

## FROM FIELD AND STUDY

**Characteristics of the Gyrfalcons from the Bering Sea Area.**—Todd and Friedmann (Wilson Bull., 59, 1947:139-150) appear to have settled finally the status and nomenclature of the Gyrfalcons of northeastern North America: they are all *Falco rusticolus obsoletus*. This race is said to inhabit all of arctic North America except the "Bering Sea coast of Alaska," where *F. r. uralensis* is said to be resident.

*Uralensis* is said to differ "from *obsoletus* only in having the seventh primary (fourth from the outside) longer than the tenth (outermost one) whereas in *obsoletus* the seventh is shorter than the tenth."

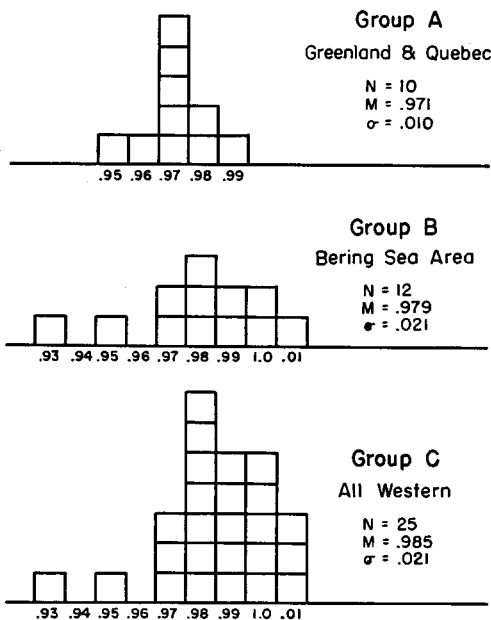


Fig. 42. Histograms showing primary index in different groups of gyrfalcons.

Since there has always been some doubt as to the proper name to apply to specimens collected in far western North America, I have recently checked the "primary index" of 35 Gyrfalcons in the Chicago Natural History Museum, the Museum of Vertebrate Zoology, and the California Academy of Sciences. I am grateful to the curators of these collections for permission to examine them. The two primaries were flattened and measured from the bend of the wing without moving the measuring stick. The length of the tenth primary was divided into that of the seventh to give the "primary index." An index less than 1.00 means that the outermost primary is the longer; an index of 1.00 means that they are equal; and an index of more than 1.00 means that the primary fourth from the outside is longer. Indices found ranged from .93 through 1.01.

The specimens were divided into three groups: A, 10 undoubted *obsoletus* (9 from Greenland and 1 from Orleans Island, Quebec); B, 12 from the Bering coast (3), Bering Sea islands (7), and the east Asiatic mainland (2); and C, 25 "western" birds, including all group B plus 2 from Point Barrow, Alaska, and 11 from British Columbia. At least 10 of the British Columbian specimens were definitely migrants, and some may even have been Asiatic migrants.

An examination of the graph (fig. 42) will show that the birds of group A have a relatively longer outer primary on the average and that they are more uniform in primary index. However, it

will also be noted that there is a complete overlap of primary index of group A by group B (as also by the more inclusive group C).

This means that no member of the population represented by group A can be distinguished by primary formula from group B or group C. Also, less than 16 per cent of the population represented by group B, and about 21 per cent of the population represented by group C can be distinguished from group A by this method.

Two explanations come to mind: One, Gyrfalcons disperse very widely in winter, and many *F. r. obsoletus* travel westward, even as far as Asia. This explanation requires either that the population of *uralensis* is small compared to that of *obsoletus*, or perhaps that it winters mainly southwest of its breeding range which is occupied in part by *obsoletus* in the winter. Some such situation would be required to explain the two group B birds with primary indices of .93 (Chicago Museum of Natural History no. 157,001, immature female, collected by George Willett, Unimak Island, Alaska, October 13, 1926), and .95 (Chicago Museum of Natural History no. 102,336, immature (?) male, collected by A. S. Loukashkin, Greater Khingan, Manchuria, Asia, December 5, 1938).

A second explanation would be that though there is a tendency for the primary index to approach or surpass 1.00 in Gyrfalcons of western Alaska and eastern Asia, it is not sufficiently invariable to be a reliable diagnostic character. To me this would seem the more likely explanation. I suspect this tendency may be a cline of average condition, running from somewhere in eastern North America westward perhaps into Asia. This might explain Chicago Natural History Museum specimens numbers 130,764 and 130,765, immature females, collected by A. Eastgate at Nelson, North Dakota, November 1, 1905, with primary indices of 1.02, and 1.00, respectively.

Unfortunately, the specimens available to me are few in number, and only one in group B is probably close to its breeding grounds. This is Chicago Museum of Natural History number 376,636, adult male, collected by L. Stejneger on Bering Island, March 23, 1883, primary index .99—in other words, *obsoletus* according to Todd and Friedmann. (There is also an adult female, collected in April at St. Michaels, Alaska, in the collection of the California Academy of Sciences, of which the primary index cannot be exactly taken, but with the less damaged tenth primary still longer than the corresponding complete seventh.)

Consequently, I am not at all sure that there is a Bering Sea coast population than can be successfully distinguished from *obsoletus*. Perhaps these birds are simply that part of subspecies *obsoletus* in which a primary index of 1.00 or more occurs most frequently. (This is an index value apparently not recorded from Greenland, although if variation in this character follows the normal curve, about two per cent of the population should show it.) This would be exactly comparable to the darkest Labrador phase (which does not occur in Greenland), though the other phases, all found in both Greenland and Labrador, differ only in relative frequency. The solution of this problem will require not only an adequate series of breeding birds from the Bering Sea coast of Alaska, but also from the Bering Sea Islands and from the breeding range of *uralensis* in Asia. In this connection it is interesting to note that Dementiev (*Systema avium rossicarum*, 1, 1935:1-288) revives the name *F. gyrfalco grebnitzkii* Severtzow for the birds from Kolyma eastward to Kamchatka and the Commander Islands. In other words, further taxonomic work is needed in Siberia to be certain of the proper name to apply to western Alaskan birds if (1) they are subspecifically distinct from *obsoletus*, and (2) are identical with those of easternmost Asia.—R. M. BOND, *Soil Conservation Service, Portland, Oregon, February 2, 1949.*

**Behavior of Birds During a Forest Fire.**—In the summer of 1943, while serving as a fire-guard in the timbered portion of the Saguaro National Monument (Rincon Mountains near Tucson, Arizona), I had a limited opportunity to observe the actions of a few birds during a forest fire.

The Saguaro National Monument includes within its boundaries a good portion of the Rincon Mountains, and in June, 1943, a forest fire burned over most of the area of Transition Zone in the range. During the early period of the fire I was stationed in a high steel lookout tower to report on the progress and directions of the blaze. My duties required a continuous watch but offered opportunities between reports and fire observations to notice the reactions of several species of birds.

Two nests of the Band-tailed Pigeon (*Columba fasciata*) were in plain view of the lookout tower, and the home ranges of a number of other pairs had been roughly determined during previous weeks