

Note that this method of plotting eliminates effects due to variable trapping effort and total activity. Fig. 1 indicates clearly some characteristics of vertical distribution under the study conditions. The birds are high in the vegetation in the early morning, and then drop as a group to lower levels about noontime. Shortly after noon the birds rise again and then as dusk approaches, the population apparently splits, with one part dropping while a smaller portion remains high. These trends are clear, but it is too early in the study to propose explanations for this behavior. One obvious necessary extension of the study is the disclosure of the species content of the split population at the end of the day.

When the smoothed histograms above are summed for all heights a histogram of diurnal activity is obtained, Fig 2. Note that this histogram eliminates the factor of variable trapping effort throughout the day, and includes food-seeking as well as non food-seeking individuals. It is not proposed to discuss the reasons for the shape of this histogram, however it is interesting to compare it with those of Hunt and Frazier (EBBA NEWS 20:91). It is evident that the activity curves for any particular set of environmental conditions may differ very markedly from the curve of a grand average of food-seeking birds over weather and season.

**DISCUSSION** The results of this study indicate that meaningful information on the vertical distribution of birds can be obtained under appropriate conditions by the methods described. Obvious modifications are necessary for future work and plans are now being made for a continuation of this work on a larger scale in the fall of 1958.

It is a pleasure to acknowledge the assistance of Dr. Darwin Wood in the field work involved.

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WASH. BIOL. SURV.

"Saw this printed and thought EBBA NEWS readers would also get a chuckle," writes F. C. Williams of Wellesley, Mass.

The metal strips used to band birds are inscribed: "Notify Fish and Wild Life Service, Wash. D. C." and they used to read "Washington Biological Survey," abbreviated to "Wash. Biol. Surv." This was changed after a farmer shot a crow and disgustedly wrote the U. S. Government, "Dear Sirs: I shot one of your pet crows the other day and followed instructions attached to it. I washed it and biled it and surved it. It was turrible. You should stop trying to fool the people with things like this...." \*\*\*

## HOW TO DETERMINE YOUNG FROM ADULTS IN FALL MIGRATING THRUSHES

By Raymond J. Middleton

One very important part of banding is that banders should never miss the opportunity to separate young from adults whenever possible. In the case of migrating thrushes, with the exception of Wood, in the fall of the year it is a simple matter to do this. Once the postjuvinal moult is completed and the first winter plumage is acquired the young of the year retain markings which are easily distinguished from adults.

In BENT'S LIFE HISTORIES OF NORTH AMERICAN THRUSHES, KINGLETS AND THEIR ALLIES, BULLETIN 196, published in 1949, we find following the description of the young of the year of the Hermit Thrush in first winter plumage, quote "the buff spotted wing coverts retained distinguish young from adults."

In FORBUSH'S BIRDS OF MASSACHUSETTS AND OTHER NEW ENGLAND STATES published in 1929 we find in the description of the various plumages of the Olive-backed Thrush (now renamed Swainson's in the fifth AOU Check List) this statement "young in first winter plumage: Similar to fall and winter adults but showing some buffy spots on wing-coverts".

In the same book we find a description of the Veery as follows: "Young in first winter plumage: Similar to winter adults but usually may be distinguished in autumn at least by buff spots at the end of retained juvenal greater wing-coverts".

FORBUSH also describes the Gray-cheeked Thrush as follows: "Young in first winter plumage: Similar to adults in fall and winter but averaging perhaps a trifle lighter, and usually showing some buffy edgings or terminal spots on wing-coverts". FORBUSH further states that the field marks of Bicknell's Thrush are similar to those given for Gray-cheeked.

We have banded 2745 of the six species of thrushes divided as follows: Wood-956; Hermit-979; Swainson's-489; Veery-143; Gray-cheeked-146; Bicknell's-32.

In the case of the Wood Thrush which is a common summer resident here, most are taken during the nesting period when young are easily determined while still in juvenal plumage. Few are taken after the first winter plumage is acquired when they become "Usually as adults but may average a little darker" according to Forbush.

Some ninety percent of the other five species are taken during the fall migration. Since reading of these descriptions of first winter



plumages so well described by Forbush in 1929 and later in Bent's Volume of 1949 which gives the same plumages, we have found these markings on the wing coverts of many of the fall migrants taken and consequently have marked them for the record as young of the year.

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OFF TO AFRICA ... and ... THE ENVIRONMENTAL TRAP  
A letter from Dr. C. Brooke Worth

Will you please address copies of EBBA NEWS, and of course bills for annual dues, to me through The Rockefeller Foundation, Medical and Biological Sciences, 49 West 49th St., New York 20, N.Y., for at least the next year or until further notice. For the time being I shall be in and near Johannesburg, Union of South Africa, participating in the investigation of encephalitis viruses as they pertain to mosquitoes, human beings, other mammals and birds.

This turn in my career has necessitated the complete dismantling of my highly revered "environmental trap" in Swarthmore. I had hoped to make a careful analysis of the results of the use of such a trap and to present the findings in "Bird-Banding." Now the trap has disappeared and all the records are in indefinite storage. However, in the light of published records by other banders who have trapped more or less the same species as I have, I believe I can give a tentative estimate of the value of this type of trap.

Briefly, it seems to take about the same kinds of birds in roughly the same numbers, with accent on White-throats and Juncos, and the usual following of winter residents -- or winter-feeding birds -- such as cardinals, titmice and so on. Return rates in successive or alternate years are good, matching but not exceeding those in published reports from other stations.

Therefore the chief value of this large, sprawling trap, with 12 ground entrances and three top openings with counter-balanced landing perches, all leading into a single final assembling cage, is that a "week-end" bander can leave the whole thing open for feeding and constantly baited until the moment he arrives home ready for business. The trap may then be set in about 15 seconds. Who could ask for anything more efficient? Answer: only those who are not willing to spend close to \$100.00 on trap material: and who knows how many man-hours of work and scratched hands in building such a monstrosity!

Swarthmore, Pa.

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A SUGGESTED BANDING RECORD SYSTEM  
By Geoffrey Gill

An essential requisite of interesting banding is a good record system. Such a system must be simple enough so that it does not become a tedious chore, yet must be complete enough so that it gives all the facts at a glance and can be readily understood by all banders.

There are several such systems which are good. These are the results of painful trial and error by banders throughout the country. Generally, these systems fall in three categories: the loose-leaf notebook (which has a tendency to grow bulky), the 3 x 5 index card system (which also grows and grows) and the "Year Book System" such as is outlined. (See illustration on following pages.)

The "Year Book System" is based on an ordinary Composition book such as is used in school and can be obtained in 36, 40, 48, 60 and 72 leaf styles. Each of these leaves has 23 lines and will take care of 23 birds. Depending upon the usual run of new birds banded each year you can purchase such a book for each year's banding. It is better to get a composition book a little larger than you expect to use for the banding and then the last few pages can be used for a list of returns and a list of special observations. I also keep a list of the birds found dead each year, usually the victims of auto traffic.

A double page is used for each bird and aside from the first set of double pages the headings are not necessary. A bander will have to individually rule each double page as he fills the pages out. Records are kept in numerical order of the band, since the number on the band is the key to the entire system. Since it is necessary to separate each species when making a report to Washington the second narrow little column is very important. As a record is transferred to the official form it is checked off in this column. A line drawn under a band number signifies a return or a recovery. Repeats, Returns and Recoveries appear on the same line as the original record but on the facing page. The 7th column denotes the type of trap that caught the bird originally. The two last columns give a running total of birds banded and a running total of the species banded.

(Editor's Note. As Mr. Gill points out in this article there are several excellent record systems. The next issue of THE RING will carry an article by EBBA treasurer Mrs. Stanley S. Dickerson describing the system she uses. It is hope that the publication of these record systems will stimulate suggestions for possible improvement -- resulting in a standard form we may make up for all members.)

-- See illustrations on next pages --

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