

canes have struck the Tortugas in recent years. On 8 June 1966 the winds of Hurricane Alma drove water over parts of Bush Key and buried many young terns in the sand. Many died, but overall mortality was surprisingly low (Mason and Steffee, 1966). On 3 June 1968 the center of Hurricane Abby passed about 60 miles west of the islands and heavy winds, rain, and waves belted the islands for several days. The high waves washed away some eggs laid on higher parts of the beaches but did not swamp Bush Key, and mortality was very low. Adults with eggs or chicks sat tight on the scrape throughout the storm, and some eggs hatched during the storm without noticeable detriment.

In recent years much of the work at the Tortugas has centered around long term banding studies of the terns. From 1936 to 1941 some 13,300 Sooty Terns, mainly juveniles, were banded at the Dry Tortugas. Some of these are still alive and provide information on the longevity of the species. In 1959 the National Park Service, the Florida State Museum, and the Florida Audubon Society began a cooperative banding program that to date has banded almost a quarter of a million Sooty Terns on the Tortugas.

METHODS

I lived on Garden Key from 29 March to 10 July 1968 and worked almost daily on nearby Bush Key. I erected a blind near a small plot (25 x 30 feet) from which I cleared nearly all vegetation. I captured terns in mist nets and color-marked 182, each with a unique pattern of three-colored leg bands and a Fish and Wildlife Service (FWS) band for individual recognition. The terns gradually became accustomed to my presence in the blind, and their behavior appeared normal once I was out of sight.

I determined the sex of the terns by noting their position in copulation, keeping in mind that male-male mountings may occur. Once the birds were color-marked, I recorded their activities and the roles of males and females in the care of their eggs and chicks. As Sooty Terns spend much of their time flying, I had to limit my studies to their activities at and near Bush Key. After the eggs hatched, I tethered some chicks to prevent them from hiding throughout the day. This altered their behavior, but it was the only way I could keep more than a few chicks in sight after they were about 3 weeks old. In 1969, 1970, and 1971 I spent shorter periods on the island after the young hatched.

BREEDING ACTIVITIES

Starting in mid-January, Sooty Terns appear near the Dry Tortugas in numbers at night only, circling, calling, and sometimes landing, but generally are absent during the day (Robertson, 1964; pers. comm.). Gradually the terns start arriving at the Tortugas earlier each evening and also in greater numbers. Finally in late March or April they remain in daylight and land on Bush Key. There they display, copulate, dig a scrape, and