

ABSTRACTS OF THESES AND DISSERTATIONS**RELEASE OF CAPTIVE-PRODUCED PEREGRINE FALCONS IN THE EASTERN UNITED STATES, 1975-1979**

Two hundred and four captive-produced Peregrine Falcons (*Falco peregrinus*) were released by hacking at 21 locations in the eastern United States during 1975-1979. Seventy-two percent (146) of the hacked falcons survived to independence and dispersed normally from the release sites. Hacking success was significantly higher at artificial (tower) sites than at natural (cliff) sites. Higher mortality during hacking at cliffs was due primarily to a higher incidence of Great Horned Owl (*Bubo virginianus*) predation. The falcons have not been migrating, and first-year survival appears comparable to the first-year survivorship of wild peregrines. Band recovery data suggest that peregrines released by hacking are no more vulnerable to shooting than wild peregrines.

The highest incidence of birds returning to release sites has been in coastal New Jersey. Some of the factors contributing to regional differences in return rates are discussed. Prey availability appears to be one of the major determinants of the suitability of artificial sites for eventual occupancy by breeding pairs. Many birds, including progeny of *tundrius* peregrines, have shown signs of incipient reproductive behavior upon returning to release sites. Three groups of young placed for hacking were adopted by parentally motivated single adults. The first known pairing of released falcons occurred in 1978. Three pairs were known in 1979, all at tower sites in coastal New Jersey. One of these, consisting of an adult male and subadult female, produced fertile eggs which were damaged late in incubation during aggressive encounters with Fish Crows (*Corvus ossifragus*). An unpaired adult female laid eggs on a skyscraper in Baltimore, Maryland, in 1979. Analysis of the eggs from both females revealed shell thicknesses within the range of hatchability and low levels of pesticide residues.

The population of released peregrines is estimated at approximately 50 subadults and adults in the spring of 1980. A computer simulation describes the growth of the population up through 1990.

Barclay, John H. 1980. Release of captive-produced Peregrine Falcons in the eastern United States, 1975-1979. M.S. thesis, Michigan Technological University, Houghton, Michigan 49931.