

**THE ALABAMA COAST: A WINTER
REFUGE FOR PIPING PLOVERS
(*CHARADRIUS MELODUS*)**

Janice Nicholls

INTRODUCTION

The Piping Plover (*Charadrius melodus*) has achieved a celebrity status due to an intense conservation effort following its designation as a threatened/endangered species in Jan. 1986 (U.S.F.W.S. 1986). A proliferation of research has detailed aspects of the species' breeding biology and status, yet little attention has been directed towards understanding its winter ecology and distribution. The Piping Plover recovery plans (i.e., representing the Atlantic and Great Lakes/Great Plains breeding populations) have stressed the need to determine the critical wintering areas so that habitat management and protection measures can be considered. Recently, the United States Fish and Wildlife Service in conjunction with the Auburn University Cooperative Wildlife Research Unit completed an extensive survey of the Atlantic and Gulf Coasts to locate the major wintering areas of the Piping Plover. Alabama was identified as an important component in the species' winter range.

RESULTS AND DISCUSSION

Fifty-two plovers were observed on the Alabama coast during the Gulf Coast survey conducted from 4 December 1987 - 23 March 1988. This represents approximately 3.4% of the Gulf Coast survey estimate and 1.2% of the total breeding population (U.S.F.W.S. 1988). Most birds (50) were sighted on Little Dauphin Island which is part of the Bon Secour National Wildlife Refuge; the remaining plovers were located on the Fort Morgan peninsula (1) and Dauphin Island (1). Comparing the results from both the Atlantic and Gulf Coasts, Alabama had the third highest number of plovers per km surveyed (1.2) following Louisiana and Texas (2.0 and 1.6, respectively). Similarly, the state had the third highest number of plovers per km coastline (0.61) behind Texas and Georgia (1.4 and 0.66, respectively).

All Piping Plover sites identified during these surveys were ranked on a 1-5 scale to compare their relative importance. The set of criteria

used in the rating scheme included: 1) the number of plovers observed on the survey, 2) habitat quality (i.e., presence of foraging and roosting sites), 3) historical reports available and 4) disturbance factors (i.e., human and ORV traffic). Little Dauphin Island qualified as an excellent site (ranked 1), while Ft. Morgan and Dauphin Island were ranked lower (both ranked 4).

Although this survey recognizes Little Dauphin Island as the most important site for Piping Plovers within the Mobile Bay coastal complex, the adjacent barrier beaches are considered to be essential supporting habitat. Research on the activity budgets and local movement patterns of wintering plover populations in coastal Alabama suggests that the birds utilize different microhabitats depending on the weather, tide and time of day (Johnson and Baldassarre 1988, Zivojnovich and Baldassarre 1987). Thus, the expansive mudflats on Little Dauphin may serve as the primary foraging site when conditions are suitable, while nearby beaches (i.e., Sand Island, Dauphin Island) may be roosting or alternate feeding areas. Possibly, this diversity of microhabitats in close juxtaposition explains the relatively large number of plovers in Mobile Bay. Additional research on the specific habitat requirements and site fidelity of the Piping Plover during the winter period may lend credence to this observation.

LITERATURE CITED

Haig, S. and L. Oring. 1985. Distribution and status of the Piping Plover throughout the annual cycle. *Journal of Field Ornithology* 56:334-345.

Johnson, C. and G. Baldassarre. 1988. Aspects of the wintering ecology of Piping Plovers in Coastal Alabama. *Wilson Bulletin* 100(2):214-224.

U.S.F.W.S. 1986. Determination of endangered and threatened status for the Piping Plover. *Federal Register* 50:50720-34.

U.S.F.W.S. 1988. *Great Lakes and Great Plains Piping Plover Recovery Plan*. U.S. Fish and Wildlife Service, Twin Cities, MN. 160 pp.

Zivojnovich, M. and G. Baldassarre. 1987. Habitat Selection, Movements and Numbers of Piping Plovers in Coastal Alabama. Unpublished report.

Janice Nicholls, Dept. of Zoology and Wildlife Science, Auburn University, AL 36849.