

It appeared when two broods were raised by Harris' Hawks in one year that the first brood reduced its ties to the adults and were normally not dependent on them when the second brood was being raised. When the second brood fledged they were often dependent on or associated with the adults for 2 to 3 months. If a second brood was not raised, the immatures from the first sometimes remained with the adults into winter.

A color-banded immature female that hatched in 1973 laid three eggs in a rebuilt nest in an old, unoccupied nesting range in August 1974, approximately 7.2 km from the nest where it fledged. This female laid eggs just after attaining adult plumage and was paired with an adult male that had falconry jesses on its legs. This nest was in a blue palo-verde tree (*Cercidium floridum*) about 300 m from an apartment complex; the nest failed during incubation.—WILLIAM J. MADER, 41 West Alpia Way, Tucson, Arizona 85704. Accepted 26 Nov. 75.

Nest site selection for Prairie Falcons.—Throughout the range of Prairie Falcons (*Falco mexicanus*) nest sites vary in height from 7 m to over 122 m (Ogden 1973. Nesting density and reproductive success of the Prairie Falcon in southwestern Idaho. Unpublished M.S. Thesis. Moscow, Univ. Idaho.). As with other large falcons, the nest is usually a scrape, i.e. no nest structure is built by the nesting birds. Most nests are sheltered by an overhanging portion of the cliff (Enderson 1964, Auk 81: 332–352), but variations do occur, such as the use of old common raven (*Corvus corax*) nests on cliffs (Ogden 1973), and there is one recorded incident of tree-nesting Prairie Falcons (Goss 1891. History of the birds of Kansas, Topeka, Kansas, Geo. W. Crane & Co.).

In March 1972 I discovered a pair of Prairie Falcons nesting in the King's Bowl at the Crystal Ice Caves in southeastern Idaho. The King's Bowl, in the Great Rift lava fault near Aberdeen, is a hole 92 by 61 m, its deepest point being 61 m. The east and west-facing walls are vertical and the north and south-facing walls are undercut, flowing into the fissure of the Great Rift. The eyrie was on the east-facing wall approximately 40 m above the bottom and about 5 m below its top. Cool air escaping from the fissure caused a constant updraft during the warmer seasons of the year. The surrounding area is essentially flat except for small lava outcroppings. Sagebrush (*Artemisia* sp.) is the dominant vegetation in the places not covered by lava flow. No typical or suitable structures for nest sites occur within 50 km.

The owner of the land at that time, Mr. Papadakis, stated that the falcons had occupied the nest site since he arrived in 1961. He stated that they produced young every year but that he never kept records as to the number. I did not see eggs or young, only the courting adults. My last visit was in early April. A recent letter (1976) indicated that the birds no longer nested there, but they did nest through at least the 11 years of disturbance by tourists. Recent failure is most likely due to the loss of one or both of the adult falcons. As this nest site differs so drastically from the normal, it seems unlikely that other Prairie Falcons will ever select it for breeding.—EDWARD J. PITCHER, 729 Airport Road, Sheridan, Wyoming 82801. Accepted 6 Dec. 76. (This paper was subsidized by the author.)

Clutch size determination, egg size, and eggshell thickness in the Pie-billed Grebe.—The favored explanation for the ultimate determination of clutch size in nidifugous birds is Lack's hypothesis that clutch size is limited by the number of eggs a female's food resources allow her to form (Lack 1968, Klomp 1970). One argument against this egg limitation hypothesis is that some birds appear to be indeterminate layers and thus capable of laying more eggs than constitute a normal clutch (Krebs 1972: 568), but Klomp's (1970: 78–79) review shows most evidence for indeterminacy in nidifugous birds is anecdotal and/or derived from domesticated individuals that may have had an abundance of food. Also we suggest the egg limitation hypothesis should not be rejected even if indeterminacy is demonstrated reliably under natural conditions. Possibly a female's resources are depleted gradually and eggs laid after the normal clutch size are so inferior that selection favors laying fewer eggs than the female is capable of laying.

We manipulated clutches of two wild Pied-billed Grebes (*Podilymbus podiceps*) to determine whether this species is best categorized as a determinate or indeterminate layer. We predicted that if food resources limit clutch size, eggs might decrease in quality as laying proceeds. Our criteria for egg quality were size and shell thickness. One of us (Rothstein 1972) suggested material for shell formation may limit clutch size in a nidicolous species, the Cedar Waxwing (*Bombycilla cedrorum*).

We studied grebe nests at the Andree Clark Bird Refuge in Santa Barbara, California from 20 April to 13 May 1974. We generally removed one egg per day from each experimental nest. Eggs were marked with a