

Foreword

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In 1950 I got my first grant from the Arctic Institute to study birds on St. Lawrence Island in Alaska. I was a junior in college at the time. My co-worker and I spent most of the summer doing a general bird inventory of the island. After the summer on St. Lawrence we made our way back to Nome on a Coast Guard Cutter. There I learned that two gold miners working in the interior of Seward Peninsula had a pet Gyrfalcon, which I wanted badly to see. I was a self-taught falconer from a very young age and knew the Gyrfalcon's reputation as a large, powerful hunter, once reserved for royalty, so naturally I was eager to see one. Getting around in Alaska at those times was no easy task. We got courtesy appointments as officers in the Air Force so we could fly in military planes between Fairbanks and Nome. To get from Nome to the Rainbow Mining Camp I had to take a wood-burning, narrow-gauge freight train. Passengers had to ride on top of the freight, which included a load of Caterpillar tractors. The tractors had cabins and nice seats, so while riding on the train I slept in one of those for protection from the rain. Sometime around midnight the train went around a sharp curve too fast and the tractors broke loose and dropped off the side of the train cars. I woke up flying through the air until I hit the ground, landing on nice soft tundra, then I looked up and saw a tractor coming towards me, so I rolled to one side and watched the tractor slide by me in the dark. Fortunately the train engineer refunded my \$20 ticket.

It took them the rest of the night to put the tractors back on the train, and by the next day I bummed a ride to the Rainbow Mining Camp. The miners were raising the Gyrfalcon as a pet and it was flying free around the camp. I remember she was gray and quite docile. It gave me an opportunity to study this Gyrfalcon just at the stage that it was learning to chase quarry but still couldn't catch anything. I kept notes on her playful behavior and development toward serious hunting, and these observations were published in one of my early scientific papers on raptors (Cade 1953; *Wilson Bulletin* 65:26-31).

This was the experience that got me interested in studying Gyrfalcons. I went to Alaska to learn about Peregrines, but that encounter with the Gyrfalcon changed my mind about the nature of what I wanted to study. I decided to do a comparative study on the two species. The next summer in 1951 I conducted a canoeing survey for falcons on the Yukon River, but found only Peregrines. I learned later that the Gyrfalcons were nesting at higher elevations above timberline, and it was then that I first noticed an ecological separation between Gyrfalcons and Peregrines. The following summer I finally found both species nesting along the Colville River in Arctic tundra and began studying their ecology and whether there was competition between the species. That's when I realized that their food habits were quite different; the Peregrines had a catholic diet and were feeding on almost any prey that was available, but Gyrfalcons were so specific on ptarmigan that it really impressed me. I was one of the first scientists to call attention to this fact. Although the native peoples were already aware of this specialization on ptarmigan and even had a name for the Gyrfalcon that meant "ptarmigan hawk," few naturalists knew of this habit at that time (Cade 1960; *University of California Publications in Zoology* 63:151-290).

I have also learned to appreciate Gyrfalcons as a falconer from my direct experience training and hunting with them. Gyrfalcons train more naturally than many other species and return readily to the glove, sometimes even without the enticement of food. They become friendly, you could almost say. They can be trained to hunt large quarry, much larger than they would normally hunt. And a Gyr will fly much farther than a Peregrine in pursuit of larger quarry, up to seven miles in my experience; their persistence and stamina are remarkable. Another special trait about Gyrfalcons that is little known is that they will fly at night. They also have no fear of eagles. And yet they are delicate, more sensitive to diseases than Peregrines, for example. Caring for Gyrfalcons takes particular care and dedication. For all these reasons Gyrfalcons have a long history of association with humans.

The plight of the Peregrine and its decline from DDT poisoning have demanded much of my attention over the years, but I've managed to

observe wild Gyrfalcons in seven of the eight countries where they occur. Because of the species' popularity with falconers, the number of Gyrfalcons bred in captivity may now exceed the wild population. Questions remain about how captive-bred Gyrfalcons might perform if species restoration becomes necessary in the future, and this question is worth some scientific inquiry along with the many studies about behaviors in the wild, distribution, diet, population genetics, and an endless array of life history details.

I doubt whether raptor biologists today have to cobble together an expedition by using freight trains and collapsible canoes as I did, but they have to have the same fascination, grit, and attention to detail. They also have tools at their fingertips that I could not have imagined as a 22-year-old student in the wilds of the Alaska Territory. Remote cameras, telemetry, sophisticated databases, and analytical software serve to deepen and refine our understanding of Gyrfalcons and other birds of prey. This unique book is a key that will make all these tools relevant to each other and meaningful to conservationists facing some pressing challenges ahead.

Much has changed over my lifetime, even the climate, but with my eighty-some years of perspective I can assure the aspiring raptor biologist that even now there are frontiers to be explored for the benefit of nature and humankind. I urge you to work hard, get into the field more often, collaborate, and share your observations generously.

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