

## FEATURE ARTICLES

### REDISTRIBUTION AND GROWTH OF THE CASPIAN TERN POPULATION IN THE PACIFIC COAST REGION OF NORTH AMERICA, 1981–2000

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**Abstract.** We examined nesting distribution and demography of the Pacific Coast population of Caspian Terns (*Sterna caspia*) using breeding records and band recoveries spanning two decades since the first population assessment. Since 1980, population size has more than doubled to about 12 900 pairs, yet the proportion of the population nesting at inland (18%) versus coastal sites (82%) has remained constant. Although the breeding range of the Pacific Coast population has expanded northward into Alaska and farther south in Mexico, there was no net latitudinal shift in the distribution of breeding pairs or new colonies. The distribution of breeding birds among areas changed dramatically, however, with 69% of breeding terns now nesting in Oregon (primarily in the Columbia River estuary) versus 4% during the late 1970s. During the past 20 years, there has continued to be a greater proportion of Caspian Terns breeding at anthropogenic sites compared to natural sites. Estimated annual survival rates for hatch-year and after-third-year birds during 1981–1998 were greater than during 1955–1980, consistent with the higher rate of population increase in recent decades. Fecundity required to maintain a stable population ( $\lambda = 1$ ) was estimated at 0.32–0.74 fledglings pair<sup>-1</sup>, depending on band recovery probabilities for subadults. Caspian Terns readily moved among breeding sites and rapidly colonized new areas; however, a greater concentration of breeding Caspian Terns among fewer colonies in response to anthropogenic factors is an important conservation concern for this species.

**Key words:** anthropogenic effects, Caspian Tern, population size, range expansion, redistribution, *Sterna caspia*, survival rates.