

Cape Lookout National Seashore Colonial Waterbird 2009 Summary

Introduction

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

Methods

Nesting habitat is posted 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 posted as the birds colonize a site. Posted 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. 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. In 2009, counts were conducted by staff biologist and biological technicians. A GPS point was recorded at the center of the colony. Monitoring throughout the summer included counts of adults, incubating pairs, number of chicks and fledglings, and buffer distance checks. Closures were posted, expanded, reduced, and removed as needed. Fledge success was observationally rated as high, medium, low, none or unknown.

Results

There were 14 CWB nesting sites in the seashore (Figure 1). Seven colonies were on North Core Banks (NCB), six colonies on South Core Banks (SCB), and one small colony on Shackleford Banks (SB). Eight single species colonies were occupied by least terns, while six colonies were mixed species. The largest colonies were at Old Drum Inlet Flats, New Drum Inlet Flats and Ophelia Inlet during the June 5th-20th Peak counts. There were 202 least terns (LETE), 75 black skimmers (BLSK), 7 common terns (COTE), and 2 gull-billed tern (GBTE) adults counted at Old Drum Inlet Flats (Appendix 1). At New Drum Inlet Flats 127 LETE, 167 BLSK, 22 COTE, and 4 GBTE were counted. At Ophelia Inlet 100 LETE and 21 COTE were counted. The success was low at these colonies due to a flooding event from high tides around 6/24 that washed out nests. The colony at Cape Point started off small in June, but grew in July. On July 22nd there were 143 LETE, 94 BLSK, 22 COTE, and 4 GBTE adults counted. The least tern

window census counted 288 breeding pairs throughout the seashore on Core Banks (Appendix 2).

Discussion

The section of beaches from mile 18 to mile 23 on North Core Banks and South Core Banks continue to provide high quality habitat for nesting terns and skimmers. Old Drum Inlet and New Drum Inlet closed naturally in March 2009. Through the inlet migration and filling process large sand flats have been created. The sand flats at Old Drum, New Drum and Ophelia Inlet hosted the larger mixed species colonies in 2009. These sand flats have open mudflat on the soundside shore. The four colonies in this area were active from late April to mid-August. Least terns, black skimmers, common terns, and gull-billed terns nested here. These colonies were very active until a late June high tide flooding event struck and washed out nests on 6/24/09. Most of the sand flats were completely washed over. Some least tern chicks and nest survived, but the other species abandoned the sites or were unproductive. The reproductive success at these sites was low and limited to least terns and few common tern fledglings.

The Cape Point colony started off slow in June with 46 LETE adults, 11 COTE adults, and 15 BLSK adults counted on 6/17/09. By late July there were 143 LETE adults, 22 COTE adults, 94 BLSK adults, and 4 GBTE adults counted on 7/22/09. In addition there were 87 LETE nest (at least 31 chicks), 11 COTE nests (4 chicks), 23 BLSK nests, and 2 GBTE nests counted on 7/22/09. Laughing gull predation of LETE chicks was recorded on 7/27/09. While the chicks initially used the upper beach and the closed western shoreline, BLSK and COTE chicks did move out towards the point on 8/6/09 and the point was closed to motor vehicles. The point was reopened to motor vehicles on 8/24/09 after the chicks had fledged and the remaining nests had been flooded by the Hurricane Bill swell that inundated the point on 8/22/09. There was little raccoon activity recorded at the point this nesting season, though nest predation was recorded on 8/21/09.

Colonies at sites such as Ocracoke Inlet, Portsmouth Flats, Kathryn-Jane Flats and Power Squadron Spit that have done well in the past had little to no success this year. Predation, flooding, and human disturbance were noted as problems. The one small colony on Shackleford had 4 BLSK nests and 4 Forester tern nests, but these nests were lost to raccoon predation.

The least tern window census in 2009 recorded 288 breeding pairs, a decrease from the 2008 census of 502. The 2007 and 2006 counts recorded 285 and 310 breeding pairs, respectively.

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Appendix 1. 2009 Colonial Waterbird Data

ID	Island	Mile	Site Description	Latitude	Longitude	Dates Active	Count date
1	NCB	0.10	Ocracoke Inlet, north tip	35.05993	-76.03501	13 May to 27 May	na
2	NCB	2.0	Portsmouth Flats	35.04852	-76.06655	18 June to ?	18-Jun
3	NCB	3.01	Portsmouth Flats	35.03632	-76.07909	5 May to 29 July	18-Jun
4	NCB	6.26	High Hills	35.00587	-76.11954	15 June to ?	na
5	NCB	18.9	Old Drum Inlet spit	34.87997	-76.28271	23 April to 5 August	18-Jun
6	NCB	21.3	Dune shell beds of New Drum	34.85681	-76.31271	5 May to 11 August	18-Jun
7	NCB	21.8	Open shell flat of New Drum	34.85127	-76.31920	29 April to 11 August	18-Jun
8	SCB	23.0	Ophelia Inlet Flat	34.84127	-76.33854	30 April to 4 August	18-Jun
9	SCB	30.39	shell flat behind dune	34.75599	-76.41516	22 May to 26 May	na
10	SCB	33.93	shell flat in front of dune, beach	34.71424	-76.45171	13 May to 30 July	19-Jun
11	SCB	37.04	Upper beach/toe of dune	34.67715	-76.48287	6 June to 27 July	17-Jun
12	SCB	43.87	Cape Point	34.58871	-76.53597	21 May to 24 August	17-Jun
13	SCB	47.2	Power Squadron Spit	34.62936	-76.55404	8 May to 6 August	17-Jun
14	SB	49.5	Soundside island	34.65769	-76.56217	22 May to 5 June	na

ID	Peak Counts	Count Type	Count 1	Count 2	Success
1	na	na	20 LETE-5/25		none
2	18 LETE	adult			unknown
3	20 LETE	adult	4 GBTE-5/21, 40 BLSK 5/23		unknown
4	na	na	LETE		unknown
5	202 LETE, 75 BLSK, 7 COTE, 2 GBTE	adult	71 LETE nests, 35 pair BLSK 5/11		low
6	12 LETE	adult			none
7	127 LETE, 167 BLSK, 22 COTE, 4 GBTE	adult	3 COTE chicks on 6/18		low
8	100 LETE, 21 COTE	adult	70 LETE and 9 COTE nests on 6/18	12 COTE, 8 LETE, 8 GBTE, 4 BLSK on 7/4	low
9	na	adult	10 LETE adults, scrapes, 1 nest on 5/22		none
10	22 LETE	adult	4 LETE broods and 3 nest on 6/19		low
11	1 LETE (1 nest)	adult			none
12	46 LETE, 11 COTE, 15 BLSK	adult	90 LETE, 14 COTE, 33 BLSK adults on 6/25	143 LETE(87 nests), 22 COTE(11 nests), 4 GBTE(2 nests), 94 BLSK (23 nests)-7/22	medium
13	26 LETE	adult	LETE 9 nests and 2 broods of chicks on 6/17		low
14	4 BLSK, 4 FOTE	nest			none

ID	Comments
1	Colony on small shell flat rise near tidal pond, overwashed/flooded on 5/28
2	Colony behind middle pond on back flats
3	Unknown activity for most of the months of June and July
4	Colony was active in June, but there are no recorded notes from NCB staff
5	Flat flooded on 6/24, some chicks and nests remain, BLSK colony diminished and some LETE chicks on 7/2, 7/24-few LETE chicks
6	Scattered LETE activity around PIPL nests
7	Colony diminished-flat flooded on 6/24, some chicks and some nest remain
8	Colony diminished by flooding event on 6/24, some chicks and fledglings observed throughout July
9	5/24 birds present, but area surrounded by holiday campers, colony gone by 5/26
10	On 7/2 colony diminished, numerous raccoon and unknown mammal tracks in area
11	On 6/22 1 chick, 7/2 second nest found, 7/27 no activity
12	7/22 -31 LETE chicks, 4 COTE chicks, Gull predation in July, 8 BLSK chicks at point tip in early August, 8/22 remaining nest flooded
13	Flooding noted on 6/25, but colony still active
14	Colony inactive by 6/5

NCB= North Core Banks
 MCB= Middle Core Banks
 SCB= South Core Banks

LETE= least tern
 BLSK= black skimmer
 COTE= common tern
 GBTE= gull-billed tern

Appendix 2.

2009 Least Tern Window Census
June 5-20

North Core Banks: 190 breeding pairs

South Core Banks: 98 breeding pairs

Shackleford Banks: No breeding pairs

CALO Total= 288 breeding pairs