

THE BLACKPOLL WARBLER IN FALL ON NANTUCKET

By John V. Dennis

The fall migration route of the Blackpoll Warbler (Dendroica striata) has recently been a topic of much interest. One school of thought has proposed a nonstop, trans-Atlantic flight from New England to the West Indies. This viewpoint is supported by the appearance in the fall of sizeable numbers of Blackpolls on Bermuda and the fact that many individuals captured at New England netting stations were excessively fat. Further support for the theory was to be found in radar observations which showed large scale departures southward from the Cape Cod region in the fall. Drury and Keith (1962), reporting upon the radar observations and other evidence, state that "millions of songbird migrants cross the sea south of New England." They add that "although some populations tend to avoid this and, if drifted out to sea, reorient and return to the coast, most migrants in autumn in New England are well prepared for especially long flights and many regularly cross direct to the Carolinas and many others fly past Bermuda non-stop to the Antilles."

Murray (1965) takes an opposing viewpoint and presents evidence that the appearance of Blackpoll Warblers and other land transients at Bermuda is a result of westerly winds that have drifted birds from the North American mainland. He is particularly impressed by wind data that seems to support a wind drift hypothesis. He also points out that only two percent of the fall New England weights were high enough to fit in with the nonstop overwater concept. Furthermore, he finds that most Bermuda arrivals occur at a time when the Blackpoll, in his opinion, has already left New England.

Both sides have presented impressive evidence in support of their viewpoints. It is far from my intention to explore or evaluate in any detail either case. My only purpose now is to see how some of our banding data and observations on Nantucket fit in with the two viewpoints.

First a look at Nantucket weights. During fall banding operations between 1956-1959, I took a sampling of weights of most birds that passed through my hands. No great number of Blackpolls were weighed--167. But this sample may be worth analyzing. Listed below are the number of birds weighed in September and October each year and the average weight for each month (in grams).

<u>Year</u>	<u>No. weights Sept.</u>	<u>Average</u>	<u>No. weights Oct.</u>	<u>Average</u>
1956	15	11.9	4	16.4
1957	43	12.3	27	12.4
1958	18	14.6	9	16.7
1959	<u>18</u>	<u>15.0</u>	<u>33</u>	<u>16.2</u>
	94	13.4	73	15.4

Average October weights are generally higher than average September weights--a fact consistent with results at other netting stations and commented upon by Murray and others. In 1957, however, the average October weight was approximately the same as the average September weight, and well under the October average for the other three years.

Murray, quoting Nisbet et al. (1963), states that a weight between 19.7 and 23.2 grams seems necessary at departure if Blackpolls are to accomplish a 1,600 mile nonstop, overwater flight. He finds, however, that of over 2,000 Blackpolls weighed in New England, only 46 birds or two percent, are within this weight category. Nantucket samples show a higher proportion of birds in the over 19.6 grams bracket. Eleven birds or 6.5 percent of the total number weighed were over 19.6 grams. These weights and the date of capture are given below.

19.8	Oct. 17, 1956
20.8	" 12, 1957
22.0	Sept. 27, 1958
20.3	Oct. 2, "
24.4	" 12, 1959
21.2	" " "
19.9	" " "
20.8	" 13 "
20.8	" 14 "
22.9	" " "
20.9	" " "

It seems somewhat arbitrary to insist upon a weight of over 19.6 grams for a Blackpoll to make the flight in question. Favorable wind conditions, for example, might permit birds with lower weights to make the trip. Or breaking the flight at Bermuda is another assist available to some of the migrants. Therefore, it seems appropriate to list all the reasonably fat birds captured at Nantucket. Setting a lower limit of 15.2 grams and including all birds up to the 19.7 category, I find a total of thirty-six birds. These are listed below.

18.1	Oct. 19, 1956	18.0	Sept. 14, 1959
15.8	" 20, "	17.3	" 17 "
15.8	Sept. 13, 1957	15.3	" 18 "

19.3	Sept. 27, 1958	16.2	Sept. 19, 1959
16.6	" 28 "	18.3	" 23 "
19.2	" " "	19.1	" " "
18.9	" " "	16.1	" 24 "
18.7	" 29 "	18.3	" " "
15.7	" " "	17.7	" 25 "
17.7	Oct. 2 "	19.9	Oct. 7 "
16.2	" 7 "	17.1	" 8 "
15.8	" 8 "	17.2	" 13 "
17.9	" " "	16.8	" " "
17.4	" " "	16.4	" " "
18.5	" 28 "	15.9	" " "
15.6	" 30 "	17.2	" " "
16.9	Sept. 14, 1959	17.9	" 14 "
17.3	" " "	17.9	" " "

Of the 167 birds captured, 47 or 28.1 percent were over 15.2 grams. This is not to say that such a large percentage is capable of making the flight in question. But it is presumably of interest that this many heavy Blackpolls make their way to Nantucket. It adds one bit of evidence that southeastern New England is after all the point of origin of flights across the Atlantic to the Lesser Antilles.

To be sure, Murray has suggested that the Blackpoll has already departed from New England by the time heaviest flights reach Bermuda. He gives the period 7-15 October as the time during which 76 percent of the Blackpolls were netted on Bermuda in 1962. Unfortunately, I do not have available to me the exact dates when Blackpolls were captured on Nantucket during all years of banding. But I do have complete figures for 1959. During this year 159 Blackpolls were banded. During the period between September 13 and October 6, thirty-three percent were banded. Between October 7 and 15, sixty-one percent were banded. And after the 15th, six percent were banded. Thus the period of greatest banding activity on Nantucket in 1959 coincides with the greatest activity on Bermuda in 1962.

It may be added that the Blackpoll has always been considered to be a late migrant on Nantucket. Its peak appearance is usually during the first half of October and numbers of them continue to pass through until virtually the end of the month. Banding is about over with by mid-October and therefore little banding data is available for late October.

Number banded in September and October are given below for the following three years:

	<u>September</u>	<u>October</u>
1958	54	30
1959	39	120
1960	40	93

The Blackpoll on Nantucket, therefore, is a late migrant and with a peak that may usually coincide with the peak on Bermuda. It seems likely that Nantucket receives only a minute proportion of the flights that are observed on radar; thus the appearance of even small number of Blackpolls in late October may well be an indicator of much larger numbers striking out across the sea.

From the standpoint of there being enough birds leaving at the right season and with sufficient weight, Nantucket would seem to qualify as a point on a presumed Blackpoll flight line between southeastern New England and the Antilles. That many Blackpolls also take a coastal route southward seems in no way to conflict with the theory of a long Atlantic flight. It is to be recalled that the Blackpoll breeds from north-central Alaska to Maine and Labrador. That some portions of the population have perhaps evolved a quicker Atlantic flight-line while others keep to the coast is not an unexpected solution to the problem of reaching wintering grounds in South America via the West Indies.

References

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