eagles were perching along the river. During sunny, windy weather, eagles soared in groups and did not display usual feeding and distribution patterns. The social function of such group soaring is discussed. Eagles initially utilized areas on the river that were isolated from human disturbance, and only when food was depleted in these areas did the eagles use sites close to human disturbance. Of 3,322 eagle observations in 1974–75, 68.5% were on the side of the river having no road access; 19.7% were on islands in the river; and 11.8% were on the side of the river where the main road is, and most human activity occurs. Management alternatives to minimize human disturbance and preserve eagle wintering habitat are discussed.

Servheen, Christopher W. 1975. Ecology of Wintering Bald Eagles on the Skagit River, Washington. M.S. thesis, University of Washington, Seattle. 96 pp.

THE INFLUENCE OF FORCED-RENESTING ON REPRODUCTIVE PARAMETERS OF CAPTIVE AMERICAN KESTRELS

Abstract

From 1974 to 1977, the first clutches of 78 pairs of captive American Kestrels (*Falco sparverius*) were removed to induce laying of replacement clutches. This procedure was termed forced-renesting. First clutches were artificially incubated and the hatchlings hand-reared to fledging age.

A Maximum Likelihood Program revealed that replacement clutches had fewer eggs, longer eggs, and eggs with thicker shells than first clutches; but they did not differ in fertility, hatchability, overall growth, and fledging success of young. Clutch size, egg length, eggshell thickness, and fresh-egg weight declined seasonally. Hatchling weight and fresh-egg weight were highly correlated, but neither was a reliable index of growth beyond 6 days of age.

Hand-rearing was associated with slower growth rates and the production of physically smaller adults. Hand-reared females laid the largest clutches and the largest and heaviest eggs and were associated with higher fertility than hand-reared males.

The implications of forced-renesting are discussed.

Bird, David M. 1978. The influence of forced-renesting on reproductive parameters of captive American Kestrels. Ph.D. thesis, McGill University, Montreal, 111 pp.