LEAST TERN TRENDS

■ **TODD POVER**

The Least Tern was listed as an endangered species in New Jersey in 1979, and the breeding population has been tracked since 1976. Over that time the population has not shown a clear trend, but instead has fluctuated considerably, sometimes from one year to the next. The statewide population has ranged from a low of 942 individual birds in 1977 (prior to listing) to a high of 3,081 birds in 1987 (based on the sum of peak counts from each site). Over the past ten years or so the breeding population has stabilized somewhat, averaging close to 2,000 individual birds.

Determining a long-term population trend for the state's colonial beach-nesting birds has proved difficult because of a variety of factors. The surveys themselves are challenging: Site topography and vegetation can hinder observation of nesting adults, particularly if surveys are conducted from the periphery of colonies to avoid disturbance. Not all adults associated with a colony are necessarily present at any one given time. Adults may be double-counted during a season if they fail at one site and move to another. Productivity is especially difficult to gauge – chicks can be especially hard to detect and, furthermore, depending on how long young remain at breeding sites, they may be missed (surveys are conducted approximately every two weeks during the season) or, alternately, double-counted. Migrant fledges present at sites later in the breeding season may also be inadvertently included in surveys.

Prior to 2003, the state's Endangered and Nongame Species Program (ENSP) only reported the statewide breeding population as the sum of peak counts from each individual site, leaving open the possibility that totals were inflated in some years due to double-counting. Starting in 2003, ENSP also tabulated the statewide total using the highest count from any individual census period during the season, largely to discount the effects of double-counting. As expected, the

Least Tern with chick. PHOTO BY TIZZIE CREGAN

census method resulted in lower statewide population totals. The census tally for Least Terns was, on average, about one-third less than the sum of the peak counts from individual colonies every year since 2003.* A difference was also noted for Black Skimmers, although it was no greater than fifteen percent in any individual year. This may be a function of there being fewer Black Skimmer colonies (and/or less movement between colonies). The census method is probably the more accurate measure of statewide population, although the actual number is probably somewhere between the two totals. The peak count method is still useful to assess long-term population trends, because census method data is only available since 2003. Also, if the percentage difference between the two counts remains similar over more years, the peak counts can still help detect broad trends.

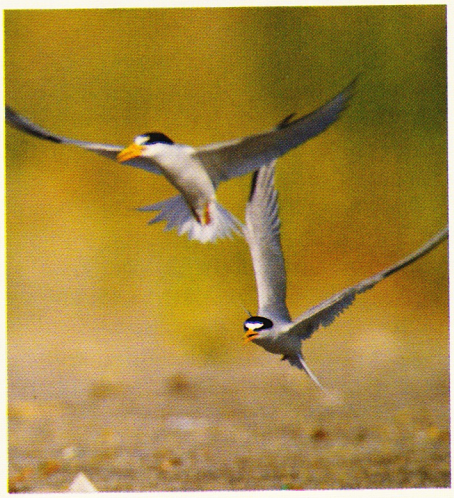
The number of Least Tern breeding sites has generally increased since 1976, especially in the period from 2000 to the present when, on average, there have been twenty-four active sites. The increased number of beach nourishment projects completed in the state in the past decade or so has provided more suitable habitat for Least Terns – this trend is especially evident in Monmouth County, where few sites (outside of Sandy Hook) existed prior to when the beachfill projects started in the mid-1990s. Since that time, Monmouth County has become an important region for Least Terns.

* 31%, 33%, 31%, 43%, and 39% from 2003-2007, respectively.

Nonetheless, the beachfill projects still raise concerns, as the breeding habitat is generally created in areas where human usage is very high. Least Terns are especially sensitive to human disturbance, and breeding success has been low at some of these sites.

Aside from human disturbance, Least Terns are vulnerable to predators – one individual predator can wipe out an entire colony in a short time. Red Foxes have become a particularly acute problem in the state for Least Terns, impacting both nest and brood success, and possibly impacting site selection as well. The Monmouth County region has been especially hard hit by foxes. *No Least Tern chicks have fledged from Sandy Hook for the past four years.*

Statewide, productivity improved in 2007, but it came on the heels of extremely low productivity the previous three years, and many colonies still completely failed in 2007. Persistently poor productivity in recent years in states along the entire Atlantic coast prompted the USFWS to coordinate an annual coastwise census starting in 2006. Results of these surveys are not available yet, but this initiative should help us better understand state and regional population trends. ■



Least Terns fighting over nesting site.
PHOTO BY BILL DALTON