## BANDING RECOVERIES OF ARCTIC MIGRANT PEREGRINES OF THE ATLANTIC COAST AND GREENLAND POPULATIONS

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A strong fall migration of peregrine falcons (Falco peregrinus) was discovered at Assateague Island, Maryland in 1939. Banding done there since that time, taken together with that done elsewhere in North America and Greenland, now permits conclusions to be drawn concerning the fall migration route of these birds. The birds are quite clearly migrants from the Arctic. They have been known since the early nineteen-forties to winter as far south as Argentina.

The recoveries of birds banded at Assateague Island are listed in Table 1 together with two others banded on the Atlantic Coast, one at Cape Hatteras and the other at Key West, Florida. The recoveries of birds trapped for banding on the Atlantic Coast are plotted as circles in Figure 1. It is quite evident that the birds do not go inland in the United States once they have reached the beaches during the southward migration. If they did so, there almost certainly would be recoveries inland, as there are of peregrines banded in Wisconsin during their southward migration.

The recoveries in the West Indies are in line with the east coast of Florida or farther east—which is compatible with migration down the east coast of the United States or at sea.

The recoveries in Central and South America are similar to those of birds banded in Wisconsin and in the Arctic. They indicate a migration route which continues from Central America down through the interior of South America as far as Bolivia, and then to the Atlantic coast of Uruguay and Argentina.

To the north there are only two recoveries of birds banded at Assateague Island, and one of a bird captured there but transported and released. The two recoveries of birds banded at Assateague are both from the west coast of Greenland. This indication of Greenland as the possible source of the peregrines banded at Assateague Island leads to the examination of the recoveries of peregrines banded in Greenland. There are only two such recoveries outside of Greenland. These are listed in Table 2 and plotted as triangles on Figure 1. One, a nestling banded by R. Luff Meredith in 1941 near the southern tip of the island, was recovered at Cienfuegos, Cuba, on December 2 of the same year. The recovery location is due south of the east coast of Florida, and is compatible with migration down the Atlantic Coast.

The other bird recovered was banded in the nest near Umanak. farther north on the west coast of Greenland and close to where the two peregrines banded at Assateague Island, Maryland, were recovered in Greenland. This bird was recovered at Windigo River, Quebec, on October 16 of the same year. Windigo River is roughly 150 miles north of Montreal. This suggests the possibility that the migration route is from Greenland south through the interior of Canada, perhaps the eastern shore of Hudson Bay, and thence to the Atlantic Coast somewhere in the northern part of the United States. There is one piece of corroborating evidence that this may be so. A bird captured at Assateague Island, Maryland, but released just outside Washington, D. C., was recovered seven years later on the western shore of James Bay, which is the southward extension of Hudson Bay. This bird is listed in Table 3 with three other birds transported and released. Unfortunately, we do not know what time of year this bird was recovered.

There are only two anomalies to be considered. The first is a bird banded at Cedar Grove, Wisconsin, and recovered the same fall on the South Carolina coast. The other is a bird banded at Assateague Island in the fall and recovered in Illinois the following spring. The South Carolina recovery is the only instance of an Arctic migrant banded inland in the United States and recovered on the Atlantic Coast, and the Illinois recovery is the only instance of an Arctic migrant banded on the Atlantic Coast ending up anywhere in the interior of the United States. The South Carolina recovery is not typical of the birds banded in Wisconsin: most of the birds banded in Wisconsin move south through the states in or adjacent to the Mississippi Valley as evidenced by band recoveries there. The recovery in Illinois, however, is of a different sort. It is the only spring recovery within the United States or Canada north of Key West, Florida, of a bird banded on the East Coast. It may therefore indicate an inland route on the northward migration for at least a portion of the population which migrates southward on the Atlantic Seaboard beaches. It is known that there is a northward migration along the beaches as well—this was reported at Block Island, R.I., as long ago as  $1917^1$ .

Finally, a bird trapped at Assateague Island, released just outside Washington, D. C., and shot two days later near the border of Virginia and Tennessee provides a possible indication of the instinctive direction of travel. This bird travelled in a direction parallel to the direction of the coastline just south of where she was trapped, and went about 200 miles in two days.

The available data on the Atlantic Coast migrants are limited, but

they lead to the following tentative conclusions:

(1) The peregrines trapped on Assateague Island are part of a population which continues its migration southward along or off the

Atlantic Coast, but not inland, and thence across the Caribbean and down the interior of South America as far as Uruguay and Argentina.

(2) The source of these birds may well be western Greenland. The two recoveries of the birds banded in Greenland fall into the same pattern as those trapped on Assateague Island, and there are, of course, two recoveries of Assateague birds in Greenland.

(3) The southward migration to the north of the United States could be in the interior of Canada—perhaps down Hudson Bay—rather than along the Atlantic Coast. Transit to the Atlantic

Coast could be across Quebec.

## **ACKNOWLEDGEMENTS**

The author is indebted to W. G. Mattox for information on the banding of Peregrines by Danish banders in Greenland, and on recoveries in Greenland. This paper was made possible only by the records resulting from the dedicated efforts of a small number of banders who banded Peregrines on the Atlantic beaches of the United States over a considerable number of years. The largest individual contributors to the records were J. N. Rice, Sr., permit 6489, and T. H. Cunningham, permit number 6017, who between them banded about a fifth of all Peregrines banded to date in North America.

## **BIBLIOGRAPHY**

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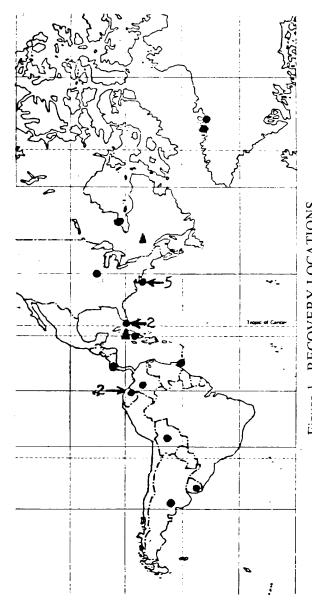


Figure 1. RECOVERY LOCATIONS

■ Trapped for banding on the Atlantic Coast of the U. S.

A Banded in the nest in Greenland.

Table 1. PEREGRINES BANDED ON THE ATLANTIC BEACHES OR THEIR IMMEDIATE VICINITY

Bander	Band No.	Age	Sex	Where Banded	When Banded	Where Recovered	When Recovered	How Recovered
5076 6518	346-32357 487-10065	Ad. Im.	ᄕᅩᄕ	Assateague I, Md. Assateague I, Md.	10-18-39 10-16-49	Bolivia Virginia, E. Shore	11-5-44 12-49	Shot Shot
6017	507-25730	Ad.	Œ	Assateague I, Md.	10-7-49	Virginia, E. Shore 37°30'N 75°40'W	10-49	Shot
2109	496-45790	Ad.	ГĽ	Assateague I, Md.	10-7-51	Colombia 2 20'W	5-8-53	Shot
6017	417-27226	Ad.	ſΤ	Assateague I, Md.	10-2-52	Uruguay 34°00'S.55°30'W	2-57	Shot
6017	546-26933	Im.	ഥ	Assateague I, Md.	10-25-53	Assateague I, Va. 37°50'N. 75°20'W	11-29-54	Shot
6489	497-64062	Ad.	ᄕ	Assateague I, Md.	10-10-54	Dom. Republic	2-55	Shot
6489	447-09921	Im.	Ľ.	Assateague I, Md.	10-8-55	Ecuador 1°50'N',79°30'W	3-22-59	Shot
6489	607-34982	<del>"</del>	ĹĽ,	Assateague I, Md.	10-5-56	Greenland 67°50'W	11-59	Shot
6489	607-34999	Ad.	щ	Assateague I, Md.	10-9-56	Trinidad 10°00'W	1-57	Shot
6489	507-48453	Ad.	ഥ	Assateague I, Md.	10-10-57	Greenland* 70°40'N.52°00'W	94-58	Shot
6489	507-65795	lm.	شا	Assateague I, Md.	10-10-59	Costa Rica	44-60	Shot
6489	647-46562	Im.	Щ	Assateague I, Md.	10-4-61	Argentina 38 <sup>°</sup> 00'S,63°20'W	1-5-62	Shot
6489	707-46530	Ad.	Ľ.	Assateague I, Md.	10-3-63	Key West, Fla. 24 30'N,81 40'W	2-10-64	Killed by Airplane

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Found Injured	Shot	Killed by Automobile	Trapped and Released	Shot
5-16-68	12-39	5-1-61	10-5-47	147
Illinois 40°20'N,90°30'W	Cuba	Key West, Florida 24 30'N,81 940'W	Assateague I, Va.	Cuba 20°50'N,76°10'W
10-10-67	11-1-39	2-1-61	11-6-46	10-1146
Assateague 1, Md.	Key West, Fla. 24 30'N'81 40'W	Cape Hatteras, NC 35 10'N, 75 30'W	Assateague I, Va. 37°50'N, 75°20'W	Assateague I, Va. 37°50'N,75°20'W
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т. Тш.	Im.	Im.	Ad.	ċ
576-82928	366-82956	647-46559	387-23678	456-11727
6489	4546	6489	4022	4022

\*This location is given in the Danish records according to W. G. Mattox in a personal letter dated 4 May 1970. The Bird Banding Laboratory computer print-out shows 68°30'N, 41°10'W.

General note-Some place names deduced from map coordinates in print-out. Actual locations may be nearby. \*\*Age provided by bander in telephone conversation. The computer print-out is garbled.

Table 2. PEREGRINES BANDED IN GREENLAND AND RECOVERED ELSEWHERE

How Recovered	Found Dead	Shot
When Recovered	12-2-41	10-16 (Same year)
Where Recovered	Cienfuegos, Cuba 22°00'N,80°20'W	Quebec Windigo River
When Banded	8441	Summer
		<b>J</b>
Where Banded	Greenland 61°00'N',45°20'W	Greenland Umanak District 71°35'N,53°20'W
Sex Where Banded	F Greenland 61,00°W,45°20°W	? Greenland Umanak District 71 35 %, 53 20 w
	Pul. F Greenland 61,00°N,45°20°W	Pul. ? Greenland Umanak District 71°35'N,53°20'W
Sex	Œ	<i>د</i> ٠

\*This Danish record of a bird banded between 1955 and 1958 transmitted in a personal letter from W. G. Mattox dated 14 May 1970.

Table 3. PEREGRINES TRAPPED AT ASSATEAGUE ISLAND, MARYLAND, TRANSPORTED AND RELEASED ELSEWHERÉ

How Recovered	Shot	Shot	Trapped by Falconer	Shot
When Recovered	1946	10-57	10-25-42	10-30-40
Where Recovered	Attawapiskat, Ont. 52°50'N.82°20'W	Ecuador 0°00'N.79°00'W	Assateague I, Md.	Virginia** 36°30'N,78°40'W
When Released	10-3-39	10-11-50	10-15-39* (caught 10-12)	10-28/40
Where Released	Chevy Chase, Md. (near Wash., D.C.)	Potomac, Md.	Boonton, N. J.	Chevy Chase, Md. (near Wash., D.C.)
Sex	ĹŢ,	Σ	(I	IT.
Age	Ad.	Ad.	Ad.	<u>ë</u>
Band No.	376-01459	426-16454	346-32360	406-71831
Bander	5334	6017	9200	5017

\*A note by R. Luff Meredith (the bander) in "The American Falconer" for April 1963 states this bird released on October 10.

\*\*Point of recovery is about 200 miles southwest of point of release.

Table 4. PEREGRINES BANDED ELSEWHERE THAN THE ATLANTIC BEACHES AND GREENLAND AND RECOVERED ON THE ATLANTIC COAST

Bander	Band No.	Age	Sex	Where Banded	When Banded	Where Recovered	When Recovered	How Recovered
2282	386-46354	Im.	ſΤ	Cedar Crove, Wisc. 43°00°N,87°50°W	10-7-41	South Carolina Coast 33°00'N,79°20'W	12441	Shot