

Bruce, A.M., R.J. Anderson, and G.T. Allen. 1982. Observations of golden eagles nesting in western Washington. *Journal of Raptor Research* 16:132-134.

Nesting of the Golden Eagle (*Aquila chrysaetos*) west of the Cascade Mountains in Washington State generally has been considered rare, and more commonly has been identified with the open habitats of the arid country of eastern Washington (Dawson and Bowles 1909, Jewett et al. 1953, Alcorn 1978). However, Laing (1956) recorded nesting Golden Eagles on Vancouver Island, British Columbia, and Thomas (1977) noted probable nesting of Golden Eagles in western Oregon. In western Washington, Reffalvi (1963) observed adult and juvenile Golden Eagles on San Juan Island, Eaton (1976), reported 6 possible nest locations, and Servheen (1978) located an active nest on the west slope of the Cascade Mountains. By the summer of 1981, 21 nests in 13 territories had been reported to the Nongame Wildlife Program of the Washington Department of Game. The nesting territories were widely distributed: 4 (with 5 nests) were on the western slopes of the northernmost Cascade Mountains; 4 (with 10 nests) in southwestern Washington; 3 (with 4 nests) on the Olympic Peninsula; and 2 (with 2 nests) in the San Juan Islands. We began systematic activity and productivity surveys in 1977, and have observed activity at 11 territories at least once in the past 5 years. We have not been able to discern any particular pattern of use of territories or of alternate nests within territories. Boeker and Ray (1971) noted that patterns of territory and nest use by eagles in the southwestern United States varied widely among pairs, and we observed similar variation in western Washington. For example, one pair apparently nested in alternate years, another nested in alternate years, and a third used the same nest for 4 years. Of the 13 territories, 12 contain 20 nests located in Douglas-fir (*Pseudotsuga menziesii*), with the remaining nest on a cliff. We have numerous observations at 18 of the tree nests, and found that 17 were located at or below canopy height in trees near the edges of forest stands or in small stands of trees adjacent to clearcuts or open fields. This is consistent with findings of Anderson and Bruce (1981), who noted that Golden Eagle tree nests in western Washington often were distinguishable from Bald Eagle (*Haliaeetus leucocephalus*) nests. Golden Eagle nests tended to be smaller in size than those of Bald Eagles, were located on or very near the edge of a forest stand, and were located at or below the average canopy height. Bald Eagle nests were located at or above the canopy level, within the forest stands, and were nearer water than Golden Eagle nests. One Golden Eagle nest, unlike the others, was found in a dense forest stand overlooking Puget Sound, a habitat more typical for Bald Eagle nesting. This nest tree contained an active Bald Eagle nest in 1979, and an unsuccessful Golden Eagle nest in 1980. All of the Golden Eagle nests we observed were adjacent to or no more than 500 m from large clear cuts or open fields, which supports populations of medium-sized mammals such as mountain beaver (*Aplodontia rufa*), snowshoe hare (*Lepus americanus*), and European rabbit (*Oryctolagus cuniculus*). Servheen (1978) previously reported Golden Eagles preying on mountain beaver, and we found them, snowshoe hare, and unidentified bird remains at several nests. Additional prey species in the diet remain to be determined. Golden Eagles likely have been present in small numbers for centuries in western Washington where fire provided necessary habitat. Thomas (1977) and Servheen (1978) suggested that clearcut logging creates highly favorable Golden Eagle habitat by providing large, open areas, that support prey species. This suggestion parallels the speculations by Leopold and Wolfe (1970) that the conversion of forestlands to pastures has created an improved habitat for Wedge-tailed Eagles (*Aquila audax*) in south-eastern Australia. Because modern forest practices increasingly have employed the clearcut method in western Washington and Oregon, Golden Eagles may be increasing as they make use of this expanded habitat.