

**MONITORING OF COLONIAL BREEDING BIRDS ON
BIJOL ISLANDS**

2008-REPORT

Department of Parks and Wildlife Management



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BACKGROUND OF THE MONITORING

In January the breeding season starts, when the Terms must beautiful plumage of white and light grey colors, with a black cap complete and a crest for some species.

This annual report highlights monitoring activities conducted on breeding and colonial nesting birds. The number of colonial nesting birds gives indication of fish stock in that part the Atlantic coast of West Africa. This extremely important Bijol Islands provide home to water birds depending the islands to breed, exploring the diverse food available, thanks to the upwelling current on the Atlantic coast.

INTRODUCTION

Bijol Islands form part of the Tanji (Karinti) Bird Reserve its area of 6.12 square km administered by the Department of parks and Wildlife Management of the Gambia.

This marine habitat is the main offshore Islands that provide home to many migrants species that take advantage of the absence of human disturbance including its abundant fish species. There are two Islands, one larger and one small, joined at low tide by a sand spit. Both Islands are low lying with maximum elevation of ca. 2m, water level although this varies between and within seasons.

The main Island is covered with low growing saline tolerant vegetation, such as (the beach morning glory, Baobab Trees, Casuarinas) plus new vegetation species which appeared in 2008, called “Kasalla” scientific name (*assia occidental*) Dorrubakalo (*sesbania bispinosa*) “Jambaduru” (*cassia Tora*) (“Nyrinjo” (*Hyptis souvolrnce*) (“sora”) (*Lapedenia heritata*) “kaso,” “musukafugilo”, “borrobor, and” Namalla (stipulate

.The birds occurring on the islands includes Royal Tern, Caspian Tern, Grey Headed Gull, Whimbrel, Long Tailed Comorant, Little Tern, Lesser Black backed Gull, Reef Heron, Pelican and small waders. The offshore islands also provide shelter for nesting of the marine turtle and other sea mammals.

This report focuses on the Islands birdlife, presenting the objectives, methods and the results of the monitoring works.

BIJOL Islands bird biodiversity and ecology

Bijol Islands is an important area for native and migrant species. The upwelling current enriches the Islands with food sufficient for seabirds and marine mammal. Many sea birds occur on the island

including for example Kintish plover, Grey plover, kelp gull, slender bill gull, Audouins gull, lesser black backed gull, Bartail godwit, Black Tailed Godwit, lesser skua, yellow wadgetail, red shank, osprey and nest predators, such as lanner falcon and Senegal coucal.

The Islands provide the only known nesting area in the Gambia. For grey headed caspian tern, Western Reef heron, Royal Tern (Barnett et al, 2001, between 2003 and 2004). From 2003 to 2007, the number of species (Royal Tern) increased up to 32076, Caspian Tern 1821, Grey Headed Gull 3528 and Western reef heron 109. The Royal tern (*sterna maxma*) increased up to 32076 pairs which is more than 20% of the breeding population of the West African region. Sub-species estimated at 45000-55000 **pars** (wetlands international 2002). Other important West African breeding colonies is found in Mauritania (ca.15000 pairs, Ban d Arguin), Senegal and the Gambia (ca.30,000-40,000 pairs (J.Veen et al 2004, langue de Barbarie, Delta du Saloum, The Bijol Islands and Kalissaye. Outside the breeding season, the West African Royal Tern spread along the entire Atlantic coast from Morocco to Namibia

THE MONITORING OBJECTIVE

Bijol islands, monitoring programme started in 1999. Data is collected on colonial nesting birds monthly by the staff of TBR management/Department of Parks and Wildlife Management. The purpose of monitoring is to gather information on the bird population change of colonial nesting fish eating birds species, change in the food availability as an indication of fish population of these sea birds.

The monitoring focus on the colonial nesting water bird, the nesting population size is determined (the number of pairs nesting and the number of eggs found in each nest during the breeding season). The monitoring concentrated on the Grey headed gull,

Caspian Tern, Royal Tern, Western Reef heron as both resident and migrant birds.

The management team visits Bijol Islands on the 24th day of each month from 8-11:30am. The main activities include counting the nests, counting the number of eggs of each species, and population of species. Nest building starts in January and ends in August.

There are several factors which explain the size of these water birds colonies. Like all coastal ecosystems on Earth, the areas of Bijol Islands are highly productive natural systems. The huge numbers of juvenile fish significantly form the basis of food stocks available to birds.

METHODOLOGY

The monitoring process reflected the behaviour of breeding birds during the peak of nesting based on the data obtained from the January-August breeding season. The team counted and recorded the number of nests and eggs, and additional information on the main breeding period for the targeted species. Below is a summary of methods used.

TRANSECT COUNTING

The Grey-headed gull nests mainly on the large island inside the low-lying vegetation. During counting, the island is usually divided into transects of 2-5 meters wide. Recorders walk along the transect lines and count the number of nests between transects. The recording does not include empty nests and damaged eggs. The Grey-headed gull nests are spaced from each other by at least 2-4 to 2-5 meters away from each other. During this time of the breeding season, the centre of the main island's low-lying vegetation provides a suitable feeding area for chicks or young ones (hatchlings).

DENSE COLONY RECORDING

The density is determined as the number of nest with eggs in a colony (per m² square indicated by corner sticks and a rope on the extreme points in the colony). The average value obtained from four (4) sampling points is then multiplied by the actual nesting area

EGG AND CLUTCH SIZE

Egg size is measured by collecting eggs and measuring the length and width). Each eggs are returned to their place after measurement. Clutch size is determined by counting the number of nest, is multiplied by the number of eggs/nest

OBSERVATION ANALYSIS OF SPECIES NESTING

Grey headed gull started nesting in early January 2008, and on the 24th January, the team recorded two nest and February, 235 nest were counted. The total of the season nest registered is one thousand two hundred and twenty –one (1221). This species was not successful in 2008 compare to 2007. In 2007, two thousand and seventy-three next were counted on the Island. This year, decreased about eight hundred and seventy-two (872)



CASPIAN TERN

Caspian Tern nest on the sand on the main island. They nest in big colonies with a nesting distance of 10-15cm apart. This species were partially unsuccessful in 2008, they started earlier than last year 2008. In 2008, Caspian tern nests in January and the team

counted three hundred and eight nests. The whole recorded of this year was one thousand six hundred forty-one nests, a decline of about one hundred and twenty three. Their eggs were not affected by floods during the breeding season.

ROYAL TERN

In April 24th, 2008, they commence nesting on the main Islands. This species nest on the bare sand in large colonies. The usually lay one egg per nest, nest with two or three eggs were assumed to be laid by two different females. Distance between nests is approx 7-10cm apart. **The Royal Terns, if it happens in the early stages of laying the female did not abandon the colony, during that time they display very aggressive behavior.** In 2007, thirty two thousand seven hundred and two nests were recorded.

In 2008, **17** thousand four hundred sixty eight nest were counted, decrease of **14** thousand six hundred twenty-four nest.

WESTERN REEF HERON

The population of heron nesting population has decreased, compare to in 2007. Fifty-eight nests were counted in 2007 while in 2008; thirty-seven nests were registered. Its decline about twenty-one nest. As per the highest recording of the previous year, is assumed that the species breeding population increased as the canopy of the casuarine tree increases in shape, the same as in 2008.

NEW SPECIES (BIRDLED TERN)

In April 2005, a single bridled tern (*sterna anaethelus*) was recorded nesting on the main Island (**Mr. John et al**). The species reappears in 2006, eggs were recorded for this particular bridled tern. The bird was not spotted on the Bijol Island in 2008.

LIFE RINGING PROGRAMME

PROFESSOR: MR. JOHN HIGH, the coordinator of bird ringing programmed, a British national residing in the Gambia. The team also associated itself with records of birds ringed during the breeding season on the Bijol Islands.

OBSERVATION OF THE BREEDING ECOLOGY

The factor responsible for decline in breeding birds in 2008 may be due flooding which occurred both islands in the course of the breeding season, eroding thousand of eggs in 2005. **Such degradation of an area by a presence of element which disturb the normal functioning of birds impossible for any possible uses.** In the recent years, breeding birds are known to concentrate on the main Island since 2006-2008. Previously Royal Tern and Caspian tern usually utilize the small Island as the main colony. This shift in habitat preference could be that some birds found other ideal breeding sites. In breeding season the team recorded 39 species on the Islands, but during non breeding period, the number species could not be recorded due lack of insufficient material (binoculars).

CONCLUSIONS

This monitoring has played a significant role in capacity building interms of protection of conservation on the Islands as a whole. It is virtually impossible to have access to conduct species recording with the absence of binoculars in non breeding season. Therefore a knowledge gap exists in the use of the GPS, Telescope and Binoculars. The monitoring, surveillance and enumeration of colonial nesting birds and others on the Bijol Islands should be a continuous process to enhance assessment of the breeding population as well as protecting migrant species from human disturbance.

RECOMMENDATION

- Encourage and support the monitoring team, because through their efforts they were able to provide information on bird on the Bijol Islands
- There is need to create opportunities for professional training on monitoring techniques, ecological research, wetland management restoration and conservation education.
- DPWM to promote Royal Tern as a flagship species on the Bijol Islands for wetland conservation

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