

## THESIS ABSTRACTS

### CHARACTERISTICS OF BREEDING HABITAT FOR PEREGRINE FALCONS ON THE COLORADO PLATEAU

The endangered Peregrine Falcon (*Falco peregrinus*) has experienced large scale population declines in much of its cosmopolitan range. Although the Peregrine is one of the most widely studied birds, breeding habitat requirements have not been critically evaluated, especially in the Rocky Mountain states. Data from 65 historically and currently active eyries were analyzed to describe and quantify habitat parameters for breeding Peregrines on the Colorado Plateau. Surveys for active eyries were concentrated in national parks between 1984–1986. A total of 144 variables (e.g., topography, hydrology, vegetation, competing species, cliff characteristics, human disturbance factors, etc.) were measured and rated for each eyrie. Physiographic parameters, trends in eyrie occupancy, and reproductive success were also examined. Correlations between eyries were observed in cliff height and distance to permanent water. Computer programs (SAS) were used to analyze individual variables. This data base is useful for locating new breeding sites and for potential reintroduction of Peregrines at historical sites. This data base will be useful in future years for standardizing and correlating new information. **Teresa, Sherry, Master of Arts in Geography, University of California, Los Angeles, 1988. Professor Hartmut Walter, Chair.**

### REVERSED SIZE DIMORPHISM, DETERMINANTS OF INTRASPECIFIC DOMINANCE, AND HABITAT USE BY AMERICAN KESTRELS (*Falco sparverius*) WINTERING IN SOUTH CAROLINA

This study examines the importance of sex, age, weight, and residency on the dominance status of wintering American Kestrels (*Falco sparverius*), examines habitat segregation by sex in kestrels wintering in South Carolina and Maryland, and experimentally tests the female dominance hypothesis proposed to explain reversed size dimorphism in raptors. Kestrels were randomly paired in an arena containing food (a mouse) either in aviaries at Clemson University or in the field. During 20 minute observation periods, all interactions between birds were recorded. Females tended to dominate males, and heavier birds tended to dominate lighter ones. The female dominance hypothesis was supported. Although sample sizes were too small for strong conclusions, there were indications that age and residency are also important determinants of dominance. Field observations revealed no habitat segregation, either in South Carolina, or in Maryland, but did suggest strong non-random habitat use. Both sexes were found significantly more in open habitats, such as plowed fields, pastures, and meadows, and significantly less often in wooded and residential areas. **Aborn, David A. 1989. M.Sc. Thesis, Dept. of Biological Sciences, Clemson University, Clemson, SC 29634-1903. Thesis Advisor: Dr. Sidney A. Gauthreaux, Jr.**

### RAPTORS OF EL IMPOSIBLE FOREST, EL SALVADOR, C.A.

The purposes of this research were to determine raptor species composition and obtain baseline natural history data. Thirty species of resident and migratory raptors were observed. Representatives of 6 species were mist-netted and banded. Data were recorded on the nesting of 13 species, and 111 hr of observations were recorded on a King Vulture (*Sarcoramphus papa*) nest. Four of the observed species were listed as endangered, five threatened, and four previously unrecorded in El Salvador. **West, Jane Noll. 1988. M.Sc. Thesis, Department of Biology, Central Washington University, Ellensburg, WA 98926.**