birds, and about the use and usefulness of the masses of data we all cheerfully collect each year on Christmas Bird Counts.

A SUPERB 1977-78 INVASION OF RED-BREASTED NUTHATCH

by Leif J. Robinson, Wellesley

It is well known that southward autumn migrations of the Red-breasted Nuthatch are quite unpredictable, though they are probably induced by failures of the northern cone crop (C. E. Bock and L. W. Lepthien, American Birds, 26, 3, 558).

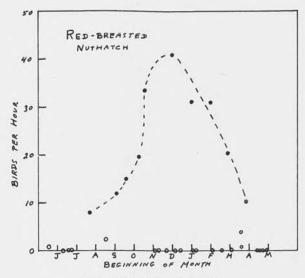
As observed in Weston, the 1977-78 autumn invasion and subsequent wintering was unprecedented and may reflect the greatest influx of this species ever recorded in Massachusetts. For example, Bailey's <u>Birds in Massachusetts</u> (1955) gives this characterization: "During years when definite fall flights have materialized, 6 to 20 birds have been reported per day." Yet, during about four hours on <u>December 26th</u>, I and three companions saw approximately 200 Red-breasted Nuthatches!

The accompanying graph shows my birds-per-hour counts at Weston Reservoir, an area especially favored by this species. Open circles represent data from June, 1974, through June, 1977--an interval without pronounced autumn migration--dots from July, 1977, through March, 1978. From these observations, I conclude that the 1977-78 invasion probably began in late August (the June dot pertains to fledging success of local breeding birds). Though this timing is in substantial agreement with Bailey, the 1977-78 flight continued until December, in marked disagreement with his statement that autumn migration ceases by mid October. After reaching a peak, the numbers declined about as rapidly as they built up. I attribute this fall-off to the exhaustion of food supplies; during February, when the decline was most rapid, my back yard population increased substantially.

In another paper (American Birds, 25, 6, 945), Book and R. Smith found that invasions of Red-breasted Nuthatch were correlated with those of Red Crossbill. Observations in Weston during the winter of 1977-78 support that conclusion; it was an excellent year for all "winter finches."

In summary, the birds-per-hour data revealed that the autumn migration of Red-breasted Nuthatch (at least during this flight year) persisted $1\frac{1}{2}$ months or so longer than the limit cited by Bailey. It seems impossible to determine whether this extension was due to the magnitude of the invasion, an anomalous local concentration of birds, or deficiencies in the data Bailey assessed. Banding records might substantially illuminate the interpretation of the remarkable 1977-78 flight of this topsy-turvy bird.

FOR SALE: The Land-Birds and Game-Birds of New England, 1895, by H.D. Minot. For information contact Mrs. Lyman S. Hayes, 19 Gypsy Trail, Weston, MA 02193. Telephone 894-1470.



MILLIONS FROM LICENSES

A record 60 million Americans spent close to \$318 million on state hunting and fishing licenses in 1976. Both figures are record highs and show that one of five Americans enjoy the outdoors in these ways. The revenues derived from these license sales enable states to conduct their fish and wildlife conservation and management programs. Additional funds come from Federal Aid in Fish and Wildlife Restoration programs under which states are reimbursed up to 75 per cent of the cost of approved projects.

T.H.A.

SNOW GEESE FUTURES

The Atlantic Snow Goose population has been increasing since 1971, reaching approximately 155,000 birds by May of 1977. This number is considered to be the maximum that the available habitat can support. Hunting regulations in 1976 were designed to control the breeding population; unfortunately they did not succeed. Thus, crop depredations and salt marsh eat outs become the limiting factors. The hunting season for Snow Geese was doubled in 1977 (to 60 days) in hopes of curtailing the population before it becomes detremental to itself and to the environment.

T.H.A.

MEXICAN DUCK STATUS REVIEW

Most of the Mexican Ducks in the United States, which are officially classified as "endangered", may be Mexican Duck and Mallard hybrids. A recent study reported almost 90 per cent of museum specimens of Mexican-like ducks taken in the United States were actually hybrids. A status review by the U.S. Fish and Wildlife Service will determine whether any populations of the Mexicanlike ducks should be proposed for reclassification from endangered to threatened or removed from the list altogether.

T.H.A.