

Cape Lookout National Seashore Colonial Waterbird 2017 Summary



Colonial Waterbird survey on Morgan Island. 2017 NPS Photo.

National Park Service
Cape Lookout National Seashore
131 Charles Street
Harkers Island, NC 28531

Introduction

The inlet spits, sandflats, inshore islands, and point of Cape Lookout National Seashore (CALO) provide nesting habitat for several species of Colonial Waterbirds (CWB). The least tern (*Sternula antillarum*), common tern (*Sterna hirundo*), gull-billed tern (*Gelochelidon nilotica*), black skimmer (*Rynchops niger*), sandwich terns (*Thalasseus elegans*) and royal tern (*Thalasseus maxima*) nest here in single species and mixed species colonies.

Methods

Nesting habitat is signed in the spring by April 1st. Reoccurring nesting sites include Power Squadron Spit, Cape Point, Ophelia Inlet, New Drum Inlet Flats, Old Drum Inlet Flats, Kathryn-Jane Flats, Portsmouth Flats, and Ocracoke Inlet tip. Potential nesting habitat is monitored and signed closed as the birds colonize a site. Wildlife protection zones/ closures typically include the upper beach, interior, and/or soundside to provide a 150 foot buffer. If chicks were present on the lower ocean beach vehicles are restricted and/or detoured to avoid flightless chicks.

The annual least tern window census occurs from June 5th-20th. In 2017, the census was early, May 26th-31st, to coordinate with the state wide effort. Breeding pairs were counted by either a perimeter count of incubating pairs or a total number adult count. Total adult counts were then divided by two to ascertain the number of breeding pairs. No correction factor was employed in the results. The assumption being that all birds present within the breeding colony site are there as breeders. Counts were conducted by the staff biologist and biological science technicians. A GPS point was recorded at the center of the colony. Monitoring throughout the summer included weekly counts of adults, incubating nest/pairs, ground nest counts, number of chicks and fledglings, and buffer distance checks. Wildlife protection zones were posted, expanded, reduced, and removed as needed. Fledge success was observationally rated as high, medium, low, none or unknown

Results

There were 13 CWB nesting sites monitored in the seashore (Figure 1). Seven colonies were on North Core Banks (NCB), including the Middle Core section and five colonies were on South Core Banks (SCB). There were no nesting terns or skimmers on Shackleford Banks (SB). One colony was located on Morgan Island. Seven single species colonies were occupied by least terns, while six colonies were of mixed species. The largest colonies were at Morgan Island, Portsmouth Flats, Old Drum Inlet, Ophelia Inlet, and Cape Point during the May 26th-31st peak counts. There were 35 least terns (LETE) pairs at Portsmouth Flats. There were 32 LETE pairs in the Old Drum Inlet area (Appendix 1). There were 16 LETE, 7 black skimmer (BLSK), and 4 common tern (COTE) pairs counted in the Ophelia Inlet area. At Cape Point, there were 32 LETE, 22 BLSK and 1 COTE nesting pairs counted. The least tern window census counted 148

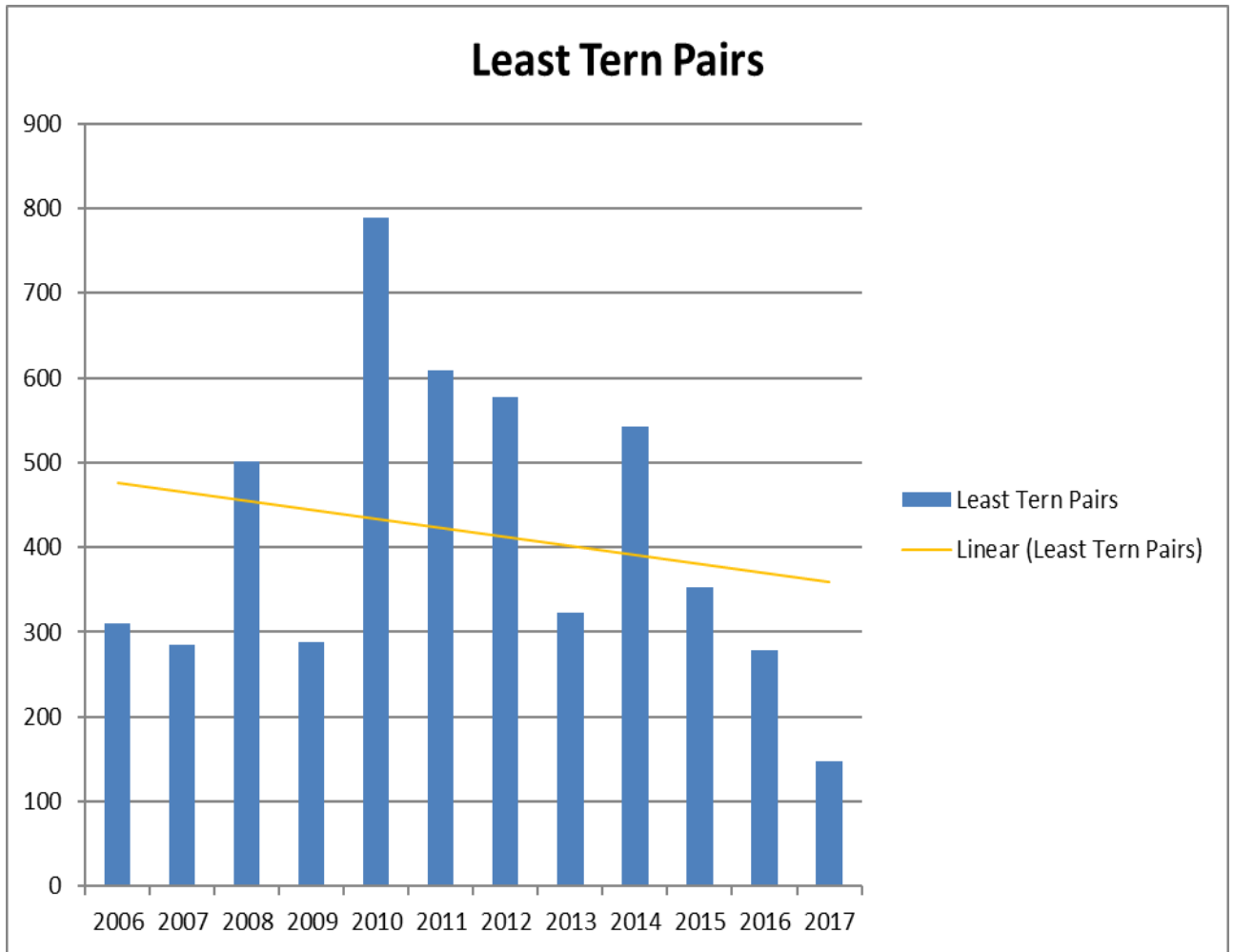
total breeding pairs throughout the seashore on Core Banks (Appendix 2). At Morgan Island, there were 750 royal tern (ROYT) and 72 sandwich tern (SATE) counted in the May census. In addition, the Morgan Island colony chick banding study reported 504 royal tern (ROYT) chicks and 49 sandwich tern (SATE) chicks banded.

Discussion

The least tern window census in 2017 recorded 148 breeding pairs, a decrease from last year (Chart 1.). There has been a continued downward trend in LETE breeding pair numbers since 2010. Predation appears to be important factor in this decline. Coyote (*Canis latrans*) and raccoon (*Procyon lotor*) tracks were repeatedly observed at nesting sites. Least terns were widely scattered in multiple small nesting groups as in past years (Figure 1). The number of colonies declined from 21 in 2016 to 13 in 2017. Little to no chick and or fledgling productivity was observed in 2017 on the barrier islands.

On Morgan Island, a former dredge spoil site, the royal terns successfully used Morgan Island again as a nesting site in 2017. Prior to 2013 royal terns had not nested on this inshore dredge spoil island since 1977. Although it is now heavily vegetated ROYT and SATE nested on a small sandy beach. In addition to the terns there were 1458 laughing gull, 45 herring gull, and 4 great black-backed gull nests recorded in the grassy vegetation. Wading birds included 2278 white ibis, 267 little blue heron, 256 great egret, 177 cattle egret, 167 black-crowned night heron, 29 snowy egret, and 6 glossy ibis nests. The wading birds build nests in the shrubs or thick ground vegetation.

Chart 1. Least Tern window census, June 5th-20th, counts from 2006 to 2017.



Appendix 1. 2017 Colonial Waterbird Data

ID	Island	Mile	Site Description	Latitude	Longitude	Dates Active	Count date
1	NCB	3	Portsmouth Flats	35.04115	-76.07723	15-May to 22-Jul	30-May
2	NCB	5.95	Katherine Jane/High Hills	35.00938	-76.11602	10-May to 6-Aug	30-May
3	NCB	9.3	upper beach shellbed	34.97618	-76.15883	15-May to 6-Jul	30-May
4	NCB	18.49	Old Drum shellbed-NCB	34.8845	-76.27628	15-May to 21-Jul	31-May
5	MCB	19.09	Old Drum shellbed-MCB	34.87724	-76.28599	3-May to 28-Jul	31-May
6	MCB	22	New Drum Flats	34.85004	-76.32318	3-May to 28-Jul	28-May
7	MCB	22.74	Ophelia	34.8441	-76.33237	16-May to 28-Jul	28-May
8	SCB	23.62	North end	34.83411	-76.34377	16-May to 15-Aug	28-May
9	SCB	28.47	upperbeach shellbed	34.77825	-76.39528	16-May to 29-Jun	29-May
10	SCB	30.84	shellbed in between dunes	34.75079	-76.41998	9-May to 15-Jul	28-May
11	SCB	31.16	upperbeach shellbed	34.74672	-76.4231	18-June to 15-Jul	na
12	SCB	44.3	Cape Point	34.58249	-76.55077	10-May to 4-Aug	28-May
13	MI		Morgan Island	34.65698	-76.52271		26-May

ID	Peak Counts	Count Type	Count 1	Count 2	Success
1	35 LETE	pairs	25 LETE Pairs on 5/15	45 pairs LETE, 10 BLSK pairs on 6/15	none
2	8 LETE	pairs		4 LETE pairs on 6/11	none
3	3 LETE	pairs	2 LETE pairs on 5/15, closure installed	1 LETE pair on 7/1	none
4	2 LETE	pairs	10 LETE pairs on 5/15, 2 nests	6 LETE pairs, 2 BLSK pairs on 6/11	none
5	30 LETE	pairs	30 LETE pairs, raccoon tracks on 5/16	1 LETE pair and 1 older chick on 7/19	low
6	6 LETE	pairs	15 LETE pairs, 2 nest on 5/20	2 LETE pair on 7/11	none
7	7 LETE	pairs	7 LETE pairs on 5/16	1 LETE pair on 7/19	none
8	7 BLSK, 16 LETE, 4 COTE	pairs	14 LETE, 12 BLSK, 4 COTE pairs on 5/16	5 LETE chicks no incubation on 8/5	low
9	4 LETE	pairs	2 LETE pairs on 5/16, closure installed	4 LETE pairs on 5/31, colony moved to 28.28	none
10	5 LETE 1 BLSK	pairs	12 LETE pairs on 5/16, closure extended	7 LETE pairs, 1 chick on 7/5	none
11			10 LETE pairs on 6/18	1 LETE pair on 7/5	none
12	32 LETE, 22 BLSK, 1 COTE	pairs	12 LETE pairs, 4 BLSK on 5/10	52 LETE, 22 BLSK, 2 COTE pairs on 6/3	none
13	750 ROTE, 72 SATE, 1458 LAGU, 45 HEGU, 4 GBGU nests	pairs	504 ROTE and 49 SATE chicks banded on 7/6		high

ID	Comments
1	closure removed after last PIPL fledged on 8/22
2	closure removed on 8/6
3	closure removed on 7/12
4	closure removed on 8/9
5	closure removed on 8/23, raccoon tracks on 5/16
6	closure removed on 8/23
7	closure removed on 8/3
8	closure removed on 8/18
9	closure removed on 6/29
10	closure removed on 7/15
11	closure removed on 7/15
12	birds used main closure and closure installed on the point tip on 6/2, coyote tracks everywhere and 0 birds in incubation at tip closure on 6/22, closure reduced and then removed on 8/4

NCB= North Core Banks
SCB= South Core Banks

LETE= least tern
GBTE= gull-billed tern

COTE= common tern
BLSK= black skimmer

ROYT= royal tern
SATE= sandwich tern

Appendix 2.

2017 Least Tern Window Census
May 26-31

North Core Banks: 91 breeding pairs

South Core Banks: 57 breeding pairs

Shackleford Banks: No breeding pairs

CALO Total= 148 breeding pairs