

may be less available, less suitable, or both, compared to California or England. This suggests that tidal flats are important in the conservation of this species, although one usually thinks of it as a beach resident.

Lack of territorial behavior suggests that Sanderlings wintering in North Carolina encounter different conditions on the beach than do those wintering in California or other sites. In California, lack of territorial behavior is associated with very low food densities, very high food densities, or presence of predators (Myers et al. 1979, Myers 1980, in press). The first possibility seems most likely for North Carolina. The birds did not show other behavioral features associated with the presence of predators such as tight flocking (Myers in press), and there were no other indications that food was abundant. The difference between North Carolina and California need not be in absolute prey abundance, of course, but may lie in availability of prey relative to required prey intake.

#### Future Research

These preliminary results suggest several promising directions for further research. North Carolina seems a difficult place to winter for Sanderlings, as its position near the northern limit of the east coast wintering range implies. Indeed, Sanderlings may not be able to remain throughout the entire winter over much of the state. One goal in future research should be to determine survival rates for birds wintering in North Carolina, and relate survival to climate, periods of severe weather, food supply, and other variables. Studies of movement and time and energy budgets will be necessary to interpret survival data. Comparison of such data to similar data collected from other wintering sites will enable us to determine the relative costs of wintering in different areas in terms of winter survival. Benefits could be measured in terms of reduction in migration mortality as evidenced by return rates. Thus the consequences of wintering in different regions can be evaluated to achieve a better understanding of the evolution of sanderling migration patterns. Comparisons between North Carolina and Peru, where J.P. Myers has initiated studies of wintering Sanderlings, seem especially promising as individuals from these populations may have a similar breeding range (Myers in prep.).

## THE AFRICAN SEABIRD GROUP

The African Seabird Group has as its primary interest all seabirds (coastal and pelagic) occurring in the Afrotropical region, and on islands in the Atlantic, Indian and Southern Oceans between 20°W, 80°E and south of 20°N. Waders or shorebirds (Charadrii) are not considered to be seabirds, with the exception of Phalaropes (Phalaropodidae). Essentially inland species of primarily marine groups are included (e.g. the Grey-headed Gull *Larus cirrocephalus* and the *Chlidonias* terns).

The African Seabird Group exists to increase communication between those interested in seabirds, especially of the region described above; to organise regular patrols of the region described above; and to publish its journal, *The Cormorant*, which is issued in two parts a year, normally June and December.

Interested persons are invited to submit observations on African seabirds for consideration for publication in *The Cormorant*. Authors do not have to be members of the Group. Material may take the form of papers, notes, progress reports, letters or reviews. Manuscripts should be typed in double spacing

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and submitted in duplicate. All submitted material is considered by at least one referee. Figures should be prepared in the size of final production, or they may be reduced photographically.

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