

# Cooperation Leads to Successful Bird Nesting on Egmont Key NWR and State Park

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## Abstract

Located at the mouth of Tampa Bay, Florida, Egmont Key National Wildlife Refuge (NWR) is a 244-acre island which supports as many as 38,000 pairs of nesting birds. When monthly bird surveys were initiated in 1990, no successful nesting was observed. Since then, productivity has significantly increased and remained high, with more than 37,000 pairs of birds nesting in 2009. Avian diversity has also increased, with at least 11 species nesting on the island. This success is attributable to a variety of factors, which include:

- Establishment and expansion of two wildlife sanctuaries
- Cooperative management by USFWS and Florida Park Service
- Increased staffing
- Enforcement of a no-pet policy
- Creation of a volunteer-based Bird Stewards program
- Beach renourishment efforts

The collaboration of multiple agencies, non-profit organizations, and volunteers is the key to the success of the nesting birds at Egmont Key NWR.

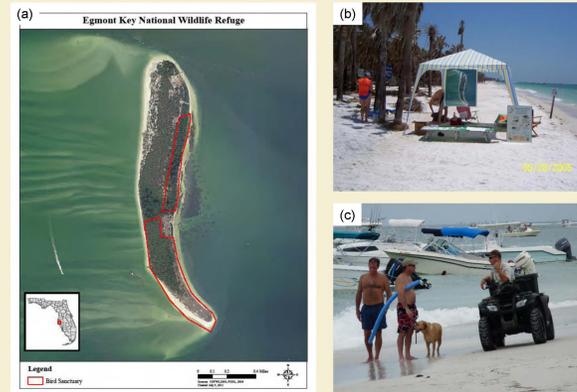


Figure 3: (a) Egmont Key National Wildlife Refuge and State Park is located at the mouth of Tampa Bay on the gulf coast of Florida. Nesting has increased with improved patrolling of wildlife sanctuaries by USFWS law enforcement and volunteers. (b) Bird stewards educate visitors about the sanctuary and the importance of undisturbed nesting habitat. (c) Law enforcement officers enforce regulations, including a no dog policy, to protect nesting birds.

## Introduction

Egmont Key National Wildlife Refuge was established in 1974 but was not staffed by USFWS until 1983 (Figure 3). Funding was unavailable for staffing the island in 1985. To counter the reduced ability of USFWS to manage the island on site, a cooperative management agreement was formed between USFWS and Florida Park Service (FPS). Since 1988, a FPS park manager has lived on the island as often as possible and two park rangers patrol the island daily.

USFWS has increased its management of the refuge recently. In 2004, a refuge manager was hired and since then USFWS law enforcement officers have patrolled the island on weekends and holidays throughout the summer months.

Egmont Key NWR's sanctuaries have been expanded over time to accommodate rising demands for quality beach-nesting habitat (Figure 1). Enforcement has also been increased to ensure sanctuaries are free of human disturbance. When birds nest on unprotected beach, those individual nests are protected as well. This primarily is done to protect American oystercatcher nests, which often are established along the west beach. Once a nest is found, stakes and twine are used to rope off the nest from human traffic. This has been a successful practice on the island.

## Methods

Monthly bird surveys are conducted throughout the year. Surveys begin at 8:00 am with at least one observer walking the perimeter of the island. Data collected include numbers of individuals, fledglings, and nests during the breeding season. To monitor nesting patterns around the island, the entire survey area is divided into distinct survey zones.

In addition to monthly surveys, a peak nesting count is conducted annually in May. Survey protocol is the same as that described for monthly surveys. This is a collaborative effort between USFWS, Florida Park Service, and the National Audubon Society.

## Results

When Egmont Key NWR was established in 1974, there was no documented nesting on the island. This would suggest that nesting was either not occurring, or was not occurring at detectable levels. Nesting was not reported until after 1992 (Table 1). Today, approximately 38,000 pairs of birds representing 11 species nest on Egmont Key NWR annually (Figures 5 and 6).

Table 1. Successful nesting was first documented on Egmont Key NWR in 1993. Since then, the diversity and abundance of nesting birds has increased significantly.

Species	Year Nesting Began on Egmont Key NWR	Peak Nesting Population (Peak Year)
Black Skimmer	1993	550 pairs (2007)
American Oystercatcher	1996	6 pairs (2000)
Laughing Gull	1999	32,450 pairs (2007)
Brown Pelican	2000	1,002 pairs (2008)
Royal Tern	2000	7,100 pairs (2009)
Sandwich Tern	2000	1,350 pairs (2009)
Great Blue Heron	2001	2 pairs (2011)
Snowy Egret	2002	2 pairs (2002)
White Ibis	2004	2,400 pairs (2009)

## Discussion

Creation of a seasonal 0.75 acre wildlife sanctuary marked the beginning of documented beach-nesting bird use at Egmont Key. Least terns, black skimmers, and American oystercatchers were the first successful nesters following the enforcement of sanctuary boundaries. Today there are two sanctuaries which have been expanded over time to provide year-round protection to 127 acres (Figure 2). Even with expanded sanctuary boundaries, true nest success was not achieved until enforcement of sanctuary regulations was made possible by increasing staff, forming a cooperative agreement with Florida Park Service (FPS), and organizing volunteers.

Today, Egmont Key NWR's sanctuaries are maintained by cooperative efforts of the USFWS, FPS, and volunteer organizations. These organizations primarily include the Egmont Key Alliance (a Citizens Support Organization to the FPS) and Friends of Tampa Bay NWRs (a support group for the USFWS). These organizations coordinate with independent volunteers to staff a bird stewards program. Bird stewards patrol sanctuary boundaries and educate visitors about the nesting birds.

Public education and sanctuary patrols are supported by law enforcement, an on-site manager, and the volunteer-based Bird Stewards program. In addition to sanctuary enforcement, the entire island was posted as a "No Pet" area in 2009 to reduce the nest losses from predation and egg overheating associated with flushing birds. These combined efforts have created a successful bird nesting sanctuary on the island thus far.



Figure 4: Brown pelicans (left) and sandwich terns (right) are common colonial nesting birds found on Egmont Key.

## Nesting Species Composition on Egmont Key NWR, 2009

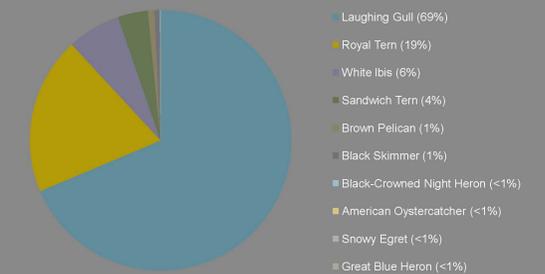


Figure 5. Nesting species composition on Egmont Key NWR, 2009. Ten species of birds were observed nesting on Egmont Key NWR in 2009. Laughing gulls comprised over two-thirds of those nests.

## Peak Nesting Densities on Egmont Key NWR, 1990 - 2009

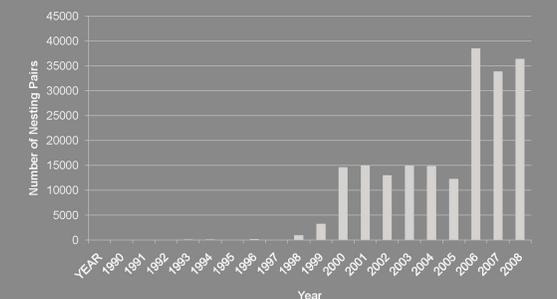


Figure 6. Peak nesting densities on Egmont Key NWR, 1990 - 2009. Nesting pairs have increased significantly as sanctuaries, volunteers, and staff have increased protection.

## Acknowledgements

The following have been instrumental in the continued success of Egmont Key NWRs wildlife sanctuary and monitoring program:

- Florida Park Service
- Egmont Key Alliance
- Friends of the Tampa Bay NWR
- Bird Stewards
- National Audubon Society (Audubon of Florida)
- US Army Corps of Engineers
- Tampa Bay Pilots Association

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Figure 1: Royal and sandwich terns have nested within Egmont Key NWR's sanctuaries since 2000, with almost 8,500 birds using the island at times.



Figure 2: American oystercatchers were one of the first species to nest on Egmont Key NWR, initiating a single nest in 1996.