

Survey Is Made of Bird Banding

Terns Migrate From Kennebec to the Niger.

Washington.—From the banks of the Kennebec to those of the Niger—that is the journey accredited to a common tern by the biological survey of the United States Department of Agriculture, which is now receiving many interesting returns from the bird-banding work at one of its bird colonies in Lake Michigan last year. Among the other interesting reports growing out of this work are those pertaining to three Caspian terns, which were located in Colombia, South America. These were found just at the time when bird banding was being done at the original colony in Michigan this year, thereby proving that the young birds do not breed in their first year.

According to the agricultural experimenters two Caspian terns were reported found in Nova Scotia and many others were discovered along the routes to the latter country and South America. Those found en route, the investigators say, show what course is followed by the migrating birds between their summer and winter homes.

With the growing interest in the procedure the department has only recently published a list of instructions concerning the practical significance of bird banding, as well as some of its history. This form of identification in America dates from the time of Audubon, who about 1803 placed silver threads around the legs of a brood of plovers and was rewarded the following season by having two of his marked birds return to nest in the same vicinity. Although bird "ringing" was attempted in Europe as early as 1710 it was almost 200 years later, in 1850, that systematic work was undertaken.

ways follow the same route, and is the route the same for both spring and fall flights?

Do migrating birds make the same stop-over every year to feed?

How long do birds remain in one locality during the migration, the breeding or the winter season?

What is the relation between the breeding and the wintering grounds of individuals; that is, do those birds that breed farthest north winter farthest south, thus jumping over those that occupy the intermediate zone, or do they merely replace the birds or individuals as winter residents?

To what region do the birds go, particularly the young, that do not return to the vicinity of their original nests? Do birds adopt the same nesting area, nest site and winter quarters in successive seasons?

For how many months will one pair remain mated, and which bird, if not both, is attracted next year to the old nesting site?

To what extent do males of a species assist in incubation and brooding? How far from their nests do birds forage for food, and after the young have left the nest will the parent birds bring them to the feeding and trapping station?

The earlier investigators, according to the recent report, marked their birds by dyeing or staining the flight or tail feathers, attaching memoranda written on parchment, or mounting feathers, feather or bill. In this country active experimental work was begun in 1901, when aluminum bands were attached to the legs of the birds. The results were so satisfactory and stimulated so much interest that eight years later the American Bird-Banding Association was organized in New York city. Subsequent study has revealed that two principal lines of research must be given special attention. First of these is the banding of Red-tails and the second, the systematic trapping and banding of adults. The latter is the more significant because the older birds give the most information on bird habits.

Trapping is accomplished by various means, one of the popular ones being the "Government" sparrow trap, a funnel-shaped device of wire and bird-wire cloth easily made even by the novice and very effective. Others which the department recommends are the well-known drop trap, the door of which is suspended until the unwary bird makes for the bait, when it drops down and shuts in the victim.

The department, to be able to study even more closely than heretofore the life histories of birds, urgently requests the co-operation of naturalists whose casual observations of wayfarers hand-bearing birds will be well worth reporting. In this way the governmental investigators expect to solve the many problems which previously have baffled the ornithologist. Among these are the speed with which individuals of any species may travel on their periodic migrations, the possible vanguard formed by one flock for others and the advance made by successive flocks passing one over the other in alternate periods of rest and flight.

Other questions which can be answered by bird-banding operations are:

Do individuals of any species al-

STARTED THE CRAZE



Arthur Wynne of Mountain Lakes, N. J., is the man behind the present cross-word puzzle craze. He started forming them for the amusement of his children; the neighbors' children joined, then the parents of the neighbors' children, and so on until the thousands had invaded hundreds of thousands of American homes. Mr. Wynne is seen at work on a new puzzle.

Wise Youth

While the worry may kill some people, the office boy observes that most folks who need killing seem to do very little worrying.

POULTRY FACTS

CAUSES OF FAILURE IN CHICKEN GAME

The poultry business is developing fast, but a great many people are losing money with poultry. There are reasons for everything, says D. H. Hall, extension poultry husbandman, at Clemson college, who points out four of the main causes of failure in the chicken game.

The first cause of failure in raising poultry is starting off on too large a scale. There are many things for a beginner to learn about the poultry business. He should start on a small scale and gradually grow into the poultry game until he knows every angle of it. He should go slowly at first and then increase his business by degrees.

The second reason why people are not making money in the poultry business is the purchasing of poor stock for breeding and laying purposes. Because some people have pure bred poultry does not mean that they always have the very best. The man that goes into the poultry business should start out with the best stock possible.

The third cause of poor results in raising poultry is the lack of proper equipment. A great many people will try to raise chickens when they haven't the equipment to raise them. Equipment is just as necessary to have as the poultry itself. The equipment does not have to be expensive, but you should have the necessary things to make the handling of poultry easy; for instance a large mash hopper to hold plenty of mash, a large water fountain so that water can be kept before the poultry at all times, and a good poultry house that is arranged conveniently.

The fourth thing that causes failure is the lack of care and attention. If you do not love poultry and if you are not willing to give it your time and attention, you cannot expect very much out of it. You must like the business and be willing to spend 14 hours each day in caring for the poultry if you expect to make a success of it.

Prevent Frosted Combs by Proper Ventilation

In cold latitudes it is necessary for poultrymen to guard against frosted combs. Many people think that the best thing they can do to prevent frosted combs is to keep the henhouse closed as tightly as possible. This is a mistake for it is a fact that a moist atmosphere is much more conducive to freezing than a colder temperature when the air is dry, says a writer in Successful Farmer.

The house should be well ventilated, so that the moisture is quickly carried away and replaced with fresh air. Your poultry house should have enough open space on the south to equal one-fourth the total floor space, and if it does not have that much open space, it will pay you to do a little remodeling. This open space should be covered with muslin. For this purpose a medium grade is best, one that will prevent wind from blowing through, and still permit a slow circulation of air.

The back of the poultry house will naturally be the warmest and best protected, so it will be wise to have the droppings boards and roosts at the back of the building.

Another important thing to remember during cold weather is to keep the fowls busy. If you go to the poultry house very early in the morning, you will see that the birds get off the roosts and stand around on the floor. If there is scratch feed scattered in the litter, they will get pecking just as soon as it is light enough, thus starting the blood in rapid circulation and lessening the danger of frozen combs.

If you allow the fowls to drink ice water on a frosty morning, it will not only lower the egg production but the males are likely to freeze their wattles.

Poultry Hints

- Both old and young turkeys should be protected from dampness.
- Old liver oil has worked wonders with confined chicks suffering from leg weakness.
- Do not breed from birds of low vitality. This causes poor hatches, weak chicks, and unprofitable pullets.
- The matter of ventilating the poultry house is relatively simple, especially if the open or curtain front is used.
- Losses from fertile eggs amount to 42 per cent, and from infertile eggs 24 per cent of the total shipped for sale.
- Killing a diseased chick is not only a kindness but is good practice from the standpoint of the health of the entire flock.
- More and more does the humble but ever busy hen show that she is the real "Bird of Freedom" in America. More hens can be kept on nearly every farm.
- Colds are caused each year from lack of ventilation. Allowing the windows to remain open overcomes this objection and prevents part of the trouble. As the season progresses one can adjust the ventilation to meet the conditions.
- If eggs are dirty, don't wash them, is the advice offered egg producers by the United States Department of Agriculture. Washed eggs deteriorate more rapidly than unwashed, and detection of a few washed eggs may cause buyers to penalize the entire lot.

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Lightly Clad. Preacher (climbing to oratorical heights)—Breathless and pantless he dashed into the city of refuge.—Toronto Goblite.

When Speech Is Silver. If a husband has the last word, it is something like this: "All right; buy the darned thing."—Duluth Herald.

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Lady Decies, Broke, Runs a Shop



Reduced to absolute poverty by the loss of all her money through helping a friend, and still suffering from the wound she received during her war service in France, Gertrude Lady Decies, widow of the fourth Baron Decies, is now struggling to support herself by keeping this little shop near East Grinstead, England, where she sells penny candies to village children, dispenses tea for passing cyclists, and runs a country boarding house for dogs.

Recover Indian Relics at Muscle Shoals

Washington.—The opening of the big Wilson dam at Muscle Shoals during 1925 will blot out a laboratory of science.

Under the direction of Dr. J. Walter Fowkes, chief of the Bureau of American ethnology of the Smithsonian Institution, Gerrard Powke, a trained scientific worker, has been exploring Indian mounds at Muscle Shoals that will be covered with water when the big Wilson dam is put into commission. The relics which Mr. Fowkes found are being packed up to be sent to the institution for study. Just what Indian tribe they belonged to remains to be determined.

The Tennessee Valley Historical society invited Doctor Fowkes to have the mounds explored and he sent Mr. Fowkes to excavate them at the mouth of Town creek, Colbert county, Ala-

Finds Bug Which Makes Vicious Mosquito Flee

Paris.—Dr. Legendre proved in a report to the French academy of sciences that disease-bearing mosquitoes can be driven from infected areas by a variety of nonvenomous insects bred systematically in his laboratories from insects brought from Belgium, two months ago. Doctor Fowkes also made a trip to the point recently and brought back with him to Washington some of the scientific finds. They include copper ornaments, beads and a species of breastplate, showing Doctor Fowkes said, that the Indians to whom they belonged prized that metal highly.

Letters Much Handled

Many letters in this country pass through 15 handlings between time of mailing and delivery.