7, 1978. Actual encounters of the species were supplemented by interviews of the inhabitants during the rest periods. The book of Delacour and Mayr (1946) and of John DuPont (1971) proved very helpful, especially the colored illustrations of DuPont. A geodetic engineer, Arcangel Fortinez, having surveyed the whole island, unselfishly supplied us with the detailed topography of the island.

### **Sarangani Island**

Sarangani Island is located at 5 degrees 24' North Latitude and 125 degrees 29' East Longitude. It lies on the southernmost projection of Mindanao Island. It has an estimated area of 3,375 hectares. Its greatest width measured is 4.5 kms. and its length is 12 kms. It could be reached by a 16 hp pumpboat from Glan, South Cotabato in six hours. A 24-ha. island called Olanivan is situated just above the northernmost tip of the island.

Sarangani Island is politically divided into two barrios, Sarangani del Norte and Sarangani del Sur, both of which were formerly under the Municipality of Jose Abad Santos, Davao del Sur. President Marcos, upon his visit to Balut Island (Fig. 8), declared the merging of the two Islands of Balut and Sarangani into one separate Municipality.

The inhabitants of the island are distinctly divided into three groups: 1) Christians (landowners mostly from Mindanao and/or the Visayan speaking people); 2) B'laan (a Filipino minority group found

also in Cotabato and Davao Provinces) and 3) Muslims (Maruri from Indonesia).

The distinct two seasons, dry and rainy, are very typical also in the island as in most part of the Philippines.

### Vegetation Types

A sizably large portion of the whole Island has been planted to coconut (see Figs. 2, 3, & 5), *Cocos nucifera* Linnaeus. Because of the characteristically rocky and hilly terrain of the island only the coconut and no other cultivated species like rice or corn seems to thrive well.

The island exhibits a number of coves which favor the abundant growth of Mangrove forests characterized by such species as *Sonneratia spp.*, *Rhizophora spp.*, *Brugiera spp.*, *Ceriops spp.* and *Avicennia officinalis*. Deep in the interior of some coves, as in Patuco, dense growth of nipa palms (*Nypa fruticans* Wurmb) are very noticeable. Most of the areas where beaches are formed have been successfully converted into coconut plantations. However, some areas which are bounded by steep rocky cliffs along the coves still exhibit original beach forest with distinct plant species like *Terminalia catappa* (Talisai), *Pandanus tectorius*, and *Barringtonia spp.*

In some clearings which have not been planted to coconut, especially at the hillsides (Fig. 6), grassland vegetation has successfully infiltrated. Grassland vegetation also thrives where the coconuts are still fairly short. Very typical plant species are found to dominate this type of vegetation as in other parts of the Philippines, i.e., Cogon (*Imperata cylindrica*) and Talahib (*Saccharum spontaneum*).

Parang vegetations are distributed throughout the island in small patches where they share common boundaries with the secondary forest. Actually this type of vegetation is a mixed growth of trees, shrubs and bushes. Very few of these vegetations have successfully given way to the growth of secondary forests. These vegetations thrive favorably on rocky hillsides, ravines, and gullies.

Perhaps the chances of second growth forest to develop into a climax type or a larger patch is very slim, in fact, nil. The pressure from the inhabitants for land use intended for coconuts, their demand for fuel, for boatbuilding, and building of houses is so consistent as to be

irresistible. Small patches of this forest type could still be found in the sitios of Tumanao, Patuco, Bolay, Kamalig, Lantaning, and between Sasapo and Sitio Sarangani.

A 10-hectare remnant original dipterocarp forest, a concession of the Vice Mayor of Jose Abad Santos, Mr. Jose de Arce, has been left untouched and purposely reserved as a wildlife sanctuary. It was in and around this area that most of the team's activities were concentrated. This is the only area which could possibly serve as a refuge for the birds and mammals of the island, but it is being lorded over by the thousands of flying foxes or fruit bats belonging to two species, namely, the *Acerodon jubatus* and the *Pteropus speciosus*, which practically occupy the whole area and are draped from the branches of almost every tree. Aside from being nocturnal, these bats have become diurnal. While it is very safe to assume that the original avian and mammalian population of the island was reduced by man's encroachment, i.e., converting the island into a coconutlandia, it is equally evident that further reduction of the remaining and diminishing avian and mammalian population has been largely due to the excessive increase in the population densities of the *A. jubatus* and *P. speciosus*. These bats feed on fruits and prove too much for some birds and mammals to compete with. In the first place, however, the prolific population of the flying foxes was caused by the modification of their habitat types still due to man's activities. Perhaps it is due to the scarcity of food in the island, that the two species of bats were often observed to fly towards the mainland between 5:00-6:00 p.m. to forage for the night and go back to the island at the wee hours of the morning.

The Mindanao Sambar Deer (*Cervus francianus*) is now practically extinct in the island where it used to roam 10 or 20 years ago, according to the testimony of the inhabitants. These people could soon bear witness, too, to the complete disappearance of the almost extinct monkey, *Macaca philippinensis*, and wild pigs, *Sus celebensis*, if the hunting for these animals would not be completely stopped.

### Avian Fauna

Aside from making an inventory of the vegetation types and the

avian population of the island, the other purpose of the expeditions was to look into the influence of the Moluccan elements of our Philippine bird fauna. As has been pointed out by Delacour and Mayr (1946) regarding the origin of Philippine bird fauna, there is a weaker but definite influence exercised from the south as represented by a number of Moluccan elements most of which have arrived from Celebes.

Sarangani and Balut Islands are the southernmost islands of the Philippines. As such, they should be the most favorable location where migrating forms of vertebrates pass on their way from their Australo-Papuan origin to the mainland Philippines or vice-versa. The terrestrial fauna, in this case the birds inhabiting the islands, should establish a considerable number of species with Moluccan or Australo-Papuan affinities.

The data and specimens from the two expeditions to Sarangani Island show that there are only 50 remaining avian species, both resident and migratory (belonging to 13 orders and 25 families), inhabiting the island. Of this number 23 species (or nearly 50%) indicate strong affinities with the Moluccan or Australo-Papuan elements, the most conspicuous of which are *Tanygnathus megalorhynchus* (never been reported in mainland Mindanao yet), *Megapodius freycinet pusillus*, *Eudynamys scolopacea*, *Artamus leucorhynchus*, *Ducula bicolor*, *Treron pompadoura*, *Ichthyophaga ichthyaetus*, *Ixobrychus cinnamomeus*, etc. (See Table A)

A few migratory species were also noted during the expeditions, e.g., *Pluvialis dominica fulva*, *Hirundo rustica gutturalis*, *Phylloscopus b. borealis*, *Muscicapa griseisticta*, *Lanius cristatus lucionensis*, and *Halcyon coromanda*. (see Table B)

### Recommendations

The results of the study conducted on the Avifauna of Sarangani Island strongly point to the following recommendations:

1. The whole Sarangani Island (3,375 hectares) should be declared as a National Park or animal sanctuary to ensure that the remaining avian population, and the other terrestrial vertebrates like mammals, reptiles and amphibians, could maintain their population densities, if not proliferate or rehabilitate their normal number to

prevent total extinction of their kind. As a national park more long-term ecological studies on breeding seasons, reproduction behavior, population densities, growth rates, etc. should be conducted.

2. So far, we have only confirmed the presence of Moluccan elements in our Philippine avifauna. In order to determine the actual degree of closeness in the affinities of the Avifauna between Balut and Sarangani Islands on one hand and mainland Mindanao on the other, thorough collections and studies of the avifauna of South Cotabato and Davao del Sur should be made.

3. The existing tremendously large population of the two species of fruit bats (*Acerodon jubatus* and *Pteropus speciosus*) should be reduced in number in any possible means to promote heterogenousness of animal life in the island.

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## SYSTEMATIC LIST

## 1. Order CICONIIFORMES

## A. Family ARDEIDAE – Herons

- A.1. *Butorides striatus javensis* (Horsefield, 1821) Little Mangrove Heron.

1 ♀ The little mangrove heron was collected from the mangrove forest in the Tumanao Cove. It was observed several times flying singly across the cove in later afternoons.

- A.2. *Ixobrychus cinnamomeus* (Gmelin, 1789) Cinnamon Least Bittern.

Observed once as it flushed from a dense growth of bushes and landed along the fishpond probably in search for food.

- A.3. *Nycticorax caledonicus manillensis* (Vigors, 1831) Rufous Night Heron.

Seen in a late afternoon while crossing the Tumanao Cove and perched on top of a tree in the Mangrove forest.

- A.4. *Botaurus stellaris* (Linne, 1758) Common Bittern.

Reported by inhabitants, who confirmed when shown a colored illustration of the Common Bittern.

## 2. Order ANSERIFORMES

## B. Family ANATIDAE – Ducks

- B.1. *Dendrocygna a. arcuata* (Horsefield, 1824) Wandering Whistling Duck.

Very rarely observed nowadays. The inhabitants used to hunt for this bird.

- B.2. *Tadorna tadorna* (Linne, 1758) Sheldrake.

This migratory sheldrake has oftentimes been observed by the inhabitants to visit the Olanivan Island.

## 3. Order FALCONIFORMES

## C. Family ACCIPITRIDAE – Hawks and Eagles

- C.1. *Haliastur indus intermedius* (Blyth, 1865) Brahminy Kite.

Often seen flying around the Cove of Tumanao in pair or singly early every morning and afternoon (3:30-5:00 p.m.)

C.2. *Spilornis cheela holospilus* (Vigors, 1830) Serpent Eagle.  
1 ♀ Collected from the Tumanao area near the Mangrove forest perching on the branch of a lofty tree.

C.3. *Accipiter trivirgatus extimus* (Mayr, 1945) Crested Goshawk.

Sighted while flying in a pair over the area near the Tumanao primary forest.

C.4 *Ichthyophaga ichthyaetus* (Horsefield, 1821) Gray-headed Fishing Eagle.

Observed once flying singly across the Tumanao area. This Gray-headed Eagle has been reported by the inhabitants to be seen in pairs.

#### 4. Order GALLIFORMES

##### D. Family MAEGAPODIIDAE — Megapods

D.1. *Megapodius freycinet pusillus* (Tweeddale, 1877) Megapode.

Observed while laying egg in the seashore. This incubator bird or megapode used to be found in abundance in the Olanivan Island which is solely owned by Vice Mayor de Arce. Mr. de Arce has completely disallowed the hunting for this bird.

#### 5. Order GRUIFORMES

##### E. Family RALLIDAE — Rails

E.1. *Amaurornis phoenicurus javanicus* (Horsefield, 1821) White-breasted Swampen.

Reported by the inhabitants to be found in the marshy areas of Patuco.

E.2. *Rallina e. eurizononcides* (Lafresnaye, 1845) Philippine Banded Crane.

E.3. *Rallus t. Torquatus* (Linne, 1776) Barred Rail

Often encountered along the marshy areas.

#### 6. Order CHARADRIIFORMES

##### F. Family CHARADRIIDAE — Plovers

F.1. *Charadrius d. dubius* (Scopoli, 1786) Ring-necked Plover

The ring-necked Plover was observed to frequent the fishpond, perhaps in search for food.

- F.2. *Pluvialis dominica fulva* (Gmelin, 1789) Pacific Golden Plover.

The Pacific Golden Plover was sighted singly and sometimes in pairs flying low close to the water of the fish pond.

G. Family SCOLOPACIDAE – Sandpipers

- G.1. *Numenius phaeopus variegatus* (Scopoli, 1786) Whimbrel.

1 ♂ Collected from the shore of Tumanao.

7. Order COLUMBIFORMES

H. Family COLUMBIDAE – Pigeons and Doves

- H.1. *Treron pompadora canescens* (Parkes, 1965) Pompadour Green Pigeon.

Sighted at the edge of the original dipterocarp forest while perching on a twig at about 4:00 p.m.

- H.2. *Phapitreron leucotis brevisrostris* (Tweeddale, 1877)

The white-eared Brown Fruit Dove was often heard and seen in the secondary forest.

- H.3. *Chalcophaps i. indica* (Linne, 1758) Green-winged Ground Dove.

1 ♂ Collected from a second growth forest.

- H.4. *Ducula a. aenea* (Linne, 1766) Green Imperial Pigeon.

Sighted once perching on a branch of a tree along the edge of the primary forest.

- H.5. *Ducula bicolor* (Scopoli, 1786) Nutmeg Imperial Pigeon.

1 ♂ Collected near the primary forest. This Nutmeg Imperial Pigeon was often observed from a distance near the mangrove forest in pairs.

8. Order PSITTACIFORMES

I. Family PSITTACIDAE – Parrots

- I.1. *Tanygnathus megalorhynchos* (Boddaert, 1783) Large-billed Parrot.

3 ♂ 2 ♀ 1? Most of these were collected just around

the Tumanao Cove. Almost every afternoon this Large-billed Parrot was observed to fly over our camp with a characteristic discordant sound.

9. Order CUCULIFORMES

J. Family CUCULIDAE – Cuckoos

J.1. *Centropus v. viridis* (Scopoli, 1786) Philippine Coucal.  
Sighted while flying from a thick grassy vegetation to a sparsely foliated tree.

J.2. *Eudynamys scolopacea mindanensis* (Linne, 1766) Koel  
3 ♂ Collected from a mangrove forest in Tumanao.

10. Order STRIGIFORMES

K. Family STRIGIDAE –Owls

K.1. *Ninox philippensis spilocephala* (Tweeddale, 1878)  
Philippine Bobook Owl.

Sighted while sleeping on the branch of a tree. One of our field collectors took a shot with his Cal. 22 Air Rifle but missed.

K.2. *Ninox scutulata randi* (Deigran, 1951) Philippine Hawk Owl.

Reportedly observed by the inhabitants of the island as it frequented the secondary forest near the seashore.

11. Order CAPRIMULGIFORMES

L. Family CAPRIMULGIDAE – Nightjars

L.1. *Eurostopodus m. macrotis* (Vigors, 1831) Philippine Eared Nightjar.

Heard almost every early evening by its distinct call “chi-wiw.”

12. Order CORACIIFORMES

M. Family ALCEDINIDAE – Kingfishers

M.1. *Halcyon chloris collaris* (Scopoli, 1786) White-collared Kingfisher

Observed to be very common in the whole island especially near the mangrove forests.

M.2. *Halcyon smyrnensis gularis* (Kuhl, 1820) White-throated Kingfisher.

Occasionally sighted in pairs in the mangroves. Easily recognized as it produced its rattling notes while flying.

M.3. *Halcyon coromanda* Ruddy Kingfisher

1? Nov. 4, 1978. Collected inside the 10-hectare original dipterocarp forest at the lower elevation. The determination of its subspecies could hardly be made as it was molting when collected.

M.4. *Pelargopsis capensis smithi* (Mearns, 1909) Stork-billed Kingfisher.

1 ♀ May 5, 1978.

The Storked-billed kingfisher was observed several times flying from one mangrove area of the cove to another, passing our base camp near the shore. One specimen was successfully collected near the mangrove area.

N. Family CORACIIDAE – Rollers

N.1. *Eurystomus orientalis cyanicollis* (Vieillot, 1819) Dollar Bird.

2 ♀ 1? May 9, 1978.

Quite common along the edges of the original forest in Tumanao.

13. Order PASSERIFORMES

O. Family PITTIDAE – Pittas

O.1. *Pitta s. sordida* (Muller, 1776) Black headed Pitta  
1 ♂ May 8, 1978, 1? May 10, 1978.

The Black-headed Pitta was occasionally heard near the base camp at Tumanao. The specimens were collected near the original dipterocarp forest.

P. Family HIRUNDINIDAE – Swallows

P.1. *Hirundo tahitica abboti* (Oberholser, 1917) Pacific Swallow.

1 ♀ May 14, 1978.

The Pacific Swallow was a common sight at the Tumanao area in front of the base camp. Collected while perching on the mast of an old abandoned fishing boat.

- P.2. *Hirundo rustica gutturalis* (Scopoli, 1786) Barn Swallow.

The Barn Swallow was sighted and observed with 10 x 50 mm binocular while perching on the pumpboat.

- Q. Family CORVIDAE — Crows

- Q.1. *Corvus macrorhynchos philippinus* (Bonaparte, 1853) Large-billed Crow.

1 ♀ May 4, 1978.

Collected inside the mangrove area while trying to feed on the entrails of a butchered dog.

- R. Family PYCNONOTIDAE — Bulbuls

- R.1. *Pycnonotus urostictus philippensis* (Hachisuka, 1934) Wattled Bulbul.

The Wattled Bulbul was observed once near the mangrove area in an early morning. Easily recognizable from *P. goiavier* due to its distinct fleshy yellow wattle around the eyes. No *P. goiavier* was ever sighted during the expeditions.

- S. Family TURDIDAE — Thrushes

- S.1. *Copsychus saularis mindanensis* (Boddaert, 1783) Dyal Thrush.

A pair of the Dyal or Magpie Robin was observed in a bushy area while transferring from one branch to another.

- T. Family SYLVIIDAE — Old World Wabblers

- T.1. *Phylloscopus b. borealis* (Blasius, 1858) Arctic Willow Warbler.

The migratory Arctic Willow Warbler was sighted on the first day of the survey while the team was resting under the tree where the bird was perched.

- U. Family MUSCICAPIDAE — Old World Flycatchers.

- U.1. *Muscicapa griseisticta* (Swinhoe, 1861) Gray-spotted Flycatcher.

The migratory Arctic Willow Warbler was sighted and observed perched on top of a dead coconut tree and inside bamboo thickets.

U.2. *Hypothymis a azurea* (Boddaert, 1783) Black-naped Blue Monarch.

1 ♂ 1 ♀ May 14, 1978.

The two specimens of Black-naped Blue Monarch were collected from the original dipterocarp forest.

V. Family ARTAMIDAE – Wood-swallows

V.1. *Artamus l. leucorhynchus* (Linnaeus, 1771) White-breasted Wood Swallows.

The White-breasted Wood-Swallow was frequently observed perched on the branches of dead trees and fronds of coconuts.

W. Family LANIIDAE – Shrikes

W.1. *Lanius cristatus lucionensis* (Linnaeus, 1776) Brown Shrike.

Several Brown Shrikes were sighted in the island. They either perched on coconut fronds or on branches of small trees.

X. Family STURNIDAE – Starlings

X.1. *Aplonis p. panayensis* (Scopoli, 1783) Philippine Glossy Starling.

11 ♂ 5 ♀ 4? May 4, 5, 7, 9, 14, 1978.

The Philippine Glossy Starling was very abundant in the island nesting in the axils of coconut leaves or in the holes of rocky cliffs.

Y. Family NECTARINIIDAE – Sunbirds

Y.1. *Nectarinia sperata davaoensis* (Delacour, 1945) Van Hasselt's Sunbird.

4 ♂ 2 ♀ May 10, 1978.

The Van Hasselt's Sunbird was quite common. It was frequently encountered while it perched on coconut fronds, on small trees near mangrove forest.

Most of the collections were made along the mangrove area.

Y.2. *Nectarinia j. jugularis* (Linnaeus, 1766) Olive-backed Sunbird.

The Olive-backed Sunbird was often observed in areas where the shrubs, bushes, and small trees abound. This bird was also sighted inside coconut plantations.

Y.3. *Anthreptes malacensis* Plain-throated Sunbird.

A pair of Plain-throated Sunbird was sighted inside a coconut plantation.

Z. Family DICAETIDAE – Flowerpeckers

Z.1. *Dicaeum a. australe* (Hermann, 1783)

1 ♂ The specimen of the Philippine Flowerpecker was collected from the mangrove forest. This bird was often found in good number early in the morning and around 3:00 p.m. feeding inside the mangrove area.

**Table A — List of Avian with Moluccan or Australo-Papuan affinities.**

1. *Ixobrychus cinnamomeus*
2. *Nycticorax caledonicus manillensis*
3. *Dendrocygna a. arcuata*
4. *Ichthyophaga ichthyaetus*
5. *Megapodius freycinet pusillus*
6. *Rallus e. eurizonoides*
7. *Rallus t. torquatus*
8. *Ducula bicolor*
9. *Ducula a. aena*
10. *Treron pompadora canescens*
11. *Chalcophaps i. indica*
12. *Tanygnathus megalorhynchos*
13. *Eudynamys scolopacea mindanensis*
14. *Eurostopodus m. macrotis*
15. *Halcyon chloris collaris*
16. *Pelargopsis capensis smithi*
17. *Ceyx lepidus margarethae*
18. *Pitta s. sordida*
19. *Artamus l. leucorhynchos*
20. *Nectarinia sperata davaoensis*
21. *Nectarinia j. jugularis*
22. *Anthreptes malacensis*

**Table B — List of visiting or Migratory avian species observed in Sarangani Island.**

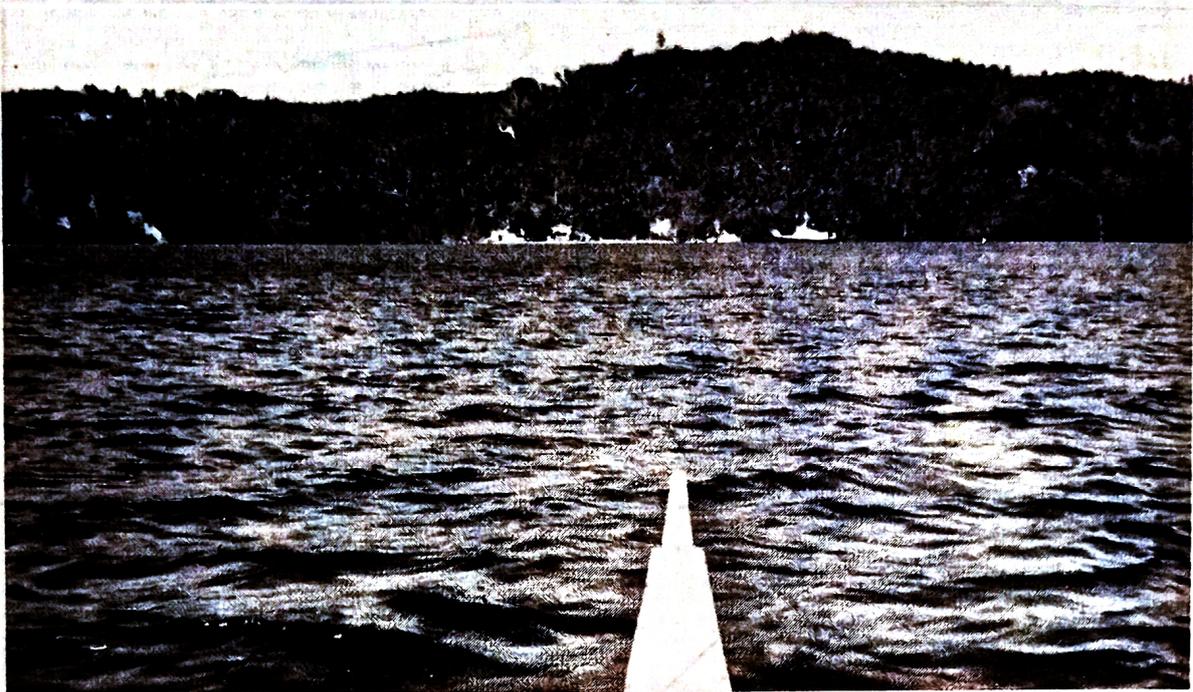
1. *Botaurus stellaris* — from Asia
2. *Tadorna tadorna* — from Asia
3. *Pluvialis dominica fulva* — from Asia
4. *Halcyon coromanda* — from Japan and Ryukyu Islands
5. *Hirundo rustica gutturalis* — from Asia
6. *Phylloscopus b. borealis* — from NE Siberia
7. *Muscicapa griseisticta* — from eastern Asia
8. *Lanius cristatus lucionensis* — from China

Table C — Altitudinal Distribution of Sarangani Birds

Species	Elevation in Feet
1. <i>Butorides striatus javensis</i>	0-200
2. <i>Ixobrychus cinnamomeus</i>	0-200
3. <i>Nycticorax caledonicus manillensis</i>	0-400
4. <i>Botaurus stellaris</i>	0-400
5. <i>Dendrocygna a. arcuata</i>	50-300
6. <i>Tadorna tadorna</i>	50-300
7. <i>Haliastur indus intermedius</i>	0-600
8. <i>Spilornis cheela holospilus</i>	200-600
9. <i>Accipiter trivirgatus extimus</i>	200-600
10. <i>Ichthyophaga ichthyactis</i>	200-600
11. <i>Megapodius freycinet pusillus</i>	0-300
12. <i>Amaurornis phoenicurus javanicus</i>	100-400
13. <i>Rallus e. Eurizonoides</i>	50-300
14. <i>Rallus t. torquatus</i>	50-400
15. <i>Charadrius d. dubius</i>	0-100
16. <i>Pluvialis dominica fulva</i>	0-200
17. <i>Numenius phaeopus variegatus</i>	0-100
18. <i>Treron pompadora canescens</i>	200-600
19. <i>Phapitreron leucotis brevirostris</i>	200-600
20. <i>Chalcophaps i. indica</i>	200-400
21. <i>Ducula a. aenea</i>	200-600
22. <i>Ducula bicolor</i>	200-600
23. <i>Tanygnathus megalorhynchos</i>	100-400
24. <i>Centropus v. viridis</i>	50-250
25. <i>Eudynamis scolopacea mindanensis</i>	50-300
26. <i>Ninox philippensis spilocephala</i>	50-400
27. <i>Ninox scutulata randi</i>	50-400
28. <i>Eurostopodus m. macrotis</i>	50-400
29. <i>Halcyon chloris collaris</i>	0-300
30. <i>Halcyon smyrnensis gularis</i>	50-400

31.	<i>Halcyon coromanda</i>	200-400
32.	<i>Pelargopsis capensis smithi</i>	0-50
33.	<i>Ceyx lepidus margarethae</i>	50-300
34.	<i>Pitta s. sordida</i>	100-400
35.	<i>Hirundo tahitica abboti</i>	50-400
36.	<i>Hirundo rustica gutturalis</i>	50-400
37.	<i>Pycnonotus urostictus philippensis</i>	50-400
38.	<i>Corvus macrorhynchus philippinus</i>	50-600
39.	<i>Copsychus saularis mindanensis</i>	50-300
40.	<i>Phylloscopus b. borealis</i>	0-600
41.	<i>Muscicapa griseisticta</i>	50-600
42.	<i>Hypothymis a. azurea</i>	50-400
43.	<i>Artamus l. leucorhynchus</i>	0-200
44.	<i>Lanius cristatus lucionensis</i>	0-600
45.	<i>Aplonis p. panayensis</i>	50-600
46.	<i>Nectarinia sperata davaoensis</i>	50-600
47.	<i>Nectarinia j. jugularis</i>	50-600
48.	<i>Anthreptes malacensis</i>	50-400
49.	<i>Dicaeum a. australe</i>	50-400
50.	<i>Eurystomus orientalis cyanicollis</i>	50-600





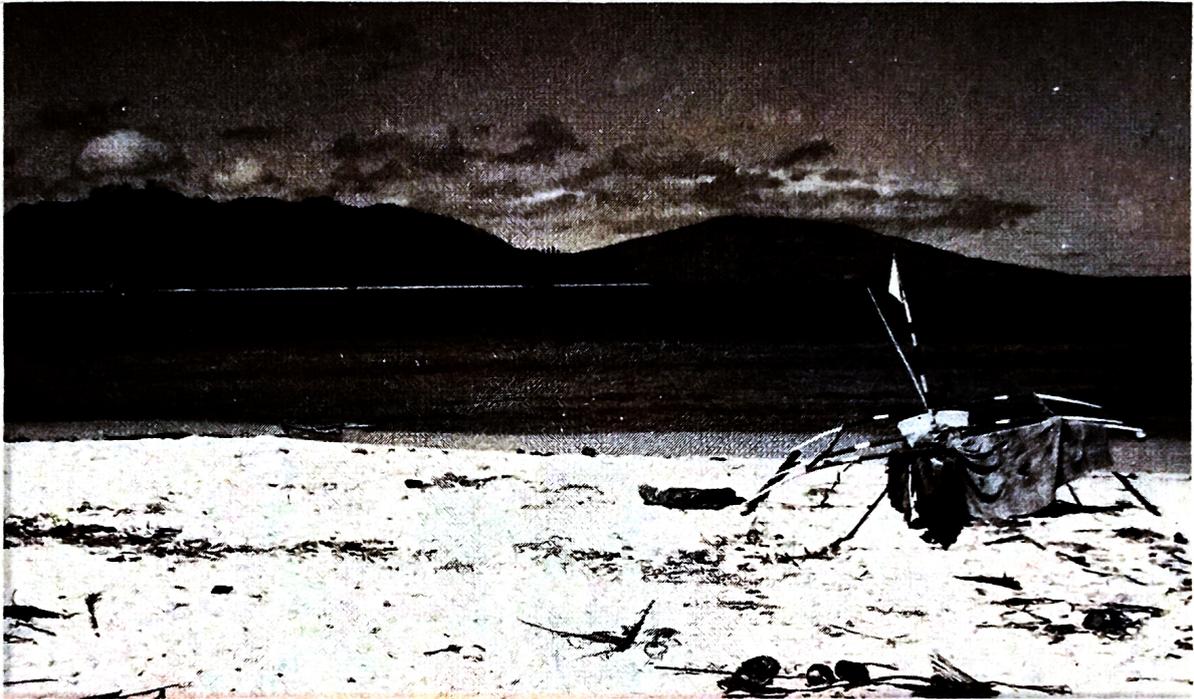
**Figure 2**

The approach to Tumanao where the NSM Team established its base camp. Coconut plantations, parang vegetations and mangrove forests could be seen. Behind this area is the 10 hectare original dipterocarp forest.



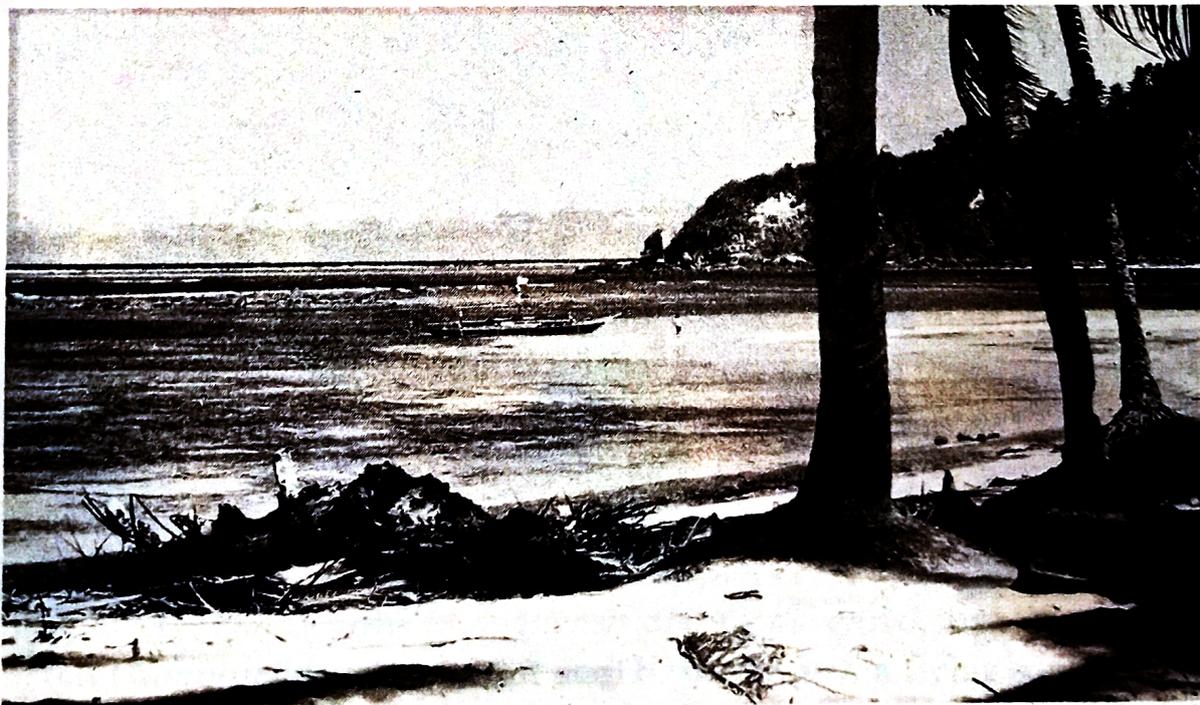
**Figure 3**

A patch of second growth forest in a rocky slope. Coconut plantations at the far view.



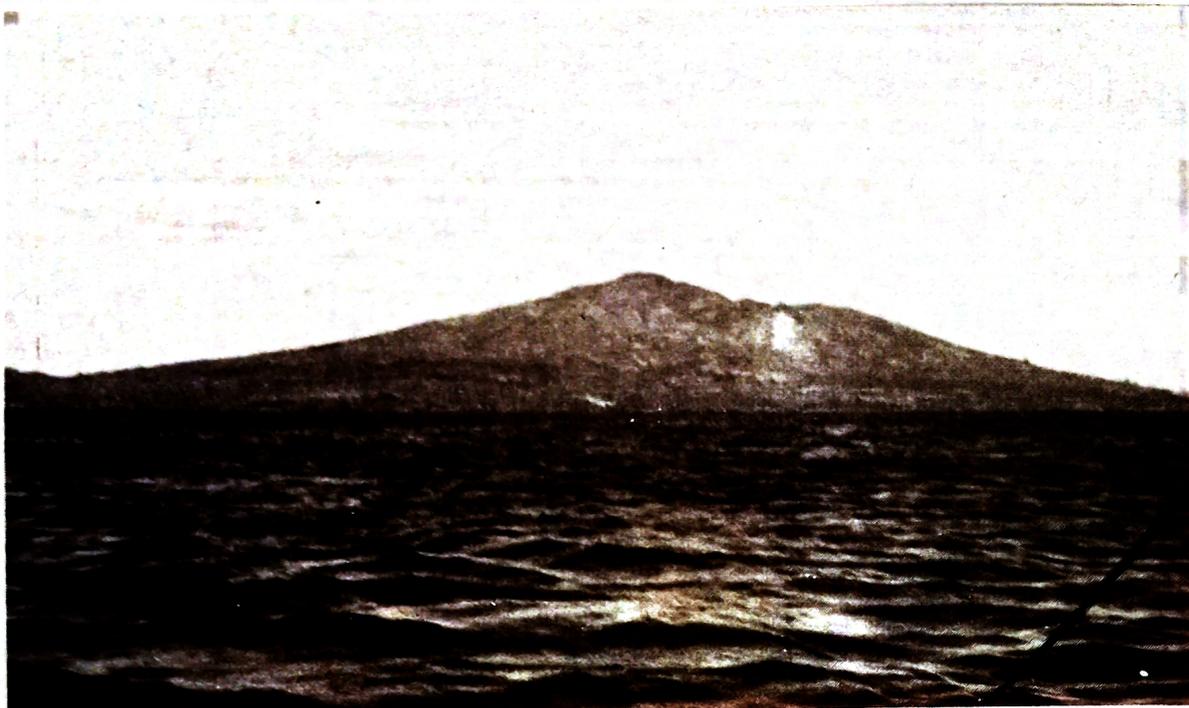
**Figure 4**

Picture taken from Olanivan Island, showing northernmost tip of Sarangani Island with Balut Island at the background.



**Figure 5**

Sitio Laker (SE of Sarangani Island) showing coconuts at the foreground and a rocky steep cliff with a patch of second growth forest at the background.



**Figure 6**

Balut Island, showing Mt. Balut with an elevation of 826 m. or 2,709 feet.



**Figure 7**

Field Collectors F. Duron, B. Cane, A. Kintao and two hired assistants skinning some collected fruit bats, *Acerodon jubatus* and a large-billed parrot, *Tanygnathus megalorhychos*.