

Feathered Architects

By Lewis Wayne Walker in "Animal Life"

In my wandering about the fields, forests, marshes and beaches in search of nature material, I have naturally come upon many bird homes. Now with this mass of my own data before me it is interesting to make comparisons, and to form reasons for the different types of nests, and for the use of varied materials.

Starting on the beach, we will work inward, and cover each type as it is found in different localities. I know of one spot of southern California, several hundred feet from the splashing waves of the Pacific where numerous tern, or sea-swallows, and snowy plovers nest. It is simply a barren stretch of sand dune, covered sparsely with a trailing plant known as ice-weed. There are stretches of bare sand in between this ice-weed, twenty to thirty feet wide, and in these spots the terns and snowy plovers lay their eggs. As for the nest, they build none, but are satisfied to make just a hollow in the sand do as a receptacle. The eggs are protectively colored and are extremely hard to find, so well do their markings resemble grains of sand and tiny sea shells. If either of these birds were to carry nesting material and place a heap of it on the beach, the protective value of their eggs would be gone, and without doubt, a great many more of their eggs than are lost now would be destroyed by prowling rats, cats, snakes and sea gulls.

Working back from the sand dunes, we come to grassy fields, and here nest the mellow-voiced larks, and their near cousins, the horned larks. Their nest also are placed on the ground, but are usually hidden under a small bush or a clump of grass. As nest architects they aspire slightly higher than their beach friends, for in addition to a hollow spot on the earth, they have a nest lining of soft inter-woven grasses. One reason for this is that while baby terns and baby plovers can run soon after hatching, baby larks must stay in the nest until fully feathered. These nests, in other words, are not only receptacles for the eggs, but nurseries for the

young as well. On the same grassy fields nest small burrowing owls. This name, however, is a misnomer, for they do not dig their own holes but usurp the burrows of rabbits, ground squirrels and prairie dogs. They can, when necessity compels, chip away a little dirt, and often if the hole they want to use is too deep will plug it up at a depth of two or three feet. Where they plug it up they peck and dig at the walls until a nesting chamber from eight to ten inches wide is made. Here in the pitch blackness, under the ground, they lay their eggs and raise their young.

Other birds, too, nest on the ground, such as the kingfisher and bank swallow, but they dig their holes straight into the side of a sand bank, pushing out the loose dirt with their feet. The bank swallow lines his small chamber with grasses and feathers, but the kingfisher is content to simply let an accumulation of fish scales and fish bones surround her hidden white eggs.

Bordering the fields is a long row of hedges, not very tall or imposing, but still having its bird population. Song sparrows build both in the branches and on the ground below them. The lower part of their nest is bulky and made of coarse material, but the cup, or hollow, is lined with soft fibers to make a comfortable home for the young. In this same hedge-row nest California Towhees, sombre birds that spend most of their lives scratching at dry leaves in search of insects and weed-seeds. In building their nests they usually use very dark material to match their somber colors, and to blend with the shaded ground that is usually only a foot or so below.

At the base of the hedges quail nests are sometimes found, and they are almost always partly covered or domed. The floor of the nest, however, is not much, because the young quail, like baby chicks, can run about and follow their parents foraging in the fields, within a few hours after hatching. From the hedges we roam on to some

trees in the distance and here we come again to a different bird population. In a small conifer up near the top, there are a number of Brewer's Blackbirds, birds that almost always colonize in their nesting sites. Some of the conifers will have four or five nests in their branches, and if a crow or a hawk comes along, all the blackbirds combine to drive him out of their territory. In the lower limbs of the conifer nest a pair of goldfinch, the male of which has such a cheery, pleasing song. Their home is small and compact, but, nevertheless, well built. The outside is covered with a gray plant down, which keeps the incubating mother from standing out too plainly, while the inside, is lined with a white, cottony-looking substance, made up of milkweed, thistle and cattail.

Not far from the goldfinch nest is the slipshod one of the mourning dove, a poor job at best. It is merely a rough, flat platform of sticks upon which the eggs are precariously laid. Some of the nests are made so flimsily that the eggs, or young, can be seen from underneath. Quite often, due to the poor construction, the eggs or the squabs roll off to perish on the ground below. One occasion when I inadvertently brushed by a branch on which a mourning dove was covering her youngsters, she flew off so hurriedly that both babies fell to the ground. Replacing them in the nest, I walked on. Passing a few days later, only one remained, and I judged that the other one fell again and was gobled up by some marauding house cat.

Further on we come to a farm house, with its barns and sheds, a haven for certain types of birds that realize some humans are friendly. Way up in one corner of the loft there is a white-faced object moving back and forth with snapping bill, and uttering menacing hisses. Right below this barn, or more key-faced owl, are seven chalky-white eggs. There is no nest to speak of, just debris, such as the bones and fur of her rodent victims piled about her treasures.

On the eaves outside the farmhouse nest many cliff swallows (before the advent of houses in America, they plastered their nests against cliffs). Each one is gourd-shaped and made

solely of mud. In damp weather these homes stand up very well, but if several weeks pass without rain, the mud becomes dry and brittle, and the nests eggs or babies crash to the ground. There is much tedious work on these homes, and thousands of trips are made by the parent birds before enough mud is transported to finish the dwelling.

In the rear of the farm we locate a house-wren's nest in a large box. In picking out this site, she evidently thought it was too spacious and so started to fill it up with sticks and twigs. How many trips she made before succeeding in her work is hard to say, but her nest is fully (in this instance) twenty times as big as she is. Up in one corner of the box she left a cup-shaped hole about the size of a golf ball, just big enough for her tiny body to fit in comfortably. Here she has already laid her brown-speckled eggs, and will hatch and rear her young.

In the front of the farmhouse where we found the wren and the swallows there stands a tall palm. Sewed under one of the dead leaves hangs the pensile nest of the hooded oriole. This truly is made by one of the best of the feathered architects, and is constructed wholly of thin, thread-like plant fibers, all intricately woven together. The wide palm leaf above acts as a shielding roof to shed the rain. That it does its work well, and serves a useful purpose, can plainly be seen, for these nests will endure through the storms of several seasons, although they are used only once.

One of the prettiest of the pensile nests is made by just a mite of a bird called the Bush-tit. They are even smaller than the wren, but their nests are often more than a foot in length. They are gourd-shaped, and have a small entrance near the top. The care, precision, and work used in making them can be better realized when a discarded nest is taken apart and examined. I did this once and believe that I handled more than two thousand pieces of nesting material. Moss, string, plant fibers, and in fact everything that could possibly be used, were to be found in that bird's home.

Still further inland we come to the desert region where grow varied types of cacti. Bird of the locality have learned to use this armored plant for nesting sites. It offers a certain protection from prowling mammals and they well seem to realize this fact. The road-runner, for instance, rarely if ever nests in anything else, and they often line the rims of their nests with bits of loose cactus, to make an enemy's approach doubly hard.

Another cactus nester is the cactus wren, one of the most cheerful of all the desert dwellers. They practise deception by building several nests in plain sight. The real nest, however, the one that contains the eggs, is usually pretty well hidden. They are globular in shape and completely domed over. The birds enter through a small hole in one side, and seem to hop with immunity over the armored spines.

In the tall trunks of the saguaro cactus some of the woodpeckers excavate their burrows. The gila woodpecker (pronounced hee-la), named for the Gila River, is the best known of these. They drill a hole about twelve or fourteen inches deep, and four or five inches wide, right in the heart of the heavy cactus trunk. They enter this nest through a doorway at the top, about an inch and a half in diameter.

Soem of the fresh- and salt-water sloughs have interesting nesters. In the last few weeks I have been carrying on some investigations at Upper Murray Lake, a game preserve near San Diego. Two of the birds that I have been watching, coots and pied-billed grebes (the latter better known as hell-divers), build floating nests, held in place by reeds or tules. As the lake rises and lowers, so do the nests, and they gently bob up and down on the small waves.

The grebes have that interesting habit of covering their eggs with debris when they leave, and I well remember the first grebe nest that I found. I was paddling about the tules, when I suddenly saw a pile of rubbish ahead. I was just about to pass it by, thinking it a last year's nest, when a patch of white came into view. Closer observation revealed seven eggs, all warm, but covered with rotten weeds. Returning to shore, I watched it through binoculars.

After a long time a head stuck out of the water right at the rear of this peculiar home, and the grebe looked about to see if all was well,—the coast clear, so to speak. It was, so her body rose out, and she clambered upon her nest. After a hurried look, she reached down with her bill, pushed the covering aside and started to incubate.

I began to get cramped and wanted to leave, but I also wished her to show me how it was covered. I started to cough, very low at first, but getting louder, not wishing to scare her too suddenly. The noise had the desired effect, for first she raised her head

and looked about, then quickly rearing her body, she reached down three times with her bill, each time picking up and spreading spongy, water-soaked weeds on her eggs. Her back then turned and she slipped into the water. Hardly a ripple marked the spot where she went down, and she travelled a good hundred and fifty feet before she again came to the surface.

One of the most interesting as well as one of the rarest, birds that I have ever worked with and photographed, also lives in the tules of Upper Murray. This is the least bittern, the smallest of the herons. Her nest is placed about a foot above the water, carefully braced on the reeds. The bottom is—like all heron nests—made of comparatively coarse sticks, while the "cup", which is pretty flat, is lined with pliable reeds. When first I discovered this nest I was searching for an incubating coot. Through the dense rushes I noticed this dark, bulky nest, and pushed my way in to investigate. Sitting tight on the eggs was a mother Least Bittern. Her neck and beak were held straight in the air as she tried to mimic a dead reed stock. So well did her pose match her surroundings that had it not been for the nest far below, I probably would not have seen her, and as it was, the majority of people would have passed her by unnoticed.

I am of the opinion that the highest type of bird architecture is that achieved by the birds that saddle their nests on branches. Two birds that build nests of this type—the humming-bird and the wood peewee—are well known through the medium of literature, but comparatively few people have detected their homes, so

hard are they to find. Both birds build with the softest materials. They cover the outside with lichens and other decorations that resemble the bark on the branch they have chosen for a home site. A hummer's nest from a yard away looks very much like a knot on a limb. They are practically impossible to find unless the parent bird is seen going home.

Bird nesting afield, not at home in a cabinet, is an extremely fascinating outdoor pastime. I have been doing it for years, yet I still get the same thrill now at finding a new nest that I did when just a beginner. Always in this work there is something new, something just a little more interesting—right around the corner.

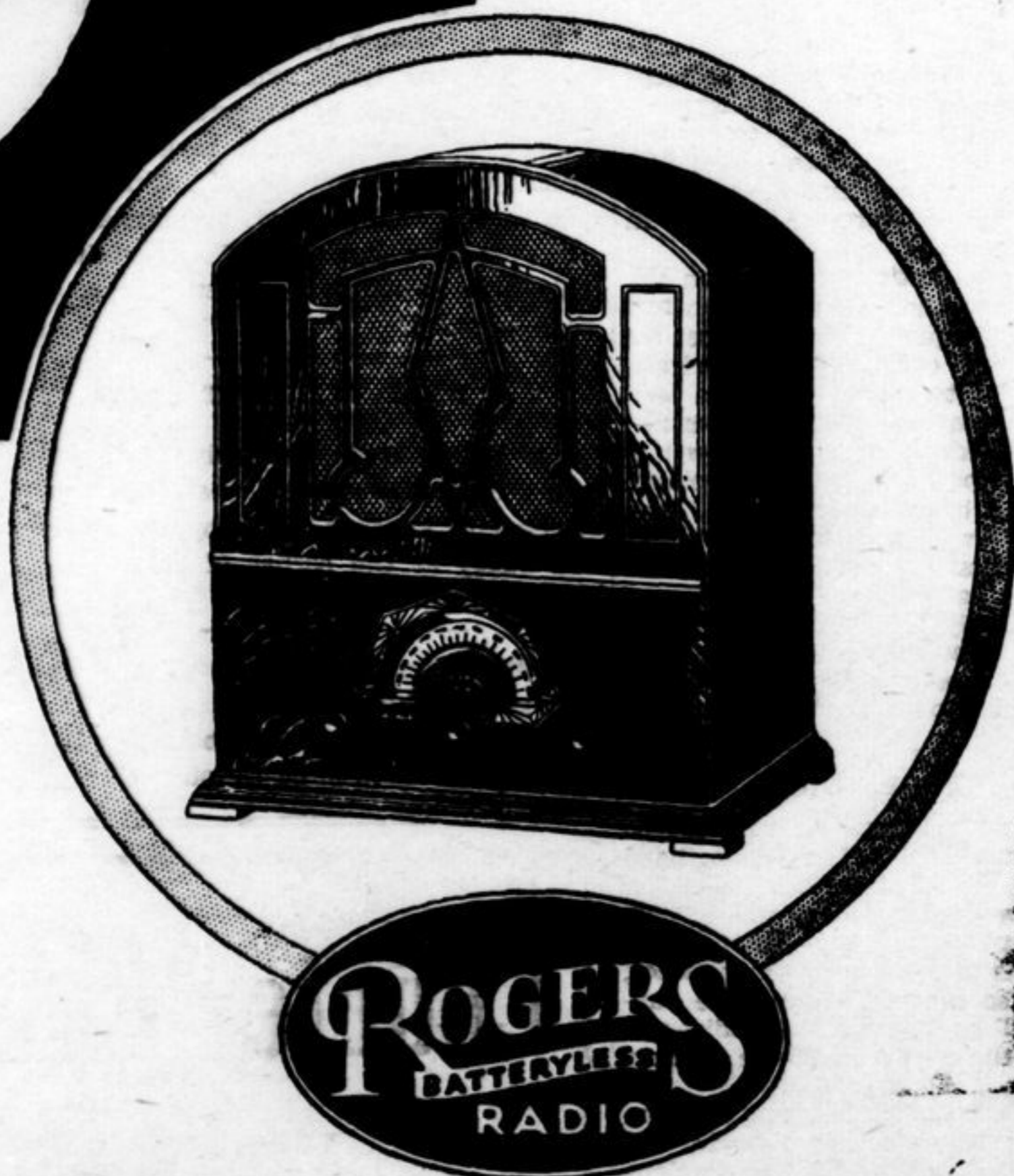
COMBINING IN THE EAST

Commenting on the general feasibility of the "combine" in harvesting grain in Eastern Canada, E. S. Hopkins, Dominion Field Husbandman, in his annual report for 1931 says: "From experiments conducted to date the operation of the 'combine' under eastern conditions appears quite feasible where the recovery of straw is of no importance. Where straw recovery necessary the combine, though quite as feasible, appears to be of doubtful economy as operated at present. This conclusion might be revised with the development of more economical means of straw recovery and the introduction of a type of machine with a higher capacity and lower operating cost. The combine has now been operated in Ottawa for the last four years and complete information on the equipment used, cost of operation and results of experiments conducted each year, may be found in the past annual reports."

NEW—JUST IN!

59.50

ROGERS Model 805
5-tube Mantel of the new advanced type. Terms as low as \$8.00 a month.



- NEW ROGERS GUARANTEED TUBES
- EXCLUSIVE SPRAY-SHIELDING
- FULL RANGE TONE CONTROL
- COMPACT CHASSIS
- SMART DESIGN

ROGERS
BATTERYLESS
RADIO

LIMITED SUPPLY

This handsome mantel model, one of the new "800" series, just in from the Rogers factory, can be put in your home today at a cost lower than advanced modern radio has ever been offered before.

Payments as low as eight dollars a month give you a galaxy of up-to-the-minute improvements that defy comparison with any radio at or near the price.

Consider a few of the new features: New type fully guaranteed Rogers tubes, blazing

new trails in satisfactory performance; exclusive Rogers spray-shielding of tubes ensures longer life and quieter reception; full-range tone control; full-vision illuminated dial; double rubber suspension; a large size electro-dynamic speaker; a smartly designed mantel that is an asset to the appointments of any room!

Never before so much for so little! See this remarkable low-priced set today.

E. KRESS & SON

Durham

Ontario

BOX Lacrosse

Durham Rink

THURSDAY, Sept. 22

at 8.15 p.m.

Southampton

vs Durham

Admission 25c and 10c

Poor old Jones is still paying
\$16.00 A TON FOR COAL
I PAY ONLY \$9.00



"Jones is like that. Still thinks he's living in boom times. I've bought a Gilson Magic Blower and cut my fuel bills. I can burn cheap, small-sized coal—and save \$65.00 in a winter, and I'll bet my house is warmer than Jones' place."

GILSON MAGIC BLOWER

FITS ANY FURNACE



A Gilson Magic Blower is just the thing cut running expenses of the home. Easy terms let it pay for itself. It's silent, safe and automatically controlled. Nothing to get out of order. Fully guaranteed. Only takes a few hours to install. No changes needed. See us and save fuel money.

Durham Machine Shop

F. W. MOON, Proprietor

Phone 140

Durham, Ont.