

## AN EXTRAORDINARY AUTUMN MIGRATION OF WHITE-BREASTED NUTHATCHES

DONALD S. HEINTZELMAN AND ROBERT MACCLAY

FOR 56 days, between 11 August and 30 November 1968, the authors systematically observed migrating hawks, and carefully observed other birds, passing Bake Oven Knob (elevation 1,600 feet), Lehigh County, Pennsylvania. By early September, large numbers of White-breasted Nuthatches (*Sitta carolinensis*) and Red-breasted Nuthatches (*Sitta canadensis*) passed the Knob almost daily. This paper details the White-breasted Nuthatch migration and compares it with that of the Red-breasted Nuthatch.

Special efforts were made to observe each passing nuthatch with 10× binoculars to verify its identification. Rarely, a bird was heard vocalizing but was not observed; these were recorded as unidentified nuthatches in our notes. This technique eliminated some birds from our sample, but assured positive identification of each record used here.

### FIELD DATA

Prior to 1968, White-breasted Nuthatches were observed irregularly during autumn at Bake Oven Knob (Heintzelman and Armentano, 1964; Heintzelman, 1969). During the period 1961 through 1967, only 53 were counted, whereas 297 were counted during the autumn of 1968. During the following autumn (1969), when 73 days of observation were made between 10 August and 26 November, 22 were counted.

On 4 September 1968, we observed eight White-breasted Nuthatches to pass the Knob—the vanguard of a migration which continued through 24 October. The heaviest flight occurred on 17 September when 80 were counted; other exceptional flights included 29 on 15 September, 22 on 29 September, and 20 on 21 September (Heintzelman, 1969:23). A graph of the 1968 Bake Oven Knob White-breasted Nuthatch data (Fig. 1) shows numerous peaks closely paralleled by the graph of our Red-breasted Nuthatch data.

Curiously, few White-breasted Nuthatches were noted elsewhere in Pennsylvania and New Jersey during the autumn of 1968. None were counted at Hawk Mountain Sanctuary located about 16 miles southwest of Bake Oven Knob (Alexander C. Nagy, letter of 8 June 1969), despite the fact that both stations are on the same mountain—the Kittatinny Ridge. However, Nagy points out that some volunteer observers on duty at the Hawk Mountain lookouts have little interest in recording small birds and their daily records

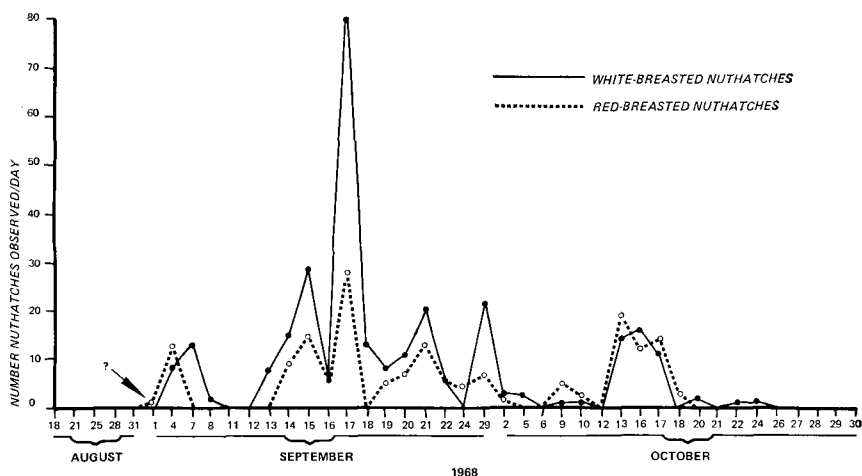


FIG. 1. Numbers of White-breasted and Red-breasted Nuthatches observed passing Bake Oven Knob, Lehigh County, Pennsylvania during the autumn of 1968.

would not reflect their presence or absence. Considerably fewer Red-breasted Nuthatches also were counted at Hawk Mountain than at Bake Oven Knob, but for similar reasons these data are not comparable.

On the other hand, no large autumn migration of White-breasted Nuthatches occurred during 1968 at Carnegie Museum's Powdermill Nature Reserve located 3 miles south of Rector, Westmoreland County, Pennsylvania; only 12 birds were caught and banded (Mary H. Clench, letter of 19 May 1969). This station is west of the Allegheny Front in western Pennsylvania approximately 185 miles in a west-southwest direction from Bake Oven Knob. However, Clench points out that "Migrations on the eastern side of the mountains and over to the coast often just don't show on the western side—and vice versa." At Island Beach State Park, New Jersey, bird banders engaged in the 1968 Operation Recovery project netted and banded only 27 White-breasted Nuthatches during the period 25 August through 30 October; in contrast, 504 Red-breasted Nuthatches were netted and banded at Island Beach during the same time period.

#### DISCUSSION

Conflicting data concerning the occurrence, or lack of occurrence, of White-breasted Nuthatch migrations have existed for decades, and this lack of agreement still continues in the literature. In the New York City area, for example, Bull (1964:320, 322) definitely documents spring and autumn

White-breasted Nuthatch migrations. Stewart and Robbins (1958:228) also list definite spring and autumn migration dates for Maryland and the District of Columbia, and specifically state that a light movement frequently occurs in early July. These are birds moving into areas 10 miles or less from their nesting range. The normal autumn migration period extends from 15 September to 10 November, with a peak from 10 October to 1 November. Finally, in parts of Kentucky, Mengel (1965:338) presents convincing evidence demonstrating that autumn White-breasted Nuthatch migrations occur.

Our 1968 data from Bake Oven Knob also clearly demonstrate that a definite White-breasted Nuthatch migration occurred and paralleled, in greater numbers, a Red-breasted Nuthatch migration. Unfortunately, it is extremely difficult to determine what primary cause or causes were responsible for this extraordinary movement. Probably factors other than those directly relating to the White-breasted Nuthatch migration were responsible, at least in part, for the Red-breasted Nuthatch migration. Nevertheless, the fact that both nuthatch species show remarkably similar peaks and lulls in their 1968 migration data suggests that some unknown but common external factor, perhaps weather, was at least partly responsible for precipitating the nuthatch flights observed at Bake Oven Knob.

#### ACKNOWLEDGMENTS

Part of the 1968 field work upon which this paper is based was supported by the William Penn Memorial Museum upon whose curatorial staff the senior author was then employed. Mary H. Clench of Carnegie Museum, and Alexander C. Nagy of Hawk Mountain Sanctuary, kindly provided comparative data from records under their care. Island Beach State Park data were obtained from records on file in the New Jersey State Museum. Kenneth W. Prescott read and suggested changes in this paper.

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- BUREAU OF RESEARCH, NEW JERSEY STATE MUSEUM, TRENTON, NEW JERSEY  
08625 AND 625 SCHUYLKILL STREET, CRESSONA, PENNSYLVANIA 17929. 30  
SEPTEMBER 1970.