

THE PEREGRINE PLIGHT

by Gayle Miller, Somerville

Early this summer in Inuvik, Northwest Territory, Canada, a pair of Peregrine Falcons nested near the town's rock quarry. Canadian federal wildlife officials banned all further blasting for half the summer, until after the young birds had been raised, even though town officials grumbled about the effects of this halt on the already brief Arctic construction season.

Why were these birds shown such preferential treatment? Because these birds are members of one of the two North American subspecies of Falco peregrinus that are on endangered species lists. The Peregrine's plight is widely recognized, and concern is being shown throughout the North American continent.

Recently, a valiant effort to breed and release young Peregrines to the wild was begun in the United States. Dr. Tom Cade of Cornell University's Ornithology Laboratory heads a team of scientists in an innovative program that could save these regal birds from extinction. They hope to restore a natural breeding population to our now vacant eastern eyries. A project of this scope and magnitude has never before been undertaken, and, if it succeeds, it will have far-reaching implications for man's efforts to save an ever-growing list of endangered species from extinction.

The eastern populations of the Peregrine Falcon (subspecies anatum) disappeared after World War II. Western populations of the same subspecies still survive, although these birds are extremely rare throughout their range, and their numbers are still decreasing. It would have been logical for Dr. Cade to use individuals from these Western populations as his breeding stock at his New York laboratory, but none were available. So instead, he used Tundra Peregrines (Falco peregrinus tundrius, a newly recognized subspecies), which are readily available from falconers. Falconers prefer these Peregrines because they are stronger than the members of other subspecies that do not migrate such great distances.

Peregrines from the Arctic tundra differ in build, plumage, and migratory habit from the subspecies anatum. This latter subspecies occurred widely in an area from the Atlantic to the Pacific Ocean, extending northward to the boreal forest and southward into Mexico. It was medium-sized (as compared to other subspecies of the Peregrine Falcon) and medium light in color. It migrated only moderate distances: Massachusetts-dwelling birds, for example, moved no further south than Long Island, N. Y., in winter. The Tundra Peregrine, on the other hand, breeds across the top of the continent from Alaska to Greenland. It is smaller in size and lighter in color, and it migrates each winter into the vast interior of South America.

The major risk in using tundra birds for breeding lay in their migratory habit. If the Peregrines used by the Cornell workers continued to travel to South America, they would be exposed to DDT, which is still very much in use there. Fortunately, the Peregrines that were released last year did not migrate very far at all. Since they had been bred and raised in latitudes with a different photoperiod (length of day and night) from that of their Arctic relatives, their triggering mechanisms and messages for migration seem to have been altered. The released birds were radio-tracked and were found to winter on the eastern coasts of the states in which they had been released. On these shores they found plentiful waterfowl on which to feed.

According to the U. S. Fish and Wildlife Service, of the 16 Peregrines released in 1975, 12 survived their first year. This year 32 were placed in the wild. 100 more are projected for release in 1977. Although these initial releases have used only the tundra subspecies, the Cornell group plans to try other races in the future. One of these is Peale's Peregrine Falcon (F. p. pealei), which is a large and more sedentary falcon from the Aleutian Islands. It is the only North American subspecies of Peregrine that is not at present on the list of endangered species.

Another race of the Peregrine that interests Dr. Cade and his co-workers is the Spanish Peregrine (F. p. brookei), which has adapted well to civilization in Europe. "It nests near villages, on castle battlements, and church towers, and feeds largely on pigeons--- which could win it warm welcome from American city fathers." (Audubon Vol. 77, No. 6, November 1975, p. 49.)

The story of how DDT demolished the eastern populations of American Peregrines has been well-documented and publicized. The following are the major points in the case of the Peregrines of Massachusetts, as documented in the Massachusetts Audubon Newsletter, Vol. 15, No. 2, October, 1975. There were once 14 active eyries in the Berkshires in western Massachusetts and in the Connecticut River Valley. In 1947 the first decrease in productivity was noted. By the late 50s, all reproduction had ceased, and only some unproductive adults remained. By 1964 no Peregrines were found in Massachusetts, or anywhere else east of the Rockies. The falcon, at the top of a long food chain, fell victim to rising DDT concentrations. As the amount of DDT rose in the birds, the thickness of their eggshells decreased. An 18.8% decline in eggshell thickness from 1947 to 1952 was sufficient to cause the fragile eggs to break from the normal movements made by the adults in their nests.

Dr. Cade believes that if he can produce a more sedentary population of Peregrines from the Arctic race, he can eliminate the DDT problem that these birds now confront on their wintering grounds in South America. Since the first released group did not migrate to these dangerous latitudes, there is great hope that the project will be a complete success. But much work remains to be done before Peregrines will have been reestablished in the numbers and at the localities of our original Duck Hawk.

Dale Zimmerman's Audubon article cited above describes the Peregrine as a "boldly handsome and dramatic bird, an agile predator that strikes down its prey in high speed dives and kills with its powerful taloned feet." He says that "observers who are fortunate enough to have seen its hunting stoop, or the male's rolling, diving mating display, are struck by the magnificence of the peregrine's flight."

Zimmerman reminds us that the falcon has been exploited by man for centuries at the hands of falconers. But it is precisely the falconer's expertise and techniques that have allowed the Cornell laboratory to work so rapidly and so successfully in their efforts to teach a domestically-bred falcon to revert to nature. If the project succeeds, the pilgrim hawk, the age-old wanderer, will once again reign over our skies and remain with us not only in myth but in reality.

Passenger Pigeon Story

A Passing in Cincinnati is a U.S. Government Printing Office booklet (stock number 024-000-00824-0), which recounts vividly the history of our continent's Passenger Pigeon, from the early settler days until more recent times, when this graceful and once plentiful bird became extinct.

This publication, the last of three historical vignettes published by the Department of the Interior, costs 65 cents and is well worth purchasing. The pamphlet is packed with detailed descriptions of the handsome birds, which flocked together in astounding numbers and ranged from Quebec to Florida. By 1914 there was only a single bird alive, and it was captive in the Cincinnati Zoo. When she died, these gentle birds were no more.

The Passenger Pigeon was "...bluish gray, and its under parts in the male were reddish and gray in the female. Its sparkling, red eyes were bold and unflinching. It usually laid only one egg on a flimsy platform of sticks placed in a tree with a hundred pair or more nesting in the same tree. Its food consisted mainly of nuts (especially beech-nuts), acorns, berries and seeds. Because of its speed (a mile a minute), grace, and maneuverability, it earned the title of 'blue meteor'."

Because it moved about and nested in such enormous numbers, it was quite vulnerable as a species. Between 1871 and 1880, it was hunted and netted so intensively that the populations underwent a precipitous decline. The number killed in this decade alone was enough to doom the species. In 1874, for example, over a four week period an estimated 25,000 pigeons per day were shipped to market from a single nesting site in Michigan.