

Original research article

Bird Diversity in Rambut Island Wildlife Reserve Seribu Islands

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Abstract

Indonesia is one of the top priority countries in efforts to preserve biodiversity because it has the largest biodiversity in the world. Rambut Island Wildlife Reserve is a nature reserve area with a wetland ecosystem type. This study aims to analyze the diversity of bird species in the Pulau Rambut Wildlife Reserve area. This research was conducted in May-July 2021. The method used for this study was a literature study. The diversity of bird species on Rambut Island, Kepulauan Seribu is quite high, as indicated by 24 species of birds. The existence of the activities of the people of Untung Jawa Island is thought to have an influence on the diversity of bird species found on Rambut Island, Kepulauan Seribu. Therefore, the role of BTNLKpS managers is needed to maintain the preservation and diversity of bird species found on Rambut Island, Kepulauan Seribu

1. INTRODUCTION

Indonesia is one of the top priority countries in efforts to preserve biodiversity because it has the largest biodiversity in the world. The main threat to biodiversity is the destruction or loss of habitat, and the best way to protect biodiversity is to protect and maintain the habitat. At this time habitat destruction is generally the result of meeting the needs of human life. Various programs have been run by the government to carry out both in-situ and ex-situ conservation, but the reality shows that the bird population is

decreasing. Human interests related to nature also often lead to a culture that is able to maintain the preservation of nature itself. The existence of key species of cultural value often has a good influence on the conservation of the species concerned [3].

Indonesia has a fairly large wetland area, which reaches 21 million ha with various types and sizes and is spread over various islands. Wetlands as complex ecosystems have various very important ecological functions such as hydrological regulatory functions, producers of biological natural resources and habitats of

various types of wildlife and plants. The uniqueness of the area causes the use of water birds that can only live in certain areas or according to their needs. The existence of wetlands as habitat for waterbirds has been formulated in the Ramsar International convention as an international interest [12].

Wetland areas that are often used as habitat for water birds are mangrove areas [13]. Ecologically, mangroves are a transitional area between marine waters and freshwater waters, therefore only flora and fauna that have special adaptability can live there [5]. A total of 189 plant species and more than 170 bird species are also known to live in the area, including several endangered bird species that have been known to live in Indonesian mangrove areas [8].

One of the islands under the supervision of the Thousand Islands Marine National Park Center (BTNLKpS) is Rambut Island or known as "seabird paradise". The area of the island is about 90 hectares, 45 hectares of which is land. The island, which has been designated as a wildlife reserve since 1999, has an extraordinary biodiversity, both flora and fauna [1]. Rambut Island was first proposed to be designated as a conservation area by the Director of the Bogor Botanical Gardens to the Governor General of the Dutch East Indies, Jakarta, with the status of a nature reserve. The underlying reason is to protect the various types of waterbirds that are abundant on the island.

Rambut Island was designated as a nature reserve in 1937 through the Decree of the Governor General of the Dutch East Indies No. 7 dated May 3, 1937. The decision was contained in the State Gazette (Staatsblad) No. 245 of 1939. Its implementation is regulated in the 1941 Natural Protection Regulation (Ordinance) which is contained in the State Gazette no. 167 in 1941. At that time, Rambut Island was declared as covering an area of 20 hectares. Based on these considerations, Pulau Rambut was designated as a Wildlife Reserve by the Minister of Forestry and Plantations through Decree No. 275/Kpts-II/1999 dated

May 7, 1999, covering an area of 90 hectares, consisting of 45 hectares of land and 45 hectares of water.

Rambut Island Wildlife Reserve is a nature reserve area with a wetland ecosystem type (wetland). This area is one of the last bastions of the life support system in DKI Jakarta Province. The entire area is a muddy swamp that is always inundated by tidal water. The presence of waterbirds is an important indicator in assessing the quality and productivity of a wetland environment, especially after the adoption of the Ramsar Convention in 1971 [4].

Geographically, the Pulau Rambut Wildlife Reserve is located between 106°41'14" - 106°41'46" East Longitude and 5°56'47" - 5°56'57" South Latitude, which is to the northwest from Tanjung Priok Harbor [6]. Meanwhile, according to the government administration, Rambut Island is included in the area of Untung Jawa Island Village, South Thousand Islands District, Thousand Islands Administrative District [9].

Most of the fauna inhabitants of Rambut Island are birds, about 22 species of merandai birds (water birds) and 39 species of land birds. Most of the waterbirds or seabirds are resident birds that inhabit Rambut Island all year round. Interestingly, these birds have the behavior of migrating to Java or other islands in the Thousand Islands to forage for food in the morning and returning to Rambut Island in the afternoon to rest [1].

The high level of community dependence on natural resources will have a great influence on natural conditions, one of which is bird diversity [10]. This study aims to analyze the diversity of bird species in the Rambut Island Wildlife Reserve area.

2. MATERIALS AND METHODS

This research was conducted from May to July 2021. The type of data used is secondary data. The data collection method in this research is literature study. The method that will be used for this study is a literature study.

The data obtained were compiled, analyzed, and concluded so as to obtain conclusions regarding the study of literature.

$$\text{Relative abundance} = \frac{\text{Number of Species}}{\text{Number of Watching Hour}}$$

Tabel 1. Encounter Level To Show Simple Abundance Order Scale [2].

Abundance Category (Number of species per 100 watching hour)	Abundance result	Scale
< 0,1	1	Rare
0,1 – 2,0	2	No common
2,1 – 10,0	3	Often
10,1 – 40,0	4	Common
40,0 +	5	Overflow

3. RESULTS and DISCUSSION

Research that has been carried out by [7]. with a total of 75 hours of observation, the results obtained are as follows:

Table 2. The diversity of bird species on the island of Rambut

No	Spesies Burung	Jumlah Individu/ 10 jam	Skala urutan
1.	Cagak Merah (<i>Ardea purpurea</i>)	30,2	Common
2.	Cagak Abu (<i>Ardea cinerea</i>)	2,8	Often
3.	Kuntul Besar (<i>Egretta alba</i>)	234,2	overflow
4.	Kuntul Kecil (<i>Egretta garzetta</i>)	93,3	overflow
5.	Kuntul Karang (<i>Egretta sacra</i>)	126,5	overflow
6.	Bluwok (<i>Mycteria cinerea</i>)	55,26	overflow
7.	Roko-Roko (<i>Plegadis falcinellus</i>)	40,5	overflow

8.	Pecuk Ular (<i>Anhinga melanogaster</i>)	10,4	common
9.	Kuntul Sedang (<i>Egretta intermedia</i>)	10,3	common
10.	Kuntul Kerbau (<i>Bubulcus ibis</i>)	0,5	No common
11.	Jalak Kerbau (<i>Acridotheres javanicus</i>)	2,3	Often
12.	Walet Linchi (<i>Collocalia linchi</i>)	2,7	Often
13.	Elang Laut Perut Putih (<i>Haliaeetus Leucogaster</i>)	2,1	Often
14.	Pergam Laut (<i>Ducula bicolor</i>)	90,65	overflow
15.	Tekukur (<i>Streptopelia chinensis</i>)	2,55	often
16.	Asian Koel (<i>Eudynamys scolopacea</i>)	1,83	No common
17.	Raja Udang Biru (<i>Alcedo coerulescens</i>)	0,25	No common
18.	Cekakak Sungai (<i>Todirhamphus chloris</i>)	0,43	No common
19.	Kepudang Kuduk hitam (<i>Oriolus chinensis</i>)	1,75	No common
20.	Kucica Kampung (<i>Copsychus saularis</i>)	230	overflow
21.	Kekep Babi (<i>Artamus leucorhynchus</i>)	10,2	common
22.	Madu Kelapa (<i>Anthreptes malaccensis</i>)	10,7	common
23.	Madu Sriganti (<i>Nectarinia jugularis</i>)	108	overflow
24.	Emprit (<i>Lonchura punctata</i>)	10,5	common

The biggest threat to the wealth of birds in nature is the destruction of nature caused by the economic situation of the community. This is spurred by the habits or livelihoods of the people of Untung Jawa Island who depend part of their lives on nature. The condition of the people of Untung Jawa Island is currently experiencing a setback due to pressure from outsiders who carry out illegal exploration, thus eliminating the livelihoods of the people of Untung Jawa Island which have been used as their guide for life.

The frequent sighting of bird hunters from outside the area is thought to have generated a similar interest in hunting among the people of Untung Jawa Island. The existence of economic pressures and pressures and influences from outside communities will change the main livelihoods of the people of Untung Jawa Island. This fact will cause the diversity of bird species on Rambut Island to be threatened and tend to decline [11].

The diversity of bird species on Rambut Island will be maintained if the wisdom of the people of Untung Jawa Island towards nature is maintained, especially maintaining the richness of bird species and can be preserved. Therefore, the management of BTNLKpS needs to involve the people of Untung Jawa Island in all activities related to nature conservation in order to maintain the environment, especially the diversity of bird species on Rambut Island. In addition, it is also necessary to hold counseling and workshops to remind that human life cannot be separated from nature.

4. CONCLUSION

The diversity of bird species on Rambut Island, Seribu Islands is high, which is indicated by 24 bird species. The existence of the activities of the people of Untung Jawa Island is thought to have an influence on the diversity of bird species found on Rambut Island, the Thousand Islands. The biggest threat to the lives of the people of Untung Jawa Island is the economy. Therefore, the role of the BTNLKpS

manager is needed to involve the people of Untung Jawa Island in all activities, especially in maintaining the preservation and diversity of bird species found on Rambut Island, Kepulauan Seribu.

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