

# Tern Colonies in Aruba, Curaçao, and Bonaire, South Caribbean Sea

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The Netherlands Antilles island group of Aruba, Curaçao, and Bonaire is situated in the semidesert climatic zone at about 12° N latitude, at distances of 17–55 miles from the northern coast of Venezuela. At least six species of terns have been found nesting in these islands, as well as one species of gull. The geographic origin of these species is extremely different. Hence, it is interesting to know in what numbers and how regularly the species nest in these islands. The presently known status of these birds is described below, partly based on previously published records (Voous, 1957). As some of the species do not seem to nest each year, at least not in constant numbers, observations made by the author during a census of tern colonies in the islands in one breeding season (1961) have been given separately. Breeding cases are documented by study skins, eggs, photographs, color slides, and color motion pictures assembled by F. H. Ansingh, Brother Arnoldo, H. J. Koelers, K. Mayer, P. A. van der Werf, and the author.

*Sterna h. hirundo* Linnaeus (Common Tern).—This Holarctic species nests only very exceptionally in the tropics. The first record of its thus nesting was published by Hartert (1893, 1902) for Bonaire in 1892, but this record unfortunately failed to convince American ornithologists. Additional breeding records and photographs of nests and downy chicks in Curaçao in 1955 have been published by Voous (1957). At present the species has been found nesting in at least 2 localities in Aruba, 3 in Curaçao, and 2 in Bonaire. It nests either in solitary pairs or in small colonies of its own species, up to approximately 10 pairs. It has been definitely found to be associated with other species of terns only once, viz. in Curaçao in 1961 on a small coral-rock island together with *S. dougallii* and *S. sandvicensis*.

In 1961 we found it nesting in Aruba (2 or 3 localities), Curaçao (3 localities), and Bonaire (2 localities).

Eggs have been found from May to early August. The clutch size recorded is 1–3, most frequently 2.

*Sterna d. dougallii* Montagu (Roseate Tern).—This cosmopolitan species was first found nesting on Aruba in 1892 by Hartert (1893, 1902). The species subsequently remained unnoticed on this island until 1961. At present the species has been found nesting in 1 locality in Aruba, 2 in Curaçao, and 2 in Bonaire. It does not form breeding colonies of its own, but has always been found in association with other nesting terns, viz. with *S. sandvicensis* and *S. albifrons*. The largest colony found was in Curaçao in 1955 (about 40 pairs; Voous, 1957). The color of the bill is deep coral red with a broad black tip; once a wholly black bill was noticed (at Bonaire, 1961).

In 1961 we found these terns nesting in Aruba (1 locality), Curaçao (2 localities), and Bonaire (1 locality).

Eggs have been found in May–July. The clutch size recorded is 1–2, occurring in about equal frequencies.

*Sterna anaethetus melanoptera* Swainson (Bridled Tern).—This circum-tropical species is only known from Aruba, in one locality. First recorded nesting there by Hartert (1893, 1902) in 1892, it was not found nesting again until 1961, when we discovered two breeding colonies, each of approximately 5–10 pairs. One of these colonies was apparently in the same locality on the coral shingle reef wall as it was nearly 60 years before. This part of the reef wall is now opposite the big oil harbor of Sint Nicolaas, which in Hartert's days did not yet exist. The reef water on the land side is now seriously polluted with black oil residue. Both Hartert and I found these terns nesting in company with *S. dougallii* and possibly with *S. albigrons*.

Eggs have been found in June and July. The clutch size recorded is 1.

*Sterna albigrons antillarum* (Lesson) (Least Tern).—This semicosmopolitan species is widely spread in all three islands, its nesting having been recorded from 3 localities in Aruba, at least 5 in Curaçao, and 4 in Bonaire. It nests in colonies of varying numbers and in varying densities. The largest colony known consisted of approximately 100 pairs (Island of Klein-Curaçao; Voous, 1957). In the densest colonies, nests were about 2 or 3 m apart. These terns have been found nesting in association with *S. sandvicensis* and *S. dougallii*. Nests have also been found on top of deserted flamingo nests in Bonaire (fide J. Rooth, and personal observation).

In 1961 we found it nesting in 3 localities in Aruba, 1 locality in Curaçao, and 3 in Bonaire.

Eggs have been found in May–July. The clutch size recorded is 1–4, most frequently 1 and 2.

*Sterna m. maxima* Boddaert (Royal Tern).—This pantropical Atlantic species, although to be seen the whole year round, has only been found nesting in single pairs on three occasions, viz. in 1955 in Curaçao and Bonaire (Voous, 1957), and in 1958 in Curaçao (Ansingh et al., 1960). In all three cases the nests were found among nesting *S. sandvicensis*.

No nests were found in 1961.

Eggs have been found in May and June. The clutch size recorded is 1–2.

*Sterna sandvicensis eurygnatha* Saunders (Yellow-billed Sandwich Tern or Cayenne Tern).—This Atlantic–Mediterranean or perhaps semicosmopolitan species apparently is represented on the islands by a variable hybrid population of yellow- and black-billed terns, the yellow-billed individuals predominating (Junge and Voous, 1955; Ansingh et al., 1960). It was first found nesting in Curaçao in 1952 and 1954 (Voous, 1957). Breeding colonies are now known from 2 localities in Curaçao and from 2 in Bonaire. They nest in large and dense colonies. The largest one known was at Curaçao in 1958 (about 1,200 nests; Ansingh et al., 1960). The average distance

between nests (eggs) in Curaçao in 1958 was 35–40 cm and in 1961 26 cm.

In 1961 we found 1 colony in Curaçao (about 130 nests) and 1 in Bonaire (about 350 nests).

Eggs have been found in May–July. The clutch size recorded is 1–2; two eggs occurred in less than 4 percent of the nests.

The frequency distribution of the coloration of the bill in the 1961 colonies compared with previous records is given in Table 1 (see also Ansingh et al., 1960:55).

TABLE 1.—BILL COLOR IN *Sterna sandvicensis eurygnatha*

Colony .....		Curaçao	Curaçao	Curaçao	Bonaire	Bonaire
Year .....		1954	1958	1961	1955	1961
No. of birds sampled .....		87	2,300	220	129	133
Bill Color	Bill Type	Percent				
Yellow	<i>eurygnatha</i>	68	57	84	38	64
Yellow with black	<i>intermediate</i>	11	35	11	36	29
Black with yellow tip	<i>sandvicensis</i>	21	7	5	26	6
Red	————	Present	Present	—	—	1

*Larus a. atricilla* Linnaeus (Laughing Gull).—This warm-temperate to tropical, eastern North American and West Indian species is known to be breeding only on Bonaire in our region in one locality. It was first found nesting in 1960 by Brother Arnoldo and J. Rooth. In 1961 Brother Arnoldo showed us a colony in exactly the same place as in 1960. The colony consisted in 1961 of no more than 10 breeding pairs, with nests several meters apart and Least Terns nesting all around.

Eggs have been found in July. The clutch size recorded is 1.

#### SUMMARY

The presently known status of terns and gulls breeding in Aruba, Curaçao, and Bonaire off the northern coast of Venezuela is described. Six species of terns and one species of gull have been recorded breeding. Probably not all of these species nest regularly in the islands. The geographic origin of the tern species differs widely. *Sterna hirundo* probably has here its only regular tropical breeding population. *S. sandvicensis* is represented by a mixed yellow- and black-billed population, probably of hybrid origin.

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