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MARTINS AND MARTIN HOUSES

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Not long before sunset on a summer evening more years ago than I care to think of, a group of boys were watching two men use their shot guns on any birds that came within range. In a few minutes a large purplish-black swallow swept by, circling over the neighboring stream in search of insects. One man dared the other to chance a shot. I remember well how he followed the flight of the bird with the muzzle of the gun, then the loud report, and the beautiful, harmless creature of the air lay gasping at our feet. I know now that it was a Purple Martin, and while I had my time of hunting birds, as did nearly all boys in the past generation, this incident has remained fixed in memory; and as I watch our present strong colony of martins I cannot help feeling that regret and sympathy for the dying bird of long ago had much to do with the interest that martins have always aroused in me, although it was many years before my ambition for a colony on my home grounds could be realized.

Our first martin house was erected in April, 1913, and as is often the case, a pair of birds came the next day. At that time there was only one other martin house in Atlantic. But the owner was not a bird lover and had put up the house only as a lawn ornament. This house had remained standing through summer and winter, and as a result had become filled with sparrow nests; the few martins which had ever nested in it were already in straits for room. I feel certain that the colony which we acquired that spring came en masse from this old house. Besides these birds there were a few pairs nesting about an old building in the business district; otherwise Atlantic was destitute of martins.

The house which we erected in 1913 was the home of a strong colony for seven years, until 1920. On March 31 of the latter year the house blew down in a violent squall, and was shattered. The pole had not been set in cement, and was decayed at the ground level. Fortunately, another house was available, and it was immediately erected;

so the lone bird, which arrived that very day, had a shelter before nightfall, and went into the new house without hesitation. In fact he seemed to watch the progress of erection with apparent interest.

On April 1, 1922, a Jacobs' house was put up near the old one, which we expected to discard; but the old house was occupied first, and as we did not wish to disturb the birds, the house was allowed to remain. So we now have two houses, containing fifty-six rooms, practically filled every summer.

There are now fourteen martin houses in Atlantic, and it is probable that others will be put up this spring. This increase is, doubtless, due in part to the enthusiasm of the landlords of the older colonies; but is also due in a larger measure to the cheerful and joyous activities of the birds by which the attention of the passer-by is attracted. One summer we were asked by an uninformed, but well-meaning inquirer where we bought the first pair, apparently supposing that a martin colony was started, like pigeons, by planting a pair in the house. He seemed much surprised when we told him that the martins were wild birds, and came, like Robins, every spring.

Early in May, 1917, that memorable time when the first and second flights of martins were practically wiped out in the entire middle west, seven birds, all so far arrived, were picked up from the lawn, or removed from the house, dead. An attempt to feed a pair brought into the kitchen was a failure, and both died. This fatal spell of weather began in the middle of April but the spring had been already cold and backward with prevailing north winds and cloudy days. On April 23, the wind was in the northeast, and fluctuated between that and northwest until May 8, with mingled rain and snow almost constantly from April 27 to May 4. The air must have been absolutely bare of insects over a wide area, and this failure of food for so many days, with constant cold and damp, was more than the martins could withstand.

It was pitiful to watch the birds return near the close of a cold, rainy day, scarcely able to fly; and we unable to give any aid or food. Soon came days when they never left the house, and this meant disaster, of course. Next they began to drop on the lawn, and the end was soon recorded, for, on May 7, I climbed up and removed the last three birds from the house, dead. With them perished a strong male with a peculiar call, whom we had fancifully named the "dawn herald", because his call was given earliest of all in the morning and was entirely different from the usual notes. This distinctive note was uttered only in the morning, and that morning salutation was not again heard

until several years had elapsed. I wish to call this to the especial attention of martin lovers. How many have heard a distinct early morning call?

Our martyrs of 1917 would not go back to warmer latitudes, but stayed and died in their own nest holes of previous years. On May 16, 1917, five new martins had arrived; by May 25 the weather conditions had become normal and the colony had increased to fourteen; and by the middle of June life in the martin house was as gay as usual. The pioneers, starved and frozen to death, were forgotten by these merry fellows, if indeed, their absence had ever been noticed.

In this connection it may be mentioned, as probably many know, dead birds must be removed from the house as soon as their presence is suspected. Houses have been permanently deserted by the martins when dead birds remained. In this case loss of the first flight made no difference to the later arrivals, and while I do not have exact figures on the number of birds present in the height of the 1917 season, I have no doubt the house filled to practically the same number of nests as in the preceding year.

Our experience and observations lead us to the conclusion that martins, once arrived at home, do not retreat southward in stormy spring weather. It may be true that in migration a flight will turn back before it has reached its destination, or may stop at the nearest house large enough to accommodate them. But when they arrive at their former nesting home they are there to stay, regardless of inclement weather. No doubt many have observed that on days following a storm or severe weather the martin house will be crowded with strange martins. We consider that these strangers are a flight held up or driven back by the cold; but our own birds are not affected, and in another day or so, as soon as the weather warms, the house contains only its regular tenants.

Many of the martin houses sold by advertising firms are made of half inch boards, and often have sloping roofs. These houses will get the birds, of course, if favorably located; but they are insufferably hot in the summer. The sloping porch roof allows young birds to slide off before they are able to fly. Following are some specifications which, in my judgment, are necessary requisites for a successful martin house.

(a) It should be constructed of inch lumber, carefully joined, and with a substantial roof, covered with tin or copper. A well built house, like our own dwellings, will cost slightly more at first; but

considering the years of service it will give, is much cheaper in the long run. And a reputable manufacturer charges, in my judgment, a very reasonable price for a thoroughly good product.

The house should always be set on a hinged pole. This arrangement will permit the house to be easily taken down, after the martins have gine, so that it may be thoroughly cleaned, painted if desired, and stored for the winter. This will add years to the life of the house, and in the spring there will be a clean, dry shelter for the returning birds. If the house is left standing English Sparrows will fill it with rubbish while the rightful tenants are away. One leading manufacturer furnishes his houses with iron poles on oak bases—a strong and durable combination, but very heavy. A straight-grained 4x4 or 6x6 timber, with side pieces attached so that bolts can be inserted for a hinge, will do as well; it should be set in cement to prevent rotting. So constructed it will not present so difficult an engineering problem in erection. Our new house requires almost the traditional "three men and a boy" in putting it up or taking it downit has the iron pole and oak base; while the old house can be easily handled by two persons, in fact by one, with a helper to merely steady the pole.

Our experience with two houses in the same yard plainly indicates that a house built of inch lumber will save practically all of the birds. We very seldom find a young bird on the ground beneath it, while as many as a dozen, or more, have been picked up under the house made of half-inch stuff, which is also built with sloping porch roofs. While the incline doubtless contributes to their fall, we believe that the young birds are forced out of their nest prematurely by the intense heat of the sun beating all day on the thin sides and roof. Inch lumber and a good roof will prevent a very large part of this mortality. There is not the slightest doubt that most martin houses of the cheaper kind are veritable infernos on a hot summer day, and their owners are unwittingly guilty of great cruelty in encouraging the birds to use them.

And while on this subject we would like to say further that the use of any nest boxes which are constructed of thin, flimsy boards, or of tin cans, or of tar paper, should be strongly condemned. Left to themselves cavity-nesting birds will find or excavate holes in trees, or in posts, and these holes will always be cool by reason of being deep in the thick wood, and it matters not whether they are in the sun or in the shade. Cavity-nesting birds take to our manufactured boxes, think-

ing them natural cavities, and in many cases will be cruelly deceived. If we must use thin boxes, by all means hang them where they will have at least partial shade. But far better, see that such boxes are made of heavy material. The additional cost will be trifling.

Of course, as soon as we have put up a martin house we must begin the battle with the English Sparrows. The following rules are the result of years of experience with this phase of martin housing, and will be found very effective, with a minimum of effort:

- (a) Use a .22 caliber rifle equipped with a silencer. The barrel should be bored smooth; then use shot cartridges.
- (b) Shoot only the male sparrows, and drop them from the martin house itself, if possible. Pay no attention to mere yard visitors; the objective is the male who is calling for a mate to join him in a nest in the martin house. On his arrival he is unsuspicious, and can be approached so closely that a kill is almost certain.
- (c) Pay no attention to the females. The male is the chooser of the nest site, and will call vociferously for a mate to join him. When the male is brought down the female will leave at once.

A miss will probably result in leaving on our hands that annoying creature—a gun-shy sparrow. It is astonishing what sagacity these gun-shy birds can display; and they will test the patience and skill of a seasoned hunter. The writer has derived genuine satisfaction in finally downing a pestiferous "cheeper" who had learned to fly instantly whenever a door was opened, and who seemed to have uncanny knowledge of the exact distance at which a charge of tiny shot is harmless. We recommend this sport to those who complain of lack of game nowadays. There is plenty of it in their own dooryards, and they will not be destroying native wild life, either.

It is perhaps needless to say that this shooting should not be entrusted to children. And to avoid regrettable mistakes we make the suggestion that, so far as possible, sparrows be shot only at the martin house. Other native sparrows will not trouble the martin house, and are therefore not likely to be mistaken for "game", as might easily be the case if the shooting is done among the trees or shrubs.

It is essential to protect the newly erected martin house from sparrows, as the presence of the latter will almost certainly discourage any martins which come to look it over. Later on, when the martin colony is established, a sparrow nest or two will not greatly annoy the martins. But we never allow a pair of sparrows to raise a brood in a martin house. If the sparrows do manage to make a nest, we must wait (not

very patiently, it is true) until we are sure that the young have hatched, and then have the nest torn out. Losing a family will discourage even English Sparrows. To destroy the sparrow nest before the young are hatched, even though a full set of eggs is taken, will in most cases only result in the covert building of another nest. Loss of the nest and young will, however, effectually drive the old birds away.

Why do martins desert their houses so soon after mid-summer, and, gathering in large flocks, depart for the south? Perhaps we will not know the complete answer to this question until we fully understand migration in general. No doubt many factors enter into the problem of migration, and probably most of the theoretical reasons given by various writers may have a foundation in fact.

Perhaps it is possible that the peculiar and acquired nesting habits of the Purple Martin may add another factor in determining the early southward movement of this species. The martins have come to be practically dependent upon manufactured houses for nesting and roosting places. The space in the ordinary house is sufficient for a nest containing only eggs or very young birds; when the young birds begin to grow the cavity very soon becomes too small. As this condition develops simultaneously in nearly every room in the house, the colony very quickly outgrows the capacity of its home. Assuming that the old birds stay with the young, the whole colony spends the daytime on the wing. The young birds must develop their muscles and acquire a certain degree of skill in flight. But during this time the problem of roosting quarters may become a difficult one for the birds. How much is known concerning the roosting habits of the martins, especially toward the end of their summer sojourn in the north? May it not be possible that their early departure for the south is in part due to the over-crowding of their martin houses?

The food habits of the Chimney Swifts are very similar to those of the Purple Martin, yet the swifts remain much later than the martins. It may be noted that the swifts are never presented with such a problem of over-crowding.

Our martin houses in Atlantic are near the intersection of two busy, paved village streets. White Way, Number Seven, passes on the south, and hundreds of cars go by all day and far into the night. In contrast, we have a Jacobs' house on the shore of Cullen Lake in northern Minnesota—amid the pines and birches and the dreamy quiet of the northern summer. What a joyful life those northern martins lead, with the sky-tinted, limpid waters of the lake to play over, and

plenty of fat dragonflies and bass flies to eat, and mosquitoes, too, and best of all, perhaps, no English Sparrows to annoy them! What fun it must be to drive off the crows and the kingfishers! And the shore is certainly policed for a long distance. In fact, the martins are not backward in dipping at our heads when we are boating close in shore, but we get used to it, and no harm results. When we see other martins above hot and noisy streets, perhaps trying to raise a brood in the hot cavity of some metal cornice, we think of our northern birds in their beautiful home, and wish that all could have the same good fortune. But the truth is, one colony seems to be just as happy as another, irrespective of surroundings.

It was in the evening of August 21, 1924, that we first observed, at Cullen Lake, a martin migration. Some time after sunset we noticed coming from the north, across the lake, a dense, wheeling flock of birds. And as they approached we were surprised to find they were martins. Two hundred or more birds must have been in this flock, which wheeled and circled around our martin house two or three times, with a chorus of flight calls, and then flew off southward in the twilight. Some of our birds must have joined this flock, for it did not seem that we had as many birds the next evening, when another large flock came from the north, in the same direction, and at about the same hour. This flock went through the same maneuvers as did the flock the night before, and most of our remaining birds joined this flock; for the next day only a few were to be seen, and within a day or so the house was entirely deserted.

As twilight had almost faded and the landscape was becoming indistinct we felt safe in concluding that the flock spent the night in flight, and by morning was hundreds of miles to the southward. It may be possible that they joined another flock and rested for the night, but we do not believe so. But, owing to the impending darkness—presenting the difficulty of finding a roost—and the apparent determination of movement in the flock, we felt sure that a long flight was in prospect. Martins may not always start their fall migration in this way. We learned later that a killing frost had occurred north of Cullen Lake, which may have accelerated the martin movement by affecting the food supply.

The martin is, in many respects, the most faithful of our home nesting birds. The Robin can be counted on to return to its home yard each year, but its nest may be moved around as fancy or expediency may dictate, without regard to property lines. The Bluebird is a charming neighbor, and comes in the first blush of spring; but it is

more fickle than the Robin and may not nest with us at all. Jenny wren comes to the old can or box, looks it over, but like as not will only fill it with sticks to keep out other birds, and finally build her nest in another place, nowhere near her last year's home. But the martin returns to the same house, swooping down with unerring instinct; and if perchance the box is not yet erected, he will linger for days waiting for it. No need of banding to prove that the same birds return: we know them, and they know us.

The community life of a martin colony is the source of endless interest, with quarrels, and courting, and family disputes just as we higher beings have. And in the weeks of spring before the nesting cares come on, gay songs and sporting in the air fill up the time from dawn to dark. Many an evening we have watched our great squadron of birds, in open but orderly formation, cruise the air above us, absolute masters of the wind, no matter how strong or gusty it may blow. And we have seen them come tumbling into the house in the midst of a roaring thunder storm, with glad cries and unafraid, to sit and preen their feathers in the pouring rain.

Those who have suitable places for martin houses are missing much of interest in bird life if they delay putting up a home for these useful and beautiful friends of the boundless sky.

ATLANTIC, IOWA.

THE BIRDS OF SIOUX FALLS, SOUTH DAKOTA, AND VICINITY

BY ADRIAN LARSON

[Concluded from The Wilson Bulletin, March, 1925, page 38.]

Warbling Vireo—Vireosylva gilva gilva. Common summer resident; breeds. Average date of spring arrival, May 17 (five years); earliest date of spring arrival, May 7, 1911; average date of fall departure, September 27 (two years); latest date of fall departure, September 29, 1907.

Yellow-throated Vireo—Lanivireo flavifrons. Rare; two seen May 22, 1908.

Blue-headed Vireo—Lanivireo solitarius solitarius. Transient. May 24, 1908.

Bell's Vireo—Vireo belli belli. Rare; one record, May 24, 1908. Black and White Warbler—Mniotilta varia. Common transient. Average date of spring arrival, May 11 (two years); earliest date of spring arrival, May 10, 1908; average date of spring departure, May 25 (two years); latest date of spring departure, May 26, 1907.