

ABOUT THE COVER: GYRFALCON

The largest and most majestic falcon in the world, the Gyrfalcon (*Falco rusticolus*) has for centuries been the favorite of falconers and kings. Swooping southward from arctic barrens in winter, this elegant bird is often near the top of the "want-list" of most New England birders. It is a polymorphic species with white, dark, and gray (intermediate) color morphs. White morph birds are unmistakable—there are no other white falcons—but dark morphs and particularly gray morphs may be confused with Peregrine Falcons. The crowns of dark Gyrfalcons lack the black cap and pronounced "sideburns" of the Peregrine. Gyrfalcons have proportionally longer tails, shorter, broader, and more rounded wings, and a slower wingbeat. All Gyrfalcons are variously spotted and barred; however, the genetics and evolutionary significance of the plumage variation in Gyrfalcons are not well understood. The sexes are similar in plumage, but males are significantly smaller in size and weigh only about two-thirds as much as females. Immature birds are more heavily streaked than adults.

A long controversy has raged over the taxonomy of this variably plumaged species. It has historically been subdivided into as many as three subspecies, largely on plumage characteristics, but authorities now generally agree that the species is monotypic, and subspecific designations are no longer accepted.

This circumpolar falcon breeds in North America in northern Canada, mostly above 60°N latitude, on the arctic islands, and in Labrador, Alaska, the Aleutian Islands, and Greenland. They winter irregularly as far south as southern Canada and the northern U.S. and occasionally farther south. Many Gyrfalcons are resident in the arctic throughout the year, and it appears that most migration is undertaken by immature and subadult birds. Movements are apparently influenced by food availability, especially ptarmigan. The Gyrfalcon is a rare and irregular winter visitor to Massachusetts, where the earliest record is October, and most sightings occur from December through February, with an occasional sighting as late as April. Most Gyrfalcon sightings have been in coastal areas from Essex County south to Cape Cod.

Gyrfalcons are monogamous, and may mate for life. They produce a single brood each year. Their breeding habitat is arctic and alpine tundra and taiga, and barren coastal and river areas, preferably where steep cliffs are available for nest sites. The territorial call of the Gyrfalcon is a series of *kak* notes. They are very aggressive when nesting and may attack any bird that wanders into their territory. Characteristically the territory is centered on the cliff eyrie, and a variety of displays, including a figure-eight flight, are used near the nest ledge. Other breeding displays include a variety of bowing, scraping, and bill-nibbling activities, usually accompanied by various chirps, chatterings, wails, and whines. Aerial displays include a repertoire of rolls, dives, fluttering, weaving,

and soaring maneuvers. Food is transferred to the female by the male either on the nest ledge or in flight.

Nesting begins in April or May. The cliff nests are nothing more than scrapes, but Gyrfalcons may use the previous stick nests of ravens, eagles, or other raptors. The usual clutch is four brown-spotted, white eggs. Both parents incubate, although the female does the majority of the work. Although the male has brood patches, they are not as well developed as in the female. Incubation lasts for about five weeks, and the chicks fledge seven to eight weeks after hatching. The male supplies food for the young during the first two to three weeks, but the female does most of the direct feeding of the young, usually dividing the prey equally among the chicks. During the nesting period the female may cache food within 100 yards of the nest. After four to six weeks the parents stop feeding the young directly; hence, the chicks must tear up prey brought to the nest.

Gyrfalcons have a variety of foraging strategies. They may perch on a rock and wait for prey, or actively search by flying back and forth low over the ground. They also soar along ridges. When attacking prey, they may fly low over the ground to reduce detection, or pursue prey directly. Sometimes they hover over their prey. Their chief food is ptarmigan, but they also take other birds ranging from sparrow-sized birds to geese. They also occasionally take mammals, especially hares.

The biggest threats to Gyrfalcons are the harsh arctic conditions and a scarce supply of food; their numbers south of their breeding range may reflect fluctuations in ptarmigan abundance. Their remote habitat has largely spared them from the pesticides and habitat alteration that have been so devastating to the Peregrine Falcon. Although North American Gyrfalcons have been largely spared from falconers collecting chicks and eggs, a practice that has caused problems for the birds in Russia and Scandinavia, they nonetheless remain highly valued by falconers. May the vigilant birder be fortunate enough to some day catch a glimpse of the magnificent "ice falcon."
W. E. Davis, Jr.

ABOUT OUR COVER ARTIST

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