

REPORT TO THE MINISTRY OF ENVIRONMENT
ANGUILLA

**ANGUILLA'S OFFSHORE ISLANDS: SEABIRD CENSUS AND NEST
MONITORING, MAY-JUNE 2004**



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Introduction

Environmental Protection In the Caribbean (EPIC) conducted an island-wide land-based census of the islands off Anguilla during May and June 2004. Islands censused were Dog, Prickly Pear East, Prickly Pear West, Scrub and Little Scrub.

Previous surveys by the Royal Society for the Protection of Birds (RSPB) have demonstrated the value of the islands to nesting seabirds. EPIC sought to continue this vital documentation work. Many marine bird nesting colonies are known to experience dramatic fluctuations in population and nesting success inter-annually. Therefore, it is essential to conduct multi-year surveys in order to properly assess the changing demography of an island's bird populations.

Methods

The EPIC boat *Shearwater* was used to access the islands. Censuses were conducted during late May through June as this was the peak of summer breeding. Each island was circumnavigated by land during a single day. Forays away from the coastline were conducted to measure sample plots of species which nest in brush.

The following accounts describe methods used to census specific species:

Brown Booby (*Sula leucogaster*), Masked Booby (*Sula dactylatra*), Magnificent Frigatebird (*Fregata magnificens*) and Brown Pelican (*Pelecanus occidentalis*) – Nests were counted, results are documented as number of nests. This method was chosen because nests were easily visible. Sites with eggs, chicks incapable of flight, or a pair of adults with nest material were considered nests.

Red-billed Tropicbird (*Phaethon aethereus*) – Flying adults were counted; results are documented as number of adults.

Laughing Gull (*Larus atricilla*) – Flying adults were counted. Results are documented as number of adults. This method was chosen because nests are often dispersed and hidden in brush, which limited detection. However, on Prickly Pear East dense nesting was observed. Therefore, one 300m² sample plot was censused and extrapolated for those areas with dense colonies. The boundaries of colony areas were recorded using a Global Positioning System (GPS) unit, which allowed us to determine the number of m² for each area.

Royal Tern (*Sterna maxima*) and Sandwich Tern (*Sterna sandvicensis*) – Nesting adults and number of chicks were counted, documented as number of nests. This method was chosen because adults usually stay at nests when observers are at a distance. When the census was conducted, chicks had begun to creche. Therefore, a count of chicks and nests was necessary to accurately reflect the nesting population.

Common Tern (*Sterna hirundo*) – Nesting adults and chicks were counted, documented as number of nests.

Least Tern (*Sterna antillarum*) – Flying adults were counted; results are documented as number of adults. This method was chosen because this species flushes easily from nests, which are depressions in sandy open areas. Observers must be hidden and carry spotting scopes to get an accurate nest count.

Sooty Tern (*Sterna fuscata*) – Nests were counted using random circular sample plots of 100m². All sites with adults in attendance and/or egg or chick were counted as nests. The boundaries of colony areas were recorded using a GPS unit, which allowed us to determine the number of m² for each area.

Bridled Tern (*Sterna anaethetus*) – Flying adults were counted; results are documented as number of adults. This method was chosen because nests are difficult to find under rocks or in vegetated depressions along coastal rocky areas. Adults flush readily then usually call around nest sites. However, on Prickly Pear East, individual nests were followed for nesting success. Therefore, a census of the number of nests was made by thoroughly searching potential nesting areas and counting sites with adults, eggs, or chicks within.

Brown Noddy (*Anous stolidus*) – The number of nests were counted; results are documented as number of nests. This method was chosen because nests are typically on rock faces and easily observed.

Results

Dog Island

Dog Island appears to be the island with the highest population of seabirds, primarily due to large colonies of Sooty Terns and Brown Boobies. In addition, ten species of seabird were recorded nesting (Table 1). The coastal margin is primarily open grassland while the interior is thorny scrub.

During the summer, 381 Booby nests were recorded in the entire coastal margin via ground census, compared to 1,035 in the winter via boat census.

There were 112 Magnificent Frigatebird nests recorded in summer via ground census, compared to 210 recorded in winter via boat census. The frigatebird colony is located at the east end; almost all nests contained chicks near to fledging.

There were 966 adult Laughing Gulls at a localized colony at Spring Bay, defined on the coastal side by booby nests and on the inland side by Sooty Tern nests.

Twenty-seven Least Tern adults were at a small colony on the northwest side, where few other species were recorded. One nest with eggs was located. Bridled Terns were found primarily on the north and west sides, where 54 adults were counted. Sooty Terns were the most abundant species, nesting among the brush. Sample plot results indicate there were 52,000 Sooty Tern nests. For Brown Noddies, 59 nests were recorded in rock and scrub habitats.

Prickly Pear East

Prickly Pear East is certainly the most visited of Anguilla's islands, as indicated by the presence of two restaurants and the large number of boats which are usually offshore. Eight seabird species were recorded nesting here (Table 2).

The dominant nesting seabird here is the Laughing Gull; a sample plot indicates there are 2,500 nests. Only 14 nests were recorded for Brown Booby and all contained chicks, most near to fledging. Four Least Terns were recorded calling on all five visits, and were observed where the island narrows in the middle, however no nests were located. A high proportion of the island contains the jumbled boulder habitat appropriate for nesting Bridled Terns and 45 nests were recorded. Twenty Brown Noddy nests were recorded, although they were difficult to see among the bushes (there are no cliffs appropriate for nesting). Six Sooty Terns were recorded calling during five visits to the island, although no nests were observed.

Prickly Pear West

Nine seabird species were recorded at Prickly Pear West, which appears to be visited infrequently (Table 3).

Despite the low rate of human disturbance, the only abundant species is the Brown Booby, for which 495 nests were recorded. All nests contained chicks, most near fledging. This is the only Anguillan site where Brown Pelicans were observed nesting; a colony of 21 nests was located in brush along the north side. Two Red-footed Boobies were also seen perched near a nest in a small tree. Only two Laughing Gull nests and 23 adults were recorded, a small number when compared to neighboring Prickly Pear East. A comparatively high count of 13 Red-billed Tropicbirds indicate there may be a greater concentration of this species on Prickly Pear West than at other islands.

Scrub

Scrub and Little Scrub Islands have been greatly impacted by past human activity, such as a derelict resort, airplane, cars, and a boat ramp. Current activities include the construction of buildings and overgrazing by goats. A total of eight seabird species were recorded nesting for both islands (Table 4).

No boobies were nesting on Scrub, despite the extensive grassy areas. Laughing Gulls were present, 309 adults were recorded. Common Terns were found nesting only on Little Scrub, where 60 nests were recorded. In addition, feeding flocks of approximately 200 Common Terns were foraging around Little Scrub, indicating a potentially higher breeding population than what was observed. Least Terns were only seen roosting, seven adults and one juvenile were at a pond near the resort. However, a mixed Royal Tern and Sandwich Tern colony was present on the northeast end. There were 115 adult Royal Terns nesting, all with chicks. There were 112 adult Sandwich Terns nesting, all with chicks. There is extensive habitat for Bridled Terns, although only eight adults were seen.

Discussion

Anguilla's offshore islands harbor some of the most diverse and abundant seabird colonies in the Lesser Antilles. The presence of at least 13 seabird species, out of the 21 species which nest throughout the West Indies, is remarkable. It is likely Audubon's

Shearwater nests among Anguilla's islands as well but no nocturnal surveys have been conducted for this species. White-tailed Tropicbirds may be present as well. The estimated 110,000 seabirds which breed in summer alone is a significant number, while winter breeders would add to the total.

Threats to these important nesting sites are numerous. Goats were seen running through dense nesting areas, posing a trampling risk to eggs and chicks. Erosion was evident in heavily grazed areas. Rats, which are well known for their devastating effect on seabird colonies, were observed on Prickly Pear East, Scrub, and Dog Islands while possible rodent feces were seen on Prickly Pear West. Human disturbance is of greatest concern on Prickly Pear East, although most visitors remain on the sandy beach away from nesting.

Rat eradication is suggested for all islands as well as the reduction or removal of goats. Continued surveys will provide necessary information on changes in populations of specific species. Studies of breeding biology, foraging requirements, and other parameters would give a clearer picture of the many factors which affect these populations.

Table 1. Number of nests or adults present by seabird species at Dog Island on 4 June 2004.

DOG ISLAND

	Nests	Adults
Brown Booby	381	
Masked Booby	1	6
Magnificent Frigatebird	112	
Red-billed Tropicbird		2
Laughing Gull		966
Least Tern		27
Sooty Tern	52,000	
Bridled Tern		54
Brown Noddy	59	
American Oystercatcher		11

Table 2. Number of nests or adults present by seabird species at Prickly Pear East on 21 May 2004.

PRICKLY PEAR EAST

	Nests	Adults
Brown Booby	14	
Red-billed Tropicbird	1	
Laughing Gull	2,500	
Least Tern		4
Sooty Tern		6
Bridled Tern	45	
Brown Noddy	20	
American Oystercatcher	2	

Table 3. Number of nests or adults present by seabird species at Prickly Pear West on 28 May 2004.

PRICKLY PEAR WEST

	Nests	Adults
Brown Booby	495	
Red-footed Booby	2	
Brown Pelican	21	
Red-billed Tropicbird		13
Laughing Gull		23
Sooty Tern	31	
Bridled Tern		22
Brown Noddy	12	
American Oystercatcher	4	

Table 4. Number of nests or adults present by seabird species at Scrub and Little Scrub on 27 June 2004.

SCRUB AND LITTLE SCRUB

	Nests	Adults
Laughing Gull		355
Royal Tern	115	
Common Tern	60	
Sandwich Tern	112	
Least Tern		7
Bridled Tern		20
Brown Noddy		16
American Oystercatcher		17