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AN ALBERTA AVIARY

WITH SIX ILLUSTRATIONS

By WILLIAM ROWAN

DR. CASEY WOOD'S article in the January, 1926, issue of THE CONDOR, on the beautiful and ornamental aviaries of the wealthy, has suggested that there might be interest attaching to a brief description of one of an opposite kind, one of a strictly utilitarian nature erected solely for scientific investigation. It is superfluous to add, after the last remark, that economy was a primary consideration! The shape and area were decided by fate, as there was only the one site available, and the old houses (see plan, fig. 49), already there, were not movable. Fortunately, even when the winter days are shortest, the aviaries get several hours of sunshine each day.

The aviary is built of shiplap and two-by-fours and is roofed with "rubberoid". It is built in two sections, a north one and a south one. The north wall of the north section is all wood, without windows (fig. 44), and is 16 feet long and 6 feet high. At each end of it, running south, is a wall 5 feet long, while from the south end of the eastern one a wall runs west for 6 feet (see plan, fig. 49). This leaves 10 feet open along the south side. Into this is built the south wing. This consists merely of a gable-shaped roof 9 feet long and 10 wide, 6 feet high at the sides and 8½ in the center. The whole of its west and south sides are open and netted with ½-inch mesh (fig. 45). The east side is boarded for six feet where it touches the old aviaries, the remaining three being open and netted. The roof of the north section rises from 6 feet behind to 8½ in front (south), and from this edge, along its 10-foot opening into the south wing, a board 2½ feet deep hangs downwards (see section, fig. 49). Along the top of this board runs a two-by-four in such a position that there is just comfortable room for birds to rest on it. (This, incidentally, is a favorite roosting place for the juncos, which show a marked preference for a flat surface at night to a proper perch.) This portion of the roof is liberally supplied with perches which are merely branches of willow, of varying thickness, far more satisfactory than any made in a carpenter's shop —and they cost nothing. Since our prevailing winds are from the northwest the roof here provides complete shelter. In the much advertised blizzard of the 11th of December, 1926, hardly a feather was stirred on the birds perching here. Even at the start of the gale, when it was blowing from the southwest right under the roof of the south wing, protection was complete. A similar device has proved perfectly effective in my older aviaries that have housed birds, through two previous winters, without misadventure.

The completely enclosed portion of the northern section (see plan) may be called the east wing (figs. 46, 47). Both its eastern and southern walls have windows of "cello-glass", a material that cuts out none of the ultra-violet rays that normally penetrate the atmosphere. Cello-glass has the added advantage that it does not require an accessory covering of netting. Although, of course, translucent, it is not transparent and not one bird in fifty will fly against it when turned into the aviary for the first time. A small percentage will fly even into wire netting when first captured, so that netting would be quite superfluous. Cello-glass is, moreover, practically unbreakable. A heavy blow with a hammer will do no more than dent it. The short wall at the opposite end of the north section is also equipped with a cello-glass window (fig. 44).

The east wing has sand on the floor to a depth of about five inches. On the wall hangs an automatic feeder (fig. 47) which accommodates fifteen birds simultaneously. Various modifications of an original home-made feeder of this type have resulted in

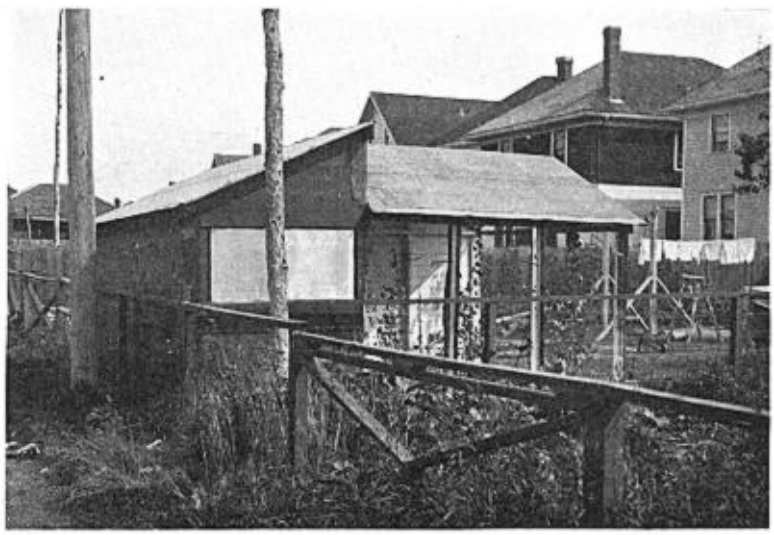

Fig. 44. NORTHWESTERN ASPECT OF THE AVIARY.

the present one, which has proved satisfactory under all conditions. In my experience wild birds do not scatter seed after the manner of canaries, and the accumulation of unfavored kinds of seeds in the feeding spaces has to be mechanically avoided. The box contains some ten pounds of seeds and lasts one hundred juncos and sparrows about three days—a shorter time in very cold weather. Beneath the food box is an automatic fountain (out of commission in the winter) at which the birds can drink, but they cannot bathe because vertical bars prevent the use of the wings. This is made of copper, according to my own design, and takes an ordinary 2-liter pyrex flask which can be replaced at any time in case of breakage, although the neck is slightly shortened to improve the proportions of the contrivance. The fountain hangs under the food box rather than above it. Falling husks merely bounce off the flask and do not get into and pollute the water. It is of the utmost importance, on the other hand, that the automatic feeder be kept perfectly dry, always, if it is to function without a hitch. Above the feeder hang a standardized minimum thermometer and an aneroid barometer.

The smaller window (fig. 47) is of ordinary glass (protected with netting), as one cannot see through cello-glass, and is contained in the doorway by which the aviary is entered. To the left of this is a burlap curtain which is worked from the outside and can be drawn across the door before it is opened. The unnecessary loss of light that a fixed curtain would entail is thus obviated. On the extreme left in the picture is another burlap curtain. This is nailed to the wall down its full length on the left and is drawn by a pull from the center of the south wing. Above the rod along which it runs is wire netting extending up to the roof. When it is desired to catch birds (as it may be two or three times a week in connection with the experiments) it is only necessary to walk around the south wing and gently drive the birds into the east wing, draw the curtain, button it down its right side (the buttons are just visible in the photo), slip through the bottom corner before fastening the last buttons, and clap a

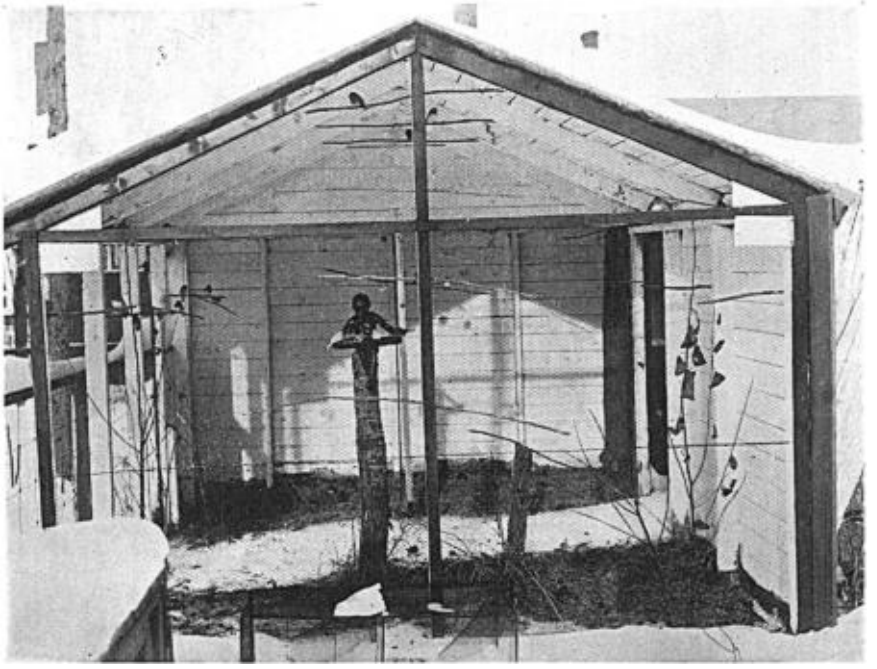

Fig. 45. SOUTHERN ASPECT OF SOUTH WING. CANARIES AND JUNCOS AT FEEDING TRAY. PHOTOGRAPH TAKEN AT 15° BELOW ZERO F.

butterfly net over the desired birds as they attempt to make their way back to the main aviary by way of the netting at the top. Any trap device for the catching of birds would be useless in this particular case on account of the frequent necessity of taking samples and the great amount of time that use of a trap would involve. The method devised is simple, works easily and quickly, and scares the birds surprisingly little.

By having a considerable depth of sand in this wing, the husks from the food box can be swept out of the door at intervals, and thus the whole can be kept constantly fresh and clean, while the sand only has to be replaced every three or four months. The consumption of twenty-five to thirty pounds of seed a week produces an incredible quantity of debris.

Except for this east wing, the rest of the floor is sod. A certain amount of shrubbery grows against the wires, affording additional perches and shelter in the summer

(to be augmented in the spring), as well as improving the general appearance of the aviary. Against the front wire of the south wing is a bathing pool of cement, which provides a non-slippery surface for the bathers. It is three by two feet, running from an inch and a half in depth at one end to nothing at the other (fig. 48). The walls, inside, were made perpendicular, which was a mistake. If these sloped inwards and were rounded on the bottom it would probably be possible, at times of thaw, to pry out the block of ice that will have to stay in, as things are, till March or April. The birds, even the canaries, enjoy a bath on sunny days even if it is freezing slightly, provided that tepid water is available. It should be just warm enough to prevent its freezing for at least half an hour. The water problem is readily solved during the winter by the snow that inevitably drifts into the cages. Even the canaries do not bother about water while there is snow in the aviary. They both drink it and bathe in it.

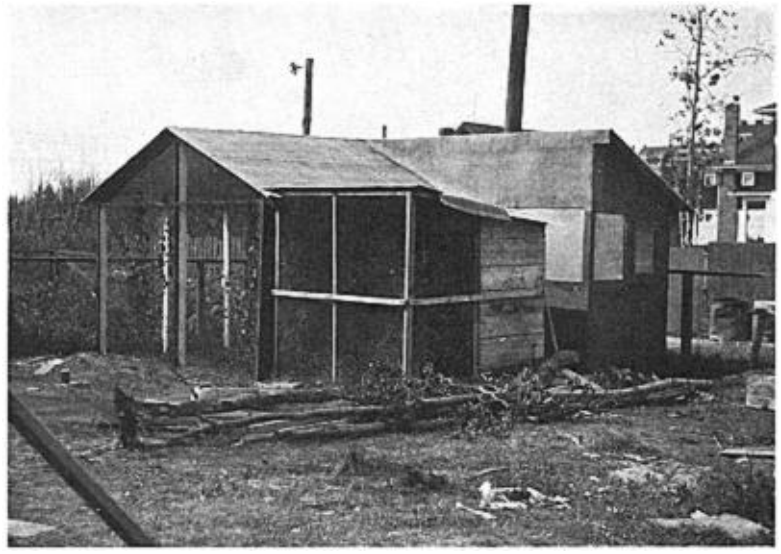

Fig. 46. GENERAL VIEW OF AVIARY FROM SOUTHEAST. OLD BUILDING IN CENTER, FRONT. TO LEFT, SOUTH WING; TO RIGHT, EAST WING OF NEW AVIARY.

When the aviary was erected, two tree stumps were left on the site. One of these was suitably situated for the ornament which appears in figure 45, the stump affording the inspiration for it. It was, moreover, found desirable to have some fixed spot where the birds could be given dainties at intervals—chopped egg, lettuce, apple peelings, etc. The statuette of one of the writer's children, holding a food tray, was accordingly made to sit on the stump. Three canaries and two juncos are feeding at it in figure 45. The picture was taken at 15° below zero.

The open stretch of three feet in the east wall of the south wing was decided upon with some hesitation on account of draughts which are notoriously detrimental to the welfare of captive birds. That it actually produces a very strong draught is evident from the picture (fig. 45). Not only has the snow drifted right across the aviary here, but the snow on the railing outside has actually been largely blown away. It was assumed, however, that birds would have the sense not to sit in the draught if they did not like it, and it has proved that this conjecture was justified even in the case of

the canaries. It was desirable to leave the space open on account of the violent western gales that blow up with thunder-storms. These may reach almost cyclonic force for a few minutes and do considerable damage by way of lifting roofs, etc. It was obvious that even a comparatively moderate gale would lift such a roof as that of the south wing unless an outlet for the wind were provided. So far from proving injurious, it has been a blessing in disguise, for the frequent east winds of winter have kept a constant supply of snow in the aviary which has saved much shovelling!

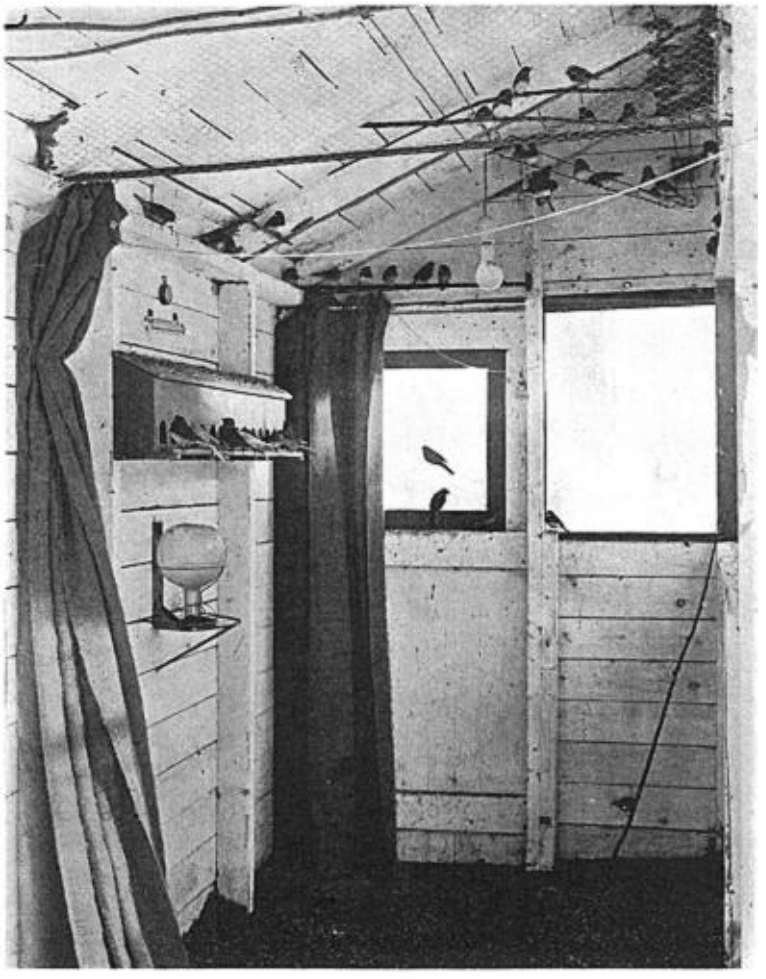

Fig. 47. INSIDE OF THE EAST WING. FOR DETAILS SEE TEXT.

The everlasting problem of mice is very easily solved in this part of the globe. It is only in the fall that these rodents appear to travel and it is then that they are likely to take up quarters (and never in large numbers) in the bird house. One only has to wait for a drop to 30 or 40 degrees below zero and then pour a slow trickle of cold water into the hole. In a few minutes a solid plug of ice that no mouse could possibly hope to tackle has sealed it in for good.

Perhaps a word, in conclusion, about the inhabitants of this aviary, which is probably one of the most "arctic" in existence, and built chiefly for winter use, will be in order. Juncos are the principal inhabitants and are the birds used in the experimental work for which the aviary was erected, out of research funds kindly granted by the Royal Society (London). The aviary contained over a hundred juncos at the commencement of the investigations. In addition there were Tree Sparrows in some numbers and other species, mostly singly, as well as ordinary canaries. Perhaps the term ordinary is not strictly correct, as they are specially bred birds from which I hope in time to get a strain that can stand anything at all by way of cold. Birds of the present generation have proved themselves extremely hardy and have remained unperturbed by long spells of below-zero weather (with a minimum of —35° F.) and one of the worst blizzards in recent history.[1] Some of the cocks have not missed singing a single day through the winter, which has so far been the severest in the last twelve years. Christmas carols sung in the garden by canaries in northern Alberta may not sound

Fig. 48. THE BATHING POOL.

probable, yet visitors to the aviary on Christmas day, with the thermometer at 6° below zero, heard five or six cocks singing simultaneously. These, and the odd sparrows, provide a side interest quite apart from the main investigation.

So far, I have not found any species of our native seed-eating migrants that cannot stand the worst cold our winters can produce, and apparently they do not suffer in any way. They are not given artificial heat at any time. But they get all the essentials of abundant, clean food, exercising space (1250 cubic feet), fresh air, and a maximum amount of light (the whole of the inside is white-washed); while by means of the drop-board they have access at all times to a well lit shelter from high winds, no matter from what direction they may blow. Aviaries only a tenth of the size, erected on the same principle and built of packing cases, were my first venture (fig. 46) and proved just as satisfactory. In fact I am using them yet for control birds. They contain canaries also, controls as well as my breeding stock, the 16 hours of darkness each day during December and January, when feeding is impossible, apparently not proving detrimental to their health.[2]

[1] In a nest built under the roof of the north section at its open (west) end, a healthy brood of young canaries was hatched out on the 18th of April, in a howling blizzard with the thermometer at five degrees above zero F. In spite of continued cold, the chicks are thriving as we go to press.

[2] The experimental aviary is artificially lit for a certain length of time each night.

Anyone trapping wild birds and keeping them in an aviary as I do, will find it a distinct advantage to have a few canaries with them. They have a sobering effect and initiate the wild birds speedily into the use of such things as automatic feeders. Out of 183 Juncos and some 20 Tree and other sparrows trapped last fall, only one failed to get acquainted with the feeding arrangements of the place. There was a certain amount of food on the ground, but ten days after capture he died from starva-

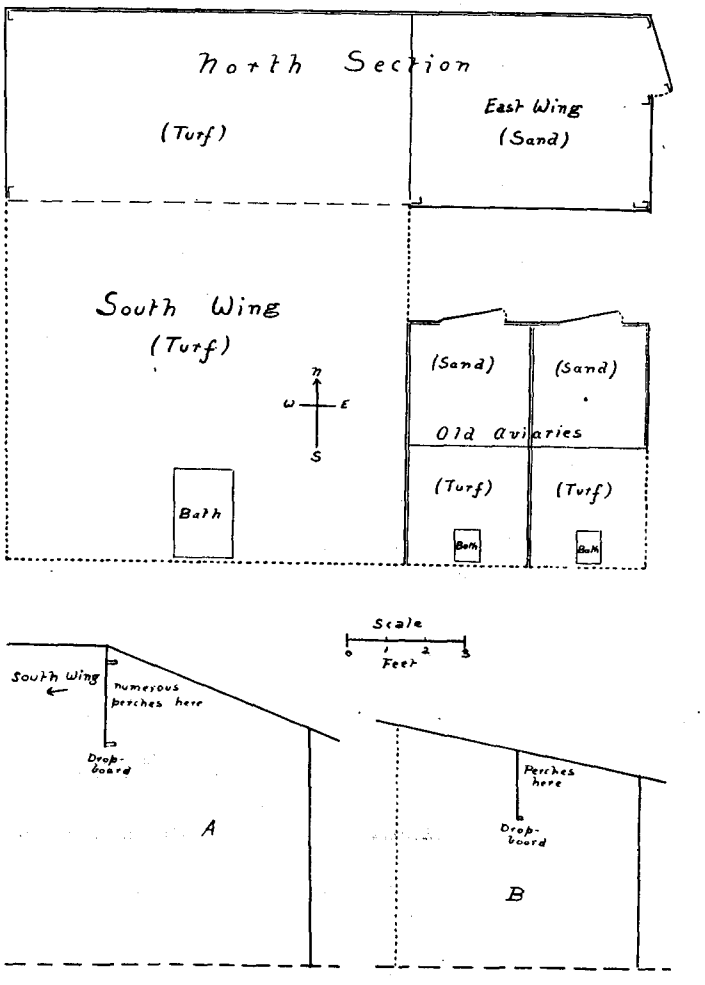

Fig. 49. PLAN AND SECTION OF AVIARY.

tion. A post mortem examination revealed neither injury nor disease, but the bird was little more than a feathered skeleton. Without the canaries such deaths would probably have been quite numerous.

University of Alberta, Edmonton, Alberta, Canada, January 1, 1927.