

No. 1 in a thick stand of grass and ostrich ferns at the edge of the garden.

Of the young Song Sparrows raised this season, I banded fourteen—one on May 24th (first day out of nest), four during June, four during August, and five during September, as they visited the traps.

I am positive that these two pairs were the only Song Sparrows resident on my grounds either year. Each pair occupied exactly the same territory that they occupied the previous year, and neither pair, so far as I observed, ventured on the territory of the other pair, excepting to a limited extent where their nesting-areas overlapped. This area is indicated in the diagram. Each of these range-areas comprises about eight thousand square feet, a tract roughly sixty by one hundred and twenty-six feet.

None of the young, numbering three, banded in 1924, was taken in 1925.

The particular configuration of the range-limits shown is doubtless due in large part to the distribution of cover favored by this species existing about my station, and it is probably true that the immediate locality would not have furnished another nesting-area suitable for any of the children of these birds, banded in 1924, had they returned in 1925.

These two nesting-areas appear to be fairly well marked examples of what Howard has so appropriately called "territories" (see his book, "Territory in Bird Life").

I am looking forward to the next season's experiences at my station.

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SOME NOTES ON BAIT

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THOUGH, to my regret, my traps have been idle for several years, I have kept water and food constantly available for the birds in our garden; and in this way I have gained experience which I expect will prove valuable when I resume bird-banding, and which may interest bird-banders elsewhere.

Our bird-bath, three feet by two in size, has attracted more species and more individuals than any other lure we have

used. Its success is probably due to its flat "shore," graduated depth of water, from nothing at the edge to three inches in the middle, and to its rough bottom. The last feature, affording secure footing to the bathers, is especially important for small birds; and, with a galvanized iron bath such as ours, it is easily secured by sprinkling sand on a coat of wet paint. If our bath had been under a trap, I believe that I could have banded individuals of most of the twenty-five species which I have observed using it, including Warblers, Vireos, Flycatchers, and other birds which are often difficult to trap.

Nesting-material should prove good bait during the brief season when it is in demand. We offer a variety of strings, threads, "cotton wool," kapok, wool, etc.; and I have seen a variety of birds, including Kingbirds, Yellow Warblers, Baltimore Orioles, and others, carrying it away. Some of these birds would probably have entered a trap to secure this material if they could not have obtained it otherwise.

In our garden at least, buttered toast crumbs seem the bait most attractive to the Sparrows and their relations. We usually offer both coarse and fine crumbs, and on both the butter seems to add to the attraction. The grains and seeds which we have tried seem less successful than the crumbs; but of the seeds, those of millet, hemp, and sun-flower have been the most useful. Nuthatches seem especially fond of sun-flower seeds and Chickadees of hemp seeds. Both these birds, and many others, are very fond of nuts and peanuts; and cheese crumbs are a favorite dish with many birds. Ripe corn on the cob is irresistible to Blue Jays, and I have seen both Downy and Hairy Woodpeckers tapping at it also.

Suet is the best bait for Woodpeckers, as every bird-bander knows, and will attract many other birds as well, especially in winter. We offer it in lumps tied in the trees and sprinkled on the ground; and we make it into "bird-stone" by melting it and mixing it with every kind of food we think a bird might like. In my experience, Brown Creepers take suet most readily when it is in the microscopical specks which remain on the bark of a tree after it has been lightly rubbed with a hard lump of suet.

If it were possible to enclose a staghorn sumac in a trap, I am sure good results would be obtained, especially in late winter and early spring. Evening Grosbeaks, every local representative of the Thrush Family, Flycatchers, Woodpeckers, several of the Finch Family, and other birds have been seen probing the heads of fruit on our sumacs. Bitter-

sweet, wild cherries, and other fruit-trees would make good bait if a suitable trap could be designed.

Most of these observations have been made many times by every bird-bander; but as experiences are seldom exactly duplicated, I hope that these brief notes may give new suggestions to some members of the bird-banding fraternity.

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A NEW HOST FOR THE BLOOD-SUCKING LARVA FLY, *Protocalliphora splendida*

BY HARRY E. WOODS

On June 25, 1925, while examining young Barn Swallows (*Hirundo erythrogastra*) in the nest, I found them infested with parasites (larvæ), which for lack of a better name were termed at the time "wood ticks." Nine of the parasites were found on one young Barn Swallow, and from one to four on the others occupying the same nest. They were firmly attached externally on the throats and breasts and were difficult to remove.

On July 7th, the next day on which I examined young Barn Swallows, I found still more specimens of the same larvæ, and several of these were sent to Mr. Charles W. Johnson, of the Boston Society of Natural History, who pronounced the imago of one, which had passed through two additional metamorphoses during the lapse of a month which had intervened between the time the larvæ were sent and their study by Mr. Johnson, to be a male blood-sucking larva fly, *Protocalliphora splendida*. Mr. Johnson also reported that this fly had not been previously found on the Barn Swallow.

As in the previous instance the larvæ under consideration were attached to the throats and breasts, and also a few were found on the tops of the heads. These young swallows were watched until they left the nests, and on two other occasions larvæ were removed. I captured several of the adult Swallows but found them free from parasites. After the young had left, the nests were examined and found to contain a number of "shells" which I judged were the cast off pupa-cases. In each instance where larvæ had not been found on the entire brood of young, I had an opportunity for comparing the condition of infested birds with those not infested with these