WATER BIRD SPECIES IN THE UJONG PANCU BEACH AREA, ACEH BESAR DISTRICT.

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ABSTRAK

High activity levels influence the presence of water bird species in the Ujong Pancu Beach area, Aceh Besar District. This study aims to identify the types of water bird species in the Ujong Pancu Beach area. The research was conducted in June 2023 using the Point Count method. The results revealed a total of 7 species belonging to 5 families, with a total of 307 individuals. The species identified *include Egretta sacra, Egretta garzetta, Ardea alba, Chroicocephalus ridibundus, Hirundo tahitica, Alcedo coerulescens, and Collocalia linchi.*

Keywords : Water Birds, Ujong Pancu Beach.

INTRODUCTION

Birds are one of the wildlife species found in nearly every place and play an important role as a natural resource in Indonesia. In Sumatra, there are 583 bird species, with 438 species (75%) being breeding species native to Sumatra. This number increases to 626 and 450 when combined with other species inhabiting the smaller islands along the Sumatra coast.

Water birds are those whose entire life activities are related to aquatic areas. The presence of water birds can serve as biological indicators in mangrove forest areas and can influence the existence or distribution of plant species. This is also related to the function of these areas as support for the life activities of water birds, providing shelter and breeding grounds.

Indonesia is known to be an important country in terms of providing habitats that support the lives of migratory water birds. Water birds play a key functional role in wetlands, which include coastal areas, marshlands, lakes, brackish areas, peatlands, and natural or artificial waters, whether stagnant or flowing, with either submerged or flowing water. Common characteristics of water birds include long legs and beaks, which aid in foraging in the generally muddy wetlands.

According to Hadinoto et al. (2012), the distribution of water birds is influenced by habitat conditions and the availability of food in their habitat. One reason for migration among birds is the lack of safe places to shelter from predators due to habitat degradation. Birds that cannot survive in their environmental conditions will seek out more suitable places.

Wibowo et al. (1996) explain that there are two groups of water birds found in mangrove habitats: resident water birds and migratory water birds that come to feed on the mudflats around mangrove forests and often rest on nearby mangrove vegetation. Indonesia, according to Wetlands International, has 380 species of water birds inhabiting

various coastal regions of the country. Examples of water birds include the great egret (Ardea alba), intermediate egret (Egretta intermedia), Chinese egret (Egretta eulophotes), little egret (Egretta garzetta), and the purple heron (Ardea purpurea).

Currently, the overall presence of water birds is declining due to various threats, particularly human activities, especially in wetland, coastal, and lowland areas. The destruction of wetlands, mangrove forests, and swamp forests along Ujong Pancu Beach threatens the survival of several water bird species due to high community activity, such as densely populated areas, fishing, and angling. This affects water bird activities, leading to a decrease in their numbers. Information regarding the presence of water birds is crucial; however, such information is still limited in the Ujong Pancu Beach area. The purpose of this study is to identify the species of water birds in the Ujong Pancu Beach area, Aceh Besar District.

RESEARCH METHOD

Place and Time

This study was conducted in the Ujong Pancu Beach area, Aceh Besar District. The research took place in June 2023.

Tools and Materials

The equipment used in this study included a digital camera, binoculars, stationery, a hand counter, and a field guidebook on Birds of Sumatra, Java, Bali, and Kalimantan (Mackinnon et al., 2010).

Research Method

The method used was the Point Count method. A total of 10 points were established, with a distance of 50 meters between each point. The observation duration at each point was 10 minutes, during which the bird species found were identified.

Research Procedure

The research was conducted by standing at specific points within the habitat being studied and recording encounters with birds within a set time frame and area (Helvort, 1981). Bird observations were carried out using binoculars to view objects at a distance. Birds that were seen were identified using the field guidebook "Birds of Sumatra, Java, Bali, and Kalimantan" (Mackinnon et al., 2010).

Observations using binoculars involved monitoring birds in the coastal area and directly identifying them while documenting the findings. If there were birds that could not be identified in the field, their characteristics were recorded, and sketches were made in the notebook. Observations included morphological characteristics (shape and color of the body, beak, legs, and feathers) of the observed birds.

Observations were conducted from 9:00 AM to 11:00 AM and resumed in the afternoon from 1:00 PM to 3:00 PM. Data collection and identification of bird species were performed by noting several important characteristics, including body size, feather color, beak shape, and leg shape. Samples obtained included documentation of the birds, followed by further identification using the reference book on the birds of Sumatra, Java, Bali, and Kalimantan (Mackinnon, 2010).

RESULTS AND DISCUSSION

Based on the observation results of water birds at 10 surveyed points, each observation point was monitored for 10 minutes. Throughout the observations from the first to the tenth point, the most frequently encountered species was the water bird species Collocalia linchi. At the first point, 41 species of water birds were identified, with Collocalia linchi being the most dominant at 25 individuals. This trend continued from the second point to the tenth. The number of each species at each observation point was as follows: at the second point, Collocalia linchi was recorded at 21 individuals; at the third point, 25 individuals; at the fourth point, 19 individuals; at the fifth point, 14 individuals; at the sixth point, 30 individuals; at the seventh point, 21 individuals; at the eighth point, 18 individuals; at the ninth point, 17 individuals; and at the tenth point, 14 individuals. Based on the data, the water bird species Collocalia linchi was most abundantly found at the sixth point, with a total of 30 individuals.

Table 1. Bird Species in the Ujong Pancu Beach Area, Aceh Besar District

	Nama Spesies			Jumlah Individu Pada Setiap Titik Lokasi										Jumlah
	Ilmiah	Lokal	Inggris	1	2	3	4	5	6	7	8	9	10	
Ardeidae	*Egretta sacra*	Kuntul Karang	*Pacific Reef Heron*	2	1	1	0	0	1	1	1	0	0	7
	Egretta garzetta	Kuntul kecil	*Little Egret*	1	0	1	1	1	2	0	1	1	0	8
	Ardea alba	Kuntul besar	*Great Egret*	1	1	1	0	0	0	2	0	0	0	5
Laridae	*Chroicocephalus ridibundus*	Camar Kepala Hitam	*Black Headed Gull*	1	0	0	0	0	1	0	0	0	0	2
Hirundinidae	*Hirundo tahitica*	Layang-Layang Batu	*Pacific Swallow*	9	8	10	6	5	13	10	6	9	4	80

[illegible]	*Alcedo coerulescens*	Raja [illegible]	*Small Blue Kingfisher*	-	0	0	0	0	2	1	0	0	0	5
Apodidae	*Collocalia linchi*	Biru Walet linci	*Cave Swiftlet*	25	21	25	19	14	30	21	18	17	10	200
	Jumlah			41	31	38	26	20	49	35	26	27	14	307

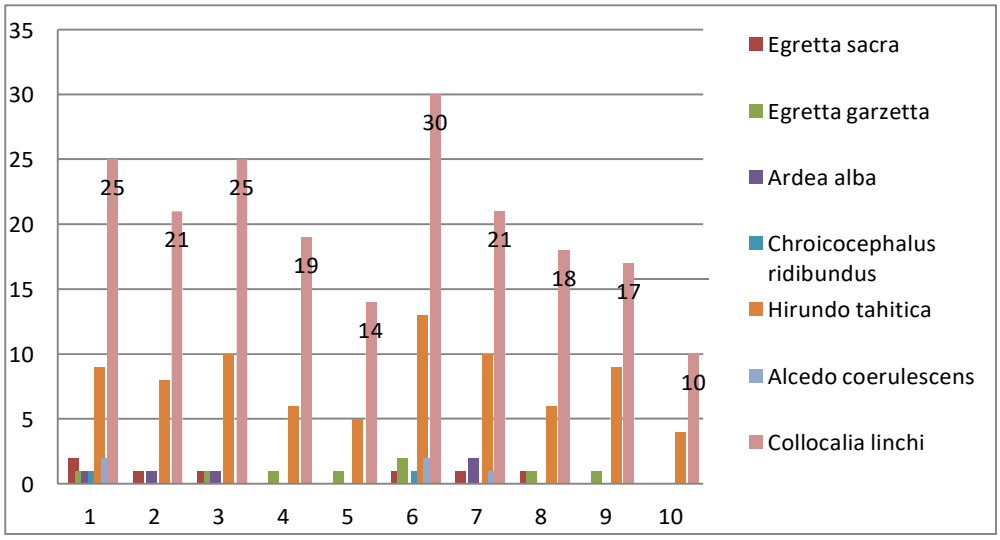

Figure 1. Data on the Number of Water Birds in the Ujong Pancu Beach Area

Based on the findings from the Ujong Pancu Beach area in Aceh Besar, a total of 5 families of water birds were identified: Ardeidae, Laridae, Hirundinidae, Alcedinidae, and Apodidae, comprising 7 species: Egretta sacra, Egretta garzetta, Ardea alba, Alcedo coerulescens, Chroicocephalus ridibundus, Collocalia linchi, and Hirundo tahitica. Notably, the migratory bird Larus ridibundus was also observed in the Ujong Pancu area. These species are commonly found along the beach, as they engage in feeding activities at the water's edge, a habitat they prefer (MacKinnon et al., 1993).

Generally, water birds are characterized by their large body size, long legs, and long, spear-like bills (Sibuea et al., 1996). These traits are adaptations to their habitat and feeding patterns (Noor et al., 2003). A key distinguishing factor among water bird species is feather color. Egretta sacra has two color variations: white and gray. In the Ujong Pancu area, the gray is more prevalent, featuring a short crest and white throat. Its straight bill is pale yellow, and its legs are greenish, with rounded wings and a rounded tail. This wading bird typically measures 58 cm and is frequently seen along the coast, resting on rocks or steep edges while hunting at the water's edge.

Ardea alba and Egretta garzetta share the same white plumage, but differ in leg color: Ardea alba has black legs, while Egretta garzetta has black legs with yellow toes. Size-wise, Ardea alba is larger at 88 cm, compared to Egretta garzetta at 60 cm. Both

species are social, often seen foraging in groups in marshes and rice fields by standing still or following prey (MacKinnon, 1993).

Mangrove habitats are vital for various water and terrestrial birds, serving as feeding, resting, and breeding grounds. Mangroves provide nesting spaces and, for migratory birds, the roots serve as resting spots during high tides, while the muddy expanses offer suitable foraging areas (Howes et al., 2003).

Chroicocephalus ridibundus is a migratory gull, feeding on fish and carrion, characterized by its white plumage. It hunts by flying around potential prey or observing from a high perch before diving into the water to catch swimming prey. This species is among the least frequently encountered, likely stopping only to rest and feed.

Collocalia linchi dominates at all observation points. This species is common from low to high altitudes, often seen in groups, and primarily feeds on small insects. As a member of the Apodidae order, it has small feet that prevent it from perching except in its nest, making it rare to see perched on branches. This bird, measuring about 10 cm, has dark greenish-black upper parts, soot-gray underparts, and a slightly notched tail (MacKinnon et al., 2010) Alcedo coerulescens is a very small kingfisher (14 cm) with striking blue and white plumage, producing a high-pitched, two-note call while flying. It is usually found perched on trees along small streams, ponds, and mangrove forests (MacKinnon et al., 2010).

Hirundo tahitica, or the rock martin, is small, with dark yellow plumage on its neck and bright gray on its underparts, and a brown forehead. This species is usually seen in small, scattered groups, foraging by flying low. Rock martins are diurnal and actively seek insects in the air, often following the same flight path repeatedly (Ghafur et al., 2016).

The Ujong Pancu Beach area serves as a habitat for water birds due to the abundant food supply, allowing them to engage in a range of life activities, including foraging, nesting, incubating eggs, and raising young. However, various threats, such as poaching, land conversion, and habitat destruction, pose risks to the conservation of water birds. Environmental degradation can lead to habitat loss and the displacement of water birds. Currently, the overall presence of water birds is declining due to these threats, with contributing factors including loss of vegetation, noise pollution, and environmental carrying capacity.

a. Loss of Vegetation

Vegetation is a crucial component of any habitat. A habitat provides the basic needs for animal populations, including shelter, breeding, food, water, and space for movement. To support animal life, a habitat must be a cohesive area that ensures access to all essential resources, such as food, clean air, minerals, shelter, breeding grounds, and safe places for raising young (Alikodra, 1990).

Before the tsunami, the research area served as a suitable habitat for water birds, characterized by a complete and dense vegetation composition, although many mangrove areas were converted for shrimp farming. Such conditions are beneficial for birds, especially for monitoring predators and facilitating their hunting activities (Ruskhanidar et al., 2007). While the ecological life of the birds was not fundamentally disrupted, human activities posed significant disturbances.

b. Noise

The current research area is being utilized for mangrove nursery purposes to rehabilitate the coastal environment damaged by the tsunami. Human activities in this location can disturb the birds' lives. Consequently, during the day, the number of bird species found in the research area is significantly low. This observation aligns with MacKinnon's (1993) statement that bird species experiencing disturbances are difficult to find.

c. Environmental Carrying Capacity

Every living creature selects a habitat that meets its life requirements. Food, water, and shelter are components of environmental carrying capacity. If a habitat cannot provide these necessities, animals will naturally migrate to seek better conditions. Alikodra (1997) and Noor et al. (2003) explain that one reason for bird migration is to find shelter from seasonal changes. In the research area, birds lack safe refuge from predators due to the absence of vegetation resulting from the 2004 tsunami disaster. Birds unable to survive in the altered environmental conditions will seek out more suitable habitats for their survival.

CONCLUSION

A total of 5 families of water birds were identified, including Ardeidae, Laridae, Hirundinidae, Alcedinidae, and Apodidae, comprising 7 species: Egretta sacra, Egretta garzetta, Ardea alba, Chroicocephalus ridibundus, Hirundo tahitica, Alcedo coerulescens, and Collocalia linchi. Additionally, a migratory bird, Larus ridibundus, was observed at the observation site.

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