

# FALL MIGRATION OF PEREGRINE FALCONS AT COASTAL AND ISLAND LOCATIONS IN MAINE

by Roger D. Applegate

Migrating Peregrine Falcons (*Falco peregrinus*) migrate near or over water along the Atlantic Coast (Cochran 1985, 1988; Kerlinger 1985) and have been observed far out at sea (Kerlinger et al. 1983; Craddock and Carlson 1970; Voous 1961). Kerlinger et al. (1983) recorded 17.9 percent of their fall observations of Peregrine Falcons an average of eighty-four kilometers offshore in the North Atlantic. This affinity for coastal environments results in concentrations of Peregrines in several localities along the Atlantic seaboard (Cochran 1988).

In Maine, Peregrine migration was observed on offshore islands and coastal areas during 1982-1987 (S.J. Baird and R.H. Podolsky, unpublished report) and 1989 to determine the spatial and temporal extent of Peregrine passage in this area. In this paper migration is defined as the directional seasonal movement of a population, as opposed to dispersal, which may occur in any direction (Evans 1981).

## Methods

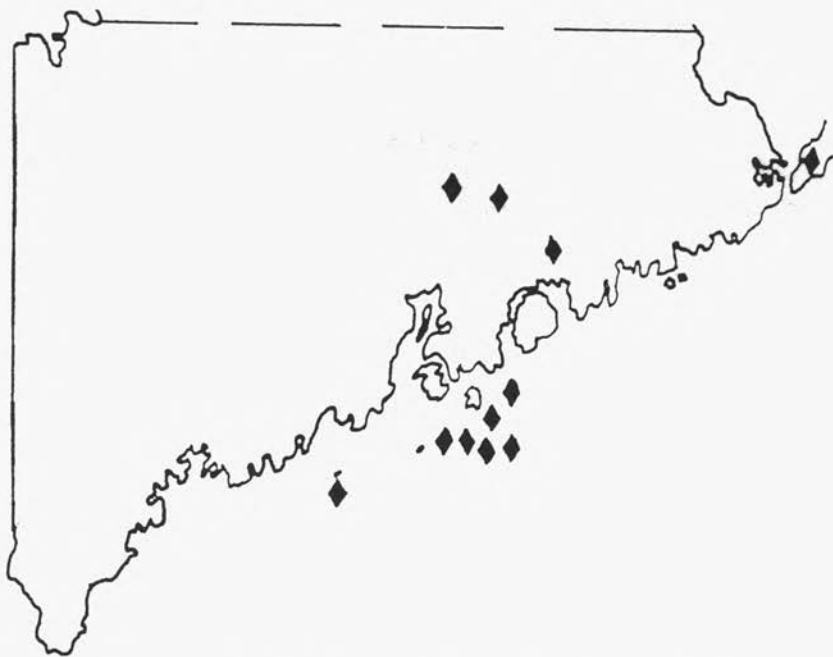
Peregrine Falcons were observed from hilltops, headlands, and other vantages in seven coastal and inland locations beginning August 24, 1989, and from five offshore islands mid-September to mid-October 1982-1987 (Figure 1). All flying falcons were counted over observation points through binoculars and spotting scopes.

## Results and Discussion

On average, six Peregrine Falcons were seen per observation day from August 24 through September 10, 1989. An average of 2.5 Peregrines per observation day were seen over a five-year period on outer islands (S.J. Baird and R.H. Podolsky, unpublished report). In addition to these observations, Peregrines were reported at Machias Seal Island, New Brunswick, Canada, on August 25, 28, and 29, 1989 (S. Grierson, personal communication).

My findings during the 1989 season showed that the migration of Peregrines in Maine begins much earlier than previous observations from offshore islands suggested (S.J. Baird and R.H. Podolsky, unpublished report). Hawk counts at Beech Mountain, Acadia National Park, Maine, did not begin until around October 1 (S. Grierson, personal communication), although counts have started September 1 in some years.

Arrival of Peregrine Falcon migrants on the northeast coast may begin in late August. Migrating Peregrines move by flapping flight, rather than by soaring and gliding, during daylight hours (Cochran 1985) and have been



**Figure 1. Locations of study sites on and near the coast of Maine 1982-87 and 1989.**

measured flying at an average ground speed of 48.8 kilometers per hour (Cochran and Applegate 1986). At this speed a migrating Peregrine observed at Hawk Mountain, Pennsylvania, on August 26-30 (Haugh 1972) would have passed the latitude of Maine at least one day earlier, assuming a relatively nonstop flight. A Peregrine radio-tagged at Assateague Island, Virginia, spent nine days in passage to its last radio-location between Florida and Cuba, a distance of 2000 kilometers (Cochran 1985).

This temporal pattern of migration may not have been evident to earlier workers for two reasons: 1) Peregrine Falcon numbers declined rapidly in the twentieth century due to pesticides (Hickey 1942; Berger et al. 1969) before populations were being intensively monitored, and 2) because many banders and observers do not start field work until September (e.g., Ward et al. 1988). Recent successful efforts at restoring Peregrines in the northeastern United States are increasing the number of birds that could be migrating through this region, as suggested by data from Hawk Mountain, Pennsylvania (Bednarz et al. 1990). This results in young birds migrating from northeastern eyries in August and September joined by migrating adults during September and October. Our data suggest that August-September migration tends to be closer inshore than October migration. Migrating immature Peregrine Falcons avoid forested areas (Cochran 1988).

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**ROGER D. APPLGATE** is a wildlife biologist at the Department of Inland Fisheries and Wildlife (DIFW) in Bangor, Maine. His research was supported by the DIFW in part with funds from the Endangered and Nongame Wildlife Fund. From 1982-1987 S.J. Baird and R.H. Podolsky conducted studies, which are cited in this article, for the DIFW. C.S. Todd provided counsel, supervision, and critical review. A.E. Hutchinson and G.J. Matula, Jr., provided administrative and logistical support and reviewed the manuscript. Critical reviews of the manuscript were provided by P.O. Corr, R.A. Joseph, T.F. Paragi, W.P. Ward, W.W. Cochran, M.R. Fuller, and J.L. Trapp. The late L.M. Applegate assisted with fieldwork, enduring long trips away from home.

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