

**INVENTORY OF TERNS, LAUGHING GULLS, AND BLACK SKIMMERS
NESTING IN MASSACHUSETTS IN 2004**



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Common Tern fledgling, Ram Island, Mattapoisett, MA.

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Abstract

Cooperators in Massachusetts surveyed 123 coastal sites in 2004 for the presence of breeding Roseate Terns (*Sterna dougallii*), Common Terns (*Sterna hirundo*), Arctic Terns (*Sterna paradisaea*), Least Terns (*Sterna antillarum*), Laughing Gulls (*Larus atricilla*), and Black Skimmers (*Rhynchops niger*). Seventy-six sites were occupied by nesting birds of one or more of these species. Roseate Terns decreased 11.7% to 1,524 pairs. Common Terns increased slightly (1.8%) to 16,372 pairs. After two years of substantial decline, Least Tern numbers grew to 2,691 pairs (a 7.8% increase). Laughing Gulls increased 10.1% to 1,322 pairs this year. Six pairs of Arctic Terns and six pairs of Black Skimmers nested in Massachusetts in 2004.

Introduction

Every year, a diverse network of cooperators in Massachusetts protects and monitors terns, Laughing Gulls, and Black Skimmers, and provides census data and other reproductive information to the Massachusetts Division of Fisheries and Wildlife (MDFW). These data help managers determine population trends and assess threats to these highly vulnerable species.

This report summarizes data on distribution, abundance, and productivity of terns, Laughing Gulls, and Black Skimmers in Massachusetts during the 2004 nesting season.

Methods

Sites surveyed: Cooperators are asked to survey all sites at which terns, Laughing Gulls, and Black Skimmers have been known to nest. Any new nesting sites are reported.

Timing of Census: Depending upon the species, either one or two censuses are conducted. The “A-count” (or “peak season” count) is conducted between 5 and 20 June. Laughing Gulls, Black Skimmers, and all tern species are censused during the A-count. For Roseate and Common Terns, the count is ideally conducted as closely as possible to the first hatch. Laughing Gull and Black Skimmer counts are timed to be coincident with Common Tern counts, and Arctic Tern counts with counts of any sympatric nesting seabird species. Least Tern colonies ideally are visited multiple times during the A-count window, and maximum estimates are reported. The “B-count” is conducted after 20 June. For Roseate Terns, the B-count is timed 25 days after the A-count. For Arctic Terns and Black Skimmers, which nest in very low numbers in the state, any additional pairs that appear after 20 June are reported. A B-count for Least Terns is not necessary unless there is a significant change in numbers from the A-count, or a site that was not used during the A-period window was used after 20 June. Because Least Terns frequently shift among sites in response to disturbance, B-counts do not contribute to the overall census numbers (to avoid double-counting the same birds); however, the B-count does document use of the site. B-counts are not required for Common Terns or Laughing Gulls.

Survey Method: Observers are asked to classify their survey method as one of the following: Nest Count, Partial/Extrapolated Nest Count, or Adult Count. All counts are expressed as “number of pairs”. Nests must contain at least one egg to be counted, unless it is obvious that chicks have already hatched; empty scrapes and abandoned nests are not counted. Adults are only counted if it appears that they are nesting at a site; birds that are not suspected to be nesting at a site (*e.g.*, resting or feeding birds) are not counted as nesting pairs. The number of breeding adults present (*i.e.*, in the nesting area, not loafing on the shoreline) is multiplied by a correction factor of 0.8 to arrive at the number of pairs.

Survey Quality and Productivity Estimate: Observers are asked to rate the quality of their survey as Low Confidence, Reasonable Confidence, or High Confidence. Observers also provide a qualitative assessment of productivity: none, poor, fair to good, or excellent. In a few cases, typically for Roseate and Common Terns at large colonies where detailed monitoring occurs, quantitative estimates of productivity (*e.g.*, fledglings/nest) are provided.

Reporting: Observers completed a standard “Massachusetts Tern Census Form”. This form requests the following information for each site surveyed: observer name and affiliation, contact information, ownership of site, dates of A- and B-counts, number of pairs observed, survey method, quality of survey, qualitative productivity estimates, dates of first eggs laid and first hatched, and evidence of predation, overwash, or disturbance.

Quality Control: All census forms are reviewed by MDFW, and observers are contacted to obtain missing data and clarify ambiguities.

Results and Discussion

In all, 123 sites were surveyed for nesting terns, Laughing Gulls, and Black Skimmers in 2004, and 76 sites were occupied by nesting birds of one or more of these species. Census results for each site are summarized in Table 1.

Roseate Tern: Roseate Tern numbers dropped 11.7% to 1,524 pairs (vs. 1,725 pairs in 2003). This drop appears to be part of a possible range-wide decline that the endangered Northeast U.S. population has been experiencing since the population peaked in 2000 at 4,310 pairs (2,124 in Massachusetts). In 2004, an estimated 3,457 pairs nested in the Northeast U.S.

Roseates nested at five sites in the state again this year. Last year’s new Roseate nesting sites (Minimoy I. and Penikese I.) were again occupied. The Minimoy colony more than doubled (from 10 pairs in 2003 to 24 pairs in 2004), and productivity was good at 1.13 fledglings/nest. However, the large numbers (251 pairs) present at Penikese in 2003 due to oil spill response actions (hazing) at Ram I. did not reappear in 2004, when only nine pairs were recorded (productivity was 0.97 fledglings/nest). The two major Roseate sites in the state, Bird and Ram Is., flip-flopped in importance between this year and last. Bird I. dropped to 554 pairs (from 904 pairs in 2003), presumably because terns fled to Ram in response to mink predation on adults. Productivity was good at 1.25 fledglings/nest. Numbers at Ram I. were strong (936 pairs vs. 557 in 2003), and productivity was decent at 0.92 fledglings/nest. Just one pair of Roseates nested at S. Monomoy I., Chatham.

Since 1985, Roseate numbers in the state have fluctuated between 1,344 and 2,124 pairs, averaging 1,624 pairs during this time period (Fig. 1).

Common Tern: After last year’s historical high (16,075 pairs), Common Tern numbers edged further upwards (1.8%) to 16,372 pairs distributed among 27 sites. The S. Monomoy I. megacolony was stable at 8,864 pairs (vs. 8,727 in 2003), and productivity was very good, at 1.59 fledglings/nest. Numbers on Ram I. jumped to 2,938 pairs (vs. 2,000), the highest ever recorded at the site, but productivity was only 0.83 fledglings/nest. Numbers at Bird I. (1,761 vs. 2,054) were strong, and productivity was a respectable 1.27 fledglings/nest. Minimoy I. climbed to 1,432 pairs (vs. 1,280) and productivity was reported as excellent. The Penikese I. colony was stable at 631 pairs (vs. 661), and productivity was very good (1.85 fledglings/nest).

Only one other colony in the state this year was known to number 100 or more pairs: Haystack Point, Edgartown (338 vs. 336; poor productivity). However, Hog I. Pier, Boston (which had 280 pairs last year) was not surveyed this year.

Since 1985, Common Tern numbers have risen fairly steadily in Massachusetts, from 7,548 to 16,372 pairs (average, 11,211 pairs) (Fig. 2).

Least Tern: The Least Tern is Massachusetts' most widely distributed tern, nesting at 60 sites in the state in 2004. After two years of substantial decline (from 3,420 pairs in 2001 to 2,496 in 2003), Least Tern numbers grew to 2,691 pairs (a 7.8% increase), returning to 1996 levels. This year the largest colony in the state resided at Smith Point, Nantucket, and numbered 819 pairs (vs. 144 in 2003). Unlike most of our Least Tern colonies, which seem to produce few to no fledglings, productivity was reported as fair to good. Additional colonies with at least 100 pairs were S. Monomoy I. (229 B-period vs. 143; poor productivity), W. Dennis Beach, Dennis (188 vs. 89; fair to good), North Beach, Orleans (170 vs. 56; poor to none), Plum I. Beach (160 B-period vs. 40; poor), Sandy Neck, Barnstable (156 vs. 123; fair to good), Crane Beach, Ipswich (153 vs. 328; poor), Tern I., Chatham (143 vs. 15; none), Dead Neck-Sampson I., Barnstable (139 vs. 243; poor), North River Mouth, Scituate (126 vs. 70; poor to good), Allen's Pond (107 vs. 154; fair to good). The largest Least Tern site in the state last year was Crane Beach.

Least Tern numbers in Massachusetts trended upwards from 1985 to 2001 and declined from 2001 to 2003. They have averaged 2,713 pairs from 1985 to present (Fig. 1).

Arctic Tern: Six pairs of Arctic Terns nested in Massachusetts in 2004 (vs. 5 in 2003; Fig. 3). Arctics nested at the same three sites this year as last: Plymouth Beach (4 pairs; 3 fledglings produced), Nauset-Eastham (1; no productivity) and Penikese I. (1; 2 fledglings produced).

Laughing Gull: Laughing Gulls were present at two sites this year. The S. Monomoy I. colony increased 10.0% to 1,321 pairs (vs. 1,200). Productivity was fair to good. One other pair nested at nearby Minimoy I.; no fledglings were produced. From 1985 to present, Laughing Gulls have averaged 999 pairs (range, 542 to 1,356 pairs) and have shown no clear positive or negative trend (Fig. 4).

Black Skimmer: Minimoy I. once again harbored all the Black Skimmers (6 pairs vs. 7 in 2003) nesting in Massachusetts (Fig. 3). Productivity was 1.5 fledglings/nest.

Acknowledgements

My appreciation goes to all those dedicated individuals, organizations, and agencies that care enough about our vulnerable coastal waterbirds to manage and monitor these species, and to submit data for reporting.

COLONY NAME, TOWN	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull			Censusing Agency ^c
	No. pairs	M ^a	P ^b	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	
Mystic River, Everett/Boston				3	A	-													Zendeh
Belle Isle Marsh, Boston																			Zendeh
Logan Airport, Boston																			Smith
Central Square Piers, East Boston				14	A	-													Zendeh
Rainsford I., Boston										75	N	-							NPS
Lovell I., Boston	No data.																		
Hog I. Pier ("Spinnaker I."), Hull	No data.																		
SOUTH SHORE																			
North R. Mouth (Third and Fourth Cliffs), Scituate				6	N	1				126 (12)	N (N)	1-2							MAS
Duxbury Beach, Duxbury										44 (22)	N/A (E/A/N)	1							MAS
Plymouth Beach, Plymouth				[5]	[N]	0	4	N	2	13 (15)	N (N)	0							Plymouth
Ellisville Harbor, Plymouth										1 (15)	N (N)	1							MAS
Sagamore Beach, Bourne and Sandwich										1 (1)	A (N)	0							MAS
Scusset Beach, Sandwich										0 (16)	(N)	-							MAS
UPPER CAPE																			
Menauhant, Falmouth										1 (4)	N (N)	-							MAS
Washburn I., Falmouth																			DCR
South Cape Beach-Waquoit, Mashpee																			DCR

COLONY NAME, TOWN	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull			Censusing Agency ^c
	No. pairs	M ^a	P ^b	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	
Popponeset Spit, Mashpee										0 (6)	(N)	-							MAS
Town Neck Beach, Sandwich										8	N	0							MAS
Springhill Beach, Sandwich										30	A	-							MAS
Scorton (Neck) Creek, Sandwich										20	N	1							MAS
Sandy Neck, Barnstable										156 (132)	A (A)	2							Barnstable
Dead Neck-Sampson I., Barnstable				5	A	-				139 (28)	N/A (N)	1							MAS
Craigville-Long Beach, Barnstable										0 (5)	(N)	0							MAS
Squaw I., Barnstable																			MAS
Dunbar Point (Kalmus Park), Barnstable										50	A	0							MAS
Gray's Beach, Yarmouth	2*	A	-	72	A	0-1				0 (9)	N	0-1							MAS
Great I., Yarmouth																			MAS
West Dennis Beach, Dennis										188	N	2							MAS
LOWER CAPE																			
Harding's Beach and Point, Chatham	Harding's Pt. not censused.																		MAS
Monomoy-South, Chatham	1 (0)	N (N)	1.0 fl./nest	8864	N	1.59 fl./nest				1 (229)	N (N)	1				1321	N	2	USFWS
Minimoy, Chatham	24 (2)	N (N)	1.13 fl./nest	1432	N	3				0 (1)	N	0	6	N	1.5 fl./nest	1	N	0	USFWS
Monomoy-North, Chatham				3	N	0													USFWS

COLONY NAME, TOWN	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull			Censusing Agency ^c
	No. pairs	M ^a	P ^b	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	
South Beach Island, Chatham										8 (3)	N (A)	0 - 1							MAS, MDFW
Nauset (North) Beach, Chatham										21 (4)	A (N)	0							Chatham
Tern I., Chatham										143 (8)	N (A)	0							MAS
Nauset (North) Beach, Orleans (Chatham line north to Nauset Harbor Inlet)										96 (170)	A (A)	0 or 1							Orleans
Nauset-New Island, Orleans																			NPS
S. Sunken Meadow, Eastham										0 (9)	(N)	0							MAS
Nauset-Eastham ("Coast Guard Beach" & "Plover I.")							1 (0)	N	0	73 (64)	A (A)	0							NPS
Great I.-Jeremy Pt., Wellfleet										36	N	0							NPS
Marconi Beach, Wellfleet																			NPS
Marconi Station/LeCount Hollow, Wellfleet										48 (33)	A (N/A)	0, 1-2							NPS
Cahoon Hollow, Wellfleet										44 (18)	A(A)	0							NPS
Pamet Harbor Bar, Truro										16 (2)	N/E	1							MAS
Beach Point/Pilgrim Beach, Truro																			MAS
Ballston Beach, Truro										0 (10)	(N)	1							NPS
High Head, Truro										0 (5)	(N)	0							NPS
Wood End-Long Point Area, Provincetown										7 (10)	N (N)	1							NPS
Race Point Light Area, Provincetown				1	N	1				6 (11)	N (N)	1							NPS

COLONY NAME, TOWN	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull			Censusing Agency ^c
	No. pairs	M ^a	P ^b	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	
Race Point CG Station, Provincetown										0 (6)	(N)	1							NPS
Mission Bell, Provincetown										11 (11)	N (N)	1							NPS
Tasha's Area, Provincetown										12 (12)	N (N)	1							NPS
BUZZARDS BAY																			
Bird I., Marion	554 (69)	N (N)	1.25 fl./nest	1761 (160)	N (N)	1.27 fl./nest													MDFW
Strawberry Pt., Mattapoisett	No data.																		
Ram I., Mattapoisett	936 (55)	E (E)	0.92 fl./nest	2938	N	0.83 fl./nest													MDFW
So. Shore Marshes WMA, Little Bay, Fairhaven										4	N	-							MDFW
Fish I., Fairhaven																			MDFW
West I., Fairhaven																			LCES
Long I., Fairhaven																			MDFW
Winsegansett Hts., Fairhaven																			LCES
Salter's Pt. and Pd., Dartmouth																			LCES
Demarest Lloyd State Park, Dartmouth																			LCES
Barney's Joy-Allen's Pd.-Little Beach, Dartmouth				11	N	-				107 (99)	N (N)	2							LCES
Gooseberry Neck, Westport																			LCES
Horseneck Beach, Westport																			MAS, LCES

COLONY NAME, TOWN	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull			Censusing Agency ^c
	No. pairs	M ^a	P ^b	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	
Speaking Rock, Westport	No data.																		
Jug Rock, Westport	No data.																		
Cockeast Pd.-Acoaxet, Westport																			TNCRI
Richmond Pd., Westport																			TNCRI
Bay Point, S. Swansea																			Waring
Pasque I., Gosnold										18	E	-							Hatch
Nashawena I., Gosnold																			Hatch
Penikese I., Gosnold	9 (0)	N	0.97 fl./nest	631	N	1.85 fl./nest	1 (0)	3	2.0 fl./nest										MDFW
Cuttyhunk I., Gosnold										6	A	-							MDFW
MARTHA'S VINEYARD																			
Eastville Beach, Oak Bluffs										40 (40)	N (N)	~0.4 fl./pair							Dukes Co., MAS
Harthaven Beach, Oak Bluffs																			MAS
Sylvia State Beach, Oak Bluffs										45 (0)	A	0							Dukes Co., MAS
Sarson I., Sengekontacket Pd., Oak Bluffs																			MAS
Haystack Pt., Sengekontacket Pd., Edgartown				338	A	1													MAS
Little Beach, Edgartown																			MAS
Cape Poge Elbow, Edgartown																			TTOR
Little Neck, Edgartown																			TTOR

COLONY NAME, TOWN	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull			Censusing Agency ^c
	No. pairs	M ^a	P ^b	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	
East Beach-Dike Bridge, Edgartown																			TTOR
Wasque, Edgartown																			TTOR
Norton Beach ("Katama"), Edgartown										0 (5)	(N)	0							Dukes Co., MAS
Edgartown Great Pd., Edgartown																			MVLBC, MAS
Oyster Pd., Edgartown																			MAS
Watcha Pd., West Tisbury																			MAS
Quansoo Area (Long Pt. Wildlife Refuge, Tisbury Great Pond, W. Tisbury & Black Point Pond, Chilmark)										[1] 0 (0)	[N]	0							MAS, TTOR
Lamberts Cove-James Pd., W. Tisbury																			MAS
Chilmark Pd., Chilmark																			MAS
Stonewall Beach, Chilmark										12	-	-							MAS
Long Beach, Aquinnah & Squibnocket Beach, Chilmark										0 (2)	N	0							MAS
Nomans Land, Chilmark																			USFWS
Lobsterville (incl. "Dogfish Bar"), Aquinnah										6	N	1							MAS
Menemsha Pd., Aquinnah-Chilmark (encompasses Edys I., Chilmark)				3	A	-													MAS
Tashmoo, Tisbury																			MAS
Mink Meadows,										1	N	0							MAS

COLONY NAME, TOWN	Roseate Tern			Common Tern			Arctic Tern			Least Tern			Black Skimmer			Laughing Gull			Censusing Agency ^c
	No. pairs	M ^a	P ^b	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	No. pairs	M	P	
Tisbury																			
NANTUCKET																			
Great Point (including "The Galls"), Nantucket										15 (24)	E (A)	1							TTOR
Coskata-Coatue, Nantucket				1	N	0				4 (6)	N (N)	0							NCF
Squam Head & Pond, Nantucket									0 (20)	(N)	2								NCF
Quidnet (including Sesachacha Pd.), Nantucket																		MAS	
Quaise, Nantucket																		NCF	
Siasconset (Sankaty-Low Beach), Nantucket										5	N	0							NMCRD
Tom Nevers Head, Nantucket																		NMCRD	
Surfside, Nantucket																		NMCRD	
Cisco Beach-Hummock Pond, Nantucket										0 (15)	(N)	1							NCF
Esther I.-Smith Pt., Nantucket				3	N	0				819 (245)	N (N)	2							NMCRD
Eel Point, Nantucket										4 (30)	N (N)	2							NCF
Tuckernuck I., Nantucket										28 (37)	N (N)	2							TLT, Veit
Muskeget I., Nantucket				4	N	0				10	N	1							TLT, Veit
TOTAL 2004 NESTING PAIRS	1,524			16,372			6			2,691			6			1,322			
TOTAL 2003 NESTING PAIRS	1,725			16,075			5			2,496			7			1,201			
% CHANGE FROM 2003	-11.7			1.8			20.0			7.8			-14.3			10.1			

^a Method: A = adult count; E = partial/extrapolated count; N = nest count. See text of “Methods” for more details.

^b Productivity: 0 = none; 1 = poor; 2 = fair to good; 3 = excellent. Quantitative estimates are given as fledglings/nest or fledglings/pair.

^c In addition to the names of towns, counties, and individuals, the following abbreviations are used: MDCR=Massachusetts Department of Conservation & Recreation; MDFW=Massachusetts Division of Fisheries & Wildlife; ECGA=Essex County Greenbelt Association; LCES=Lloyd Center for Environmental Studies; MAS=Massachusetts Audubon Society-Coastal Waterbird Program; MVLBC=Martha’s Vineyard Land Bank Commission; NCF=Nantucket Conservation Foundation; NMCRD=Town of Nantucket Marine and Coastal Resources Department; NPS=National Park Service; TNCRI=The Nature Conservancy - Rhode Island; TLT=Tuckernuck Land Trust, TTOR=The Trustees of Reservations; USFWS=US Fish & Wildlife Service; WBNERR=Waquoit Bay National Estuarine Research Reserve.

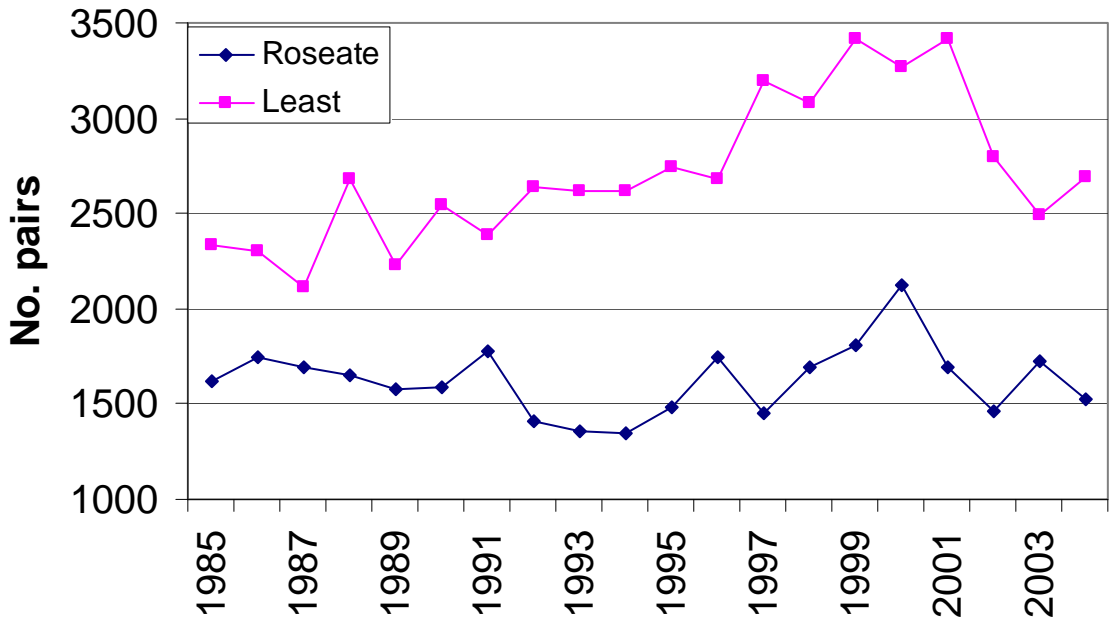


Figure 1. Numbers of nesting Roseate and Least Terns in Massachusetts, 1985-2004.

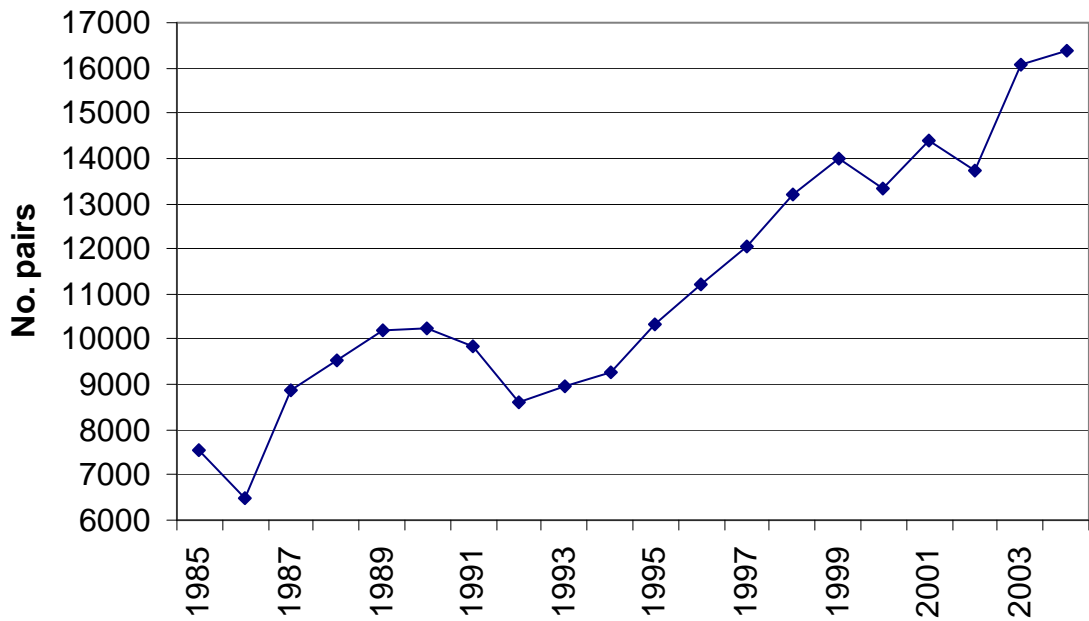


Figure 2. Numbers of nesting Common Terns in Massachusetts, 1985-2004.

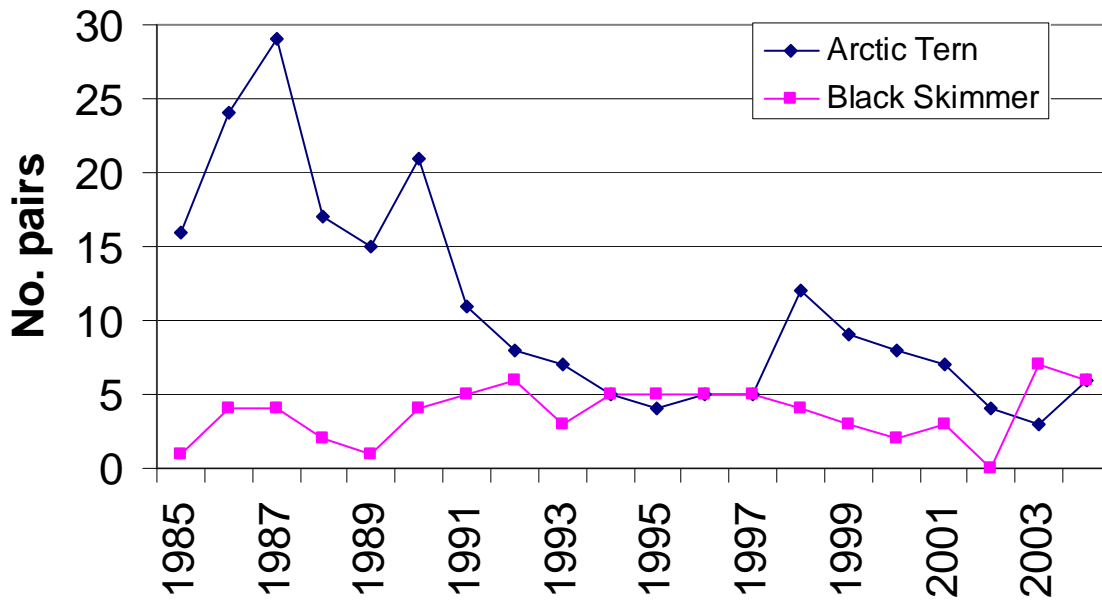


Figure 3. Numbers of nesting Arctic Terns and Black Skimmers in Massachusetts, 1985-2004.

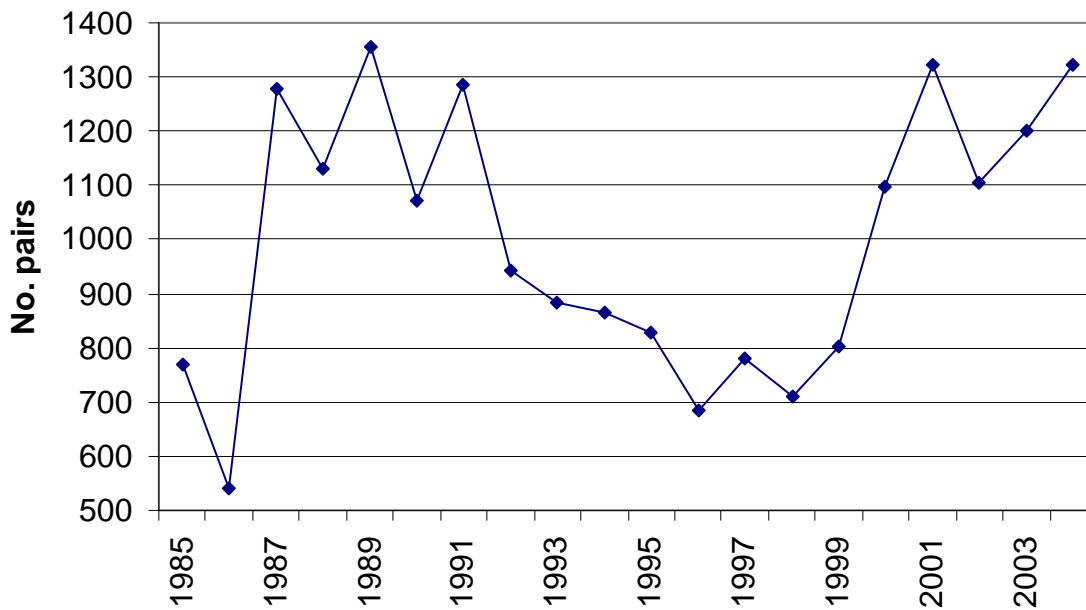


Figure 4. Numbers of nesting Laughing Gulls in Massachusetts, 1985-2004.