ABSTRACTS OF THESES

As previously indicated (*Raptor Res.* 10[2]; 49), we will publish abstracts of theses and dissertations, retroactive to 1974. Be sure to include the complete citation (author's full name, year, title, university, pages).

A SURVEY AND ANALYSIS OF BALD EAGLE NESTING IN WESTERN WASHINGTON

Through extensive aerial surveys of the western Washington marine coastline, 218 Bald Eagle nests were located in 1975; 114 (52 percent) were occupied. Of 100 active nests, 63 percent were successful, producing 86 young for an average of 1.37 young per successful nest. One hundred forty-four nesting territories were defined, of which the 114 occupied represented 79 percent. Territories are felt to provide a more accurate measurement of habitat utilization and population status than nest numbers alone. Only 54 territories (38 percent) contained alternate nests. Analysis of 40 nest-site parameters showed proximity to open water, large nest trees with sturdy branching at sufficient height, and stand heterogeneity, both vertically (crown dominance) and horizontally (crown cover), to be the most important factors in site selection. General characteristics associated with most nests are privately owned land within 200 yards of shore, open but irregular salt water coast, predominantly coniferous stands, greater than 40 percent crown density, continuous stands often near openings, Douglas fir nest trees with Sitka spruce common on the Olympic Peninsula, nest trees usually codominant with other large trees in uneven stands, live trees less than 25 percent dead and often with broken tops, moderate to dense foliage over nests, moderate to light foliage surrounding nests, nests within top 20 feet of nest trees, and disc-shaped nests 5 feet across and 2 feet deep. Of the nests, 89 percent had at least one of ten categories of human activity within 1 mile and 74 percent within .5 mile. A tabulation of field observations on nests with a disturbance less than .25 mile away resulted in an average distance from productive nests of 130 yards and from unproductive nests an average of 80 yards. The Forest Service 5-chain (110-yard) protection zone was substantiated. Stepwise discriminant analyses were used with nest-site parameters to test their value in discriminating between occupied and inactive sites, and successful and unsuccessful nests. The technique showed promise for future evaluations of potential Bald Eagle nesting habitat.

Grubb, Teryl G. 1976. A survey and analysis of Bald Eagle nesting in western Washington. M.S. thesis. University of Washington, Seattle. 86 pp.

Present address: Teryl G. Grubb, Research Wildlife Biologist
U.S. Forest Service
Rocky Mountain Forest & Range Expt. Sta.
Forest Hydrology Laboratory
Arizona State University
Tempe, Arizona 85281