Each After its Kind

BY JOHN BURROUGHS

OW sharply most forms of life are differentiated!

The die that stamps each of them is deeply and clearly cut. As I sit here in my bush camp under the applees. I see a chipmunk spinning up the

trees, I see a chipmunk spinning up the stone wall a few yards away. His alert eye spies me, and he pauses, sits up a few moments, washes his face with that hurried movement of his paws over it, then hesitates, turns, and goes spinning back down the stone fence. He seems to sniff danger in me. He is living his life, he has a distinct sphere of activity; in this broad, rolling landscape he is a little jet of vital energy that has a character and a purpose of its own; it is unlike any other. How unlike the woodchuck in the next field, creeping about the meadow, storing up his winter fuel as fat in his own flabby body; or the woodpecker on the apple-tree; or the noisy crow flying by overhead! Each is a manifestation of the psychic principle in organic nature, but each is an individual expression of it. The chemistry and the physics of their lives are the same, but how different the impressions they severally make upon us! Life is infinitely various in its forms and activities, though living things all be made of one stuff.

Soon after the chipmunk there appears a red squirrel going down the wall—half-brother to the chipmunk but keyed to a much higher degree of intensity. He moves in spasms and sallies and is frisky and impish, where the chipmunk is sedate and timid. His arboreal life requires different qualities and powers; he rushes through the treetops like a rocket; he travels on bridges of air; he is nearly as much at home amid the branches as are the birds, much more so than is the flying squirrel, which has but one trick, while the red squirrel has a dozen. That facile tail,

now a cockade, now a shield, now an air buoy; that mocking dance, those derisive snickers and explosions; those electric spurts and dashes—what a character he is—the very Puck of the woods!

Yesterday a gray squirrel came down the wall from the mountain—a long, softly undulating line of silver-gray; unhurried, alert, but not nervous, pausing now and then, but striking no attitudes: silent as a shadow and graceful as a wave—the very spirit of the tall, lichencovered birches and beeches of the mountainside. When food is scarce in the woods he comes to the orchards and fields for insects and wild fruit, and any chance bit of food he can pick up. What a contrast he makes to the pampered town squirrel, gross in form and heavy in movement!—the town squirrel is the real rustic, while the denizen of the woods has true grace and refinement. Domestication, or semi-domestication, coarsens and vulgarizes the wild creatures; only in the freedom of their native haunts do they keep the beauty and delicacy of form and color that belong to them.

A nuthatch comes upon the appletree in front of me uttering now and then his soft nasal call, and runs up and down and around the trunk and branches, his boat-shaped body navigating the rough surfaces and barely touching them. Every moment or two he stops and turns his head straight out from the tree as if he had an extra joint in his neck. Is he on the lookout for danger? He pecks a little now and then, but most of the food he is in quest of seems on the surface and is very minute. A downy woodpecker comes upon the same tree. His movements are not so free as those of the nuthatch. He does not go head-foremost down the tree; his head is always pointed upward. He braces and steadies himself with his tail, which has stiff spines at the ends of the quills. By a curious gymnastic feat he

drops down the trunk inch by inch, loosing his hold for a moment and instantly recovering it. Hecannot point his beak out at right angles to the tree as can the nuthatch. In fact, he is not a tree-creeper, but a woodpecker, and can penetrate fairly hard wood with his beak. His voice has a harsh, metallic ring compared with that of the soft, childlike call of the nuthatch. His only contribution to the music of the spring is his dry-limb drum with which he seeks to attract his mate when the love passion is upon him.

Oh, these wild creatures! how clearcut, how individual, how definite they are! While every individual of a species seems stamped with the same die, the species themselves, even in closely allied groups, are as distinct and various in their lineaments and characteristics as we can well conceive of. Behold the family of rodents, including the squirrels, the hares, the rabbits, the woodchucks, the prairie-dogs, the rats and mice, the porcupines, the beavers—what diversity amid the unity, what unlikeness amid the sameness! It makes one marvel anew at the ingenuity and inventiveness of Nature—some living above ground, some below, some depending upon fleetness of foot and keenness of eye for safety, some upon dens and burrows always near at hand; the porcupine and hedgehog upon an armor of barbed quills, the beaver upon his dam and his sharpness of sense. If they all descended from the same original type-form, how that form has branched like a tree in the fields—dividing and dividing and dividing again! But the likeness to the tree fails when we consider that no two branches are alike; in fact, that they are as unlike as pears and peaches and apples and berries and cherries would be on the same tree—all of the same family, but diverging widely in the species.

The ground-dwellers, such as woodchucks and prairie-dogs and gophers, have many similar habits, as have the tree-dwellers and the hares and rabbits. That any of these rodent groups will branch again and develop a new species is in harmony with the doctrine of evolution. But these evolutionary processes are so slow that probably the whole span of human history would be inadequate to measure one of them.

Nearly all the animal forms that we know are specialized forms, like our tools and implements—shaped for some particular line of activity. Man is the most generalized of animals; his organization opens to him many fields of activity. The woodpecker must peck for its food, the kingfisher must dive, the fly-catcher must swoop, the hawk must strike, the squirrel must gnaw, the cat must spring, the woodcock must probe, the barn-yard fowls must scratch, and so on, but man is not thus limited. His hands are tools that can be turned to a thousand uses. They are for love or war, to caress or to smite, to climb or to swim, to hurl or to seize, to delve or to build.

The organization of most animals has special reference to their mode of getting a living. That is the dominant need, and stamps itself upon every organism.

Man is a miscellaneous feeder and a world-wide traveler, hence all climes and conditions are his. He is at home in the Arctics or the Tropics, on the sea, on the land, and in the air—a fruit-eater, a grain-eater, a flesh-eater, a nut-eater, an herb-eater—his generalized anatomy and his diversified mentality make the whole earth his dwelling-place, and all its thousands of treasure-houses are made available for his needs.

What diversity in unity among the Contrast these two familiar species which are nearly of a size—the marsh-hawk, and the hen- or red-tailed hawk. The former has the longer tail, and its back is of a darker brown. We see it in summer beating up and down, low over the fields and meadows, its attention fixed upon the ground beneath it. At the same time we may see the hen-hawk soaring aloft, sweeping leisurely around in great circles, or climbing higher in easy spirals, apparently abandoning itself to the joy of its aerial freedom. The hen-hawk is a bird of leisure in contrast with its brother of the marshes. We rarely see it hunting; it is either describing its great circles against the sky, apparently in the same mood that the skater is in who cuts his circles and figures upon the ice; or else it sits perched like a statue high up on some dead branch in the edge of the forest, or

on some tree by the roadside, and sees the summer hours go by. Solitude, contemplation, a sense of freedom, seem to be its chief delight, while we rarely see the marsh-hawk except when it is intent upon its game. It haunts the fields and meadows over a wide area like a spirit, up and down and around and across it goes, only a few feet above the ground, eying sharply every yard of surface beneath it, now and then dropping down into the grass, never swooping or striking savagely, but halting and alighting rather deliberately, evidently not in pursuit of a bird, but probably attracted by field-mice. The eye follows its course with pleasure; such industry, such ease of movement, such deliberation, such a tireless quest over the summer fields—all contribute to make a picture which we look upon with interest. It is usually the female which we see on such occasions; she is larger and darker in color than the male, and apparently upon her falls the main support of the family. Said family is usually composed of three or four young in a nest upon the ground in a marsh, where it is not easy for the pedestrian to reach. The hunting habits of the hen-hawk are quite different. It subsists largely, not upon hens or poultry, as its name would seem to indicate, but upon field-mice and other small rodents, which it swoops down upon from a point in the air above them, where it hovers a moment on beating wing, or from the top of some old stub or dry branch in the meadow. Its nest is usually placed fifty or more feet from the ground in some large forest tree, and is made of dry twigs and branches. have found but one marsh-hawk's nest, and not more than once in twenty years do I find the nest of a hen-hawk.

Two species of our smaller hawks present about as sharp a contrast as do the two I have just described—the sparrow-hawk and the pigeon-hawk. It is very doubtful if the sparrow-hawk ever kills sparrows, its food being largely insects, though the pigeon-hawk is not above killing pigeons—or at least pursuing them with murderous intent. It is the terror of the smaller birds, capturing robins, high-holes, bluebirds, thrushes, and almost any other it can get its claws

upon. If you see a small bird hotly pursued by a brown hawk, the chances are that it is the song or field sparrow making desperate efforts to reach the cover of some bush or tree. On such occasions I have seen the pursued bird take refuge in a thorn-bush the branches of which had been cropped by the cattle till they were so thick and thorny that you could hardly insert your hand among them. In such cases the hawk is, of course, defeated, but it will beat about the bush spitefully in its vain attempts to dislodge its game.

The sparrow-hawk is the prettiest of our hawks, and probably the most innocent. One midsummer when I was a boy on the old farm we had a sudden visitation of sparrow-hawks; there must have been at least fifty about the old meadow at one time, alighting upon the fencestakes or hovering on the wing above the grass and swooping down upon the big, fat grasshoppers. It was a pretty sight and unusual, as I have witnessed it only once in my life. Both of these hawks, I believe, nest in cavities in limbs of old trees.

Our birds often differ in their habits much more than in their forms and colors. We have two fly-catchers singularly alike in general appearance—namely, the phoebe-bird and the wood-peweewhich differ widely in their habits of The phœbe is the better known life. because it haunts our porches and sheds and bridges, and not infrequently makes itself a nuisance from the vermin with which its nest, especially its midsummer nest, often swarms. It is an early spring bird, and its late March or early April call, repeating over and over the name by which it is known, is a sound that every country boy de-The wood-pewee is a little lights in. less in size, but in form and color and manners is almost the duplicate of the It is a much later arrival, and need not be looked for till the trees begin to turn over their new leaves. Then you may hear its tender, plaintive cry amid the forest branches—also a repetition of its own name, but with a sylvan cadence and tenderness peculiarly its own. It differs from the phæbe's note just as the leafy solitudes of the woods differ from the strong, open light,

and the fence-stakes and ridge-boards where the phœbe loves to perch. It is the voice or cry of a lonely, yearning spirit, attuned to great sweetness and tenderness. The phæbe has not arrested the attention of any of our poets, but the pewee has inspired at least one fine woodsy poem. I refer to Trowbridge's "Pewee."

The nesting habits of the two birds differ as widely as do their songs. The phœbe is an architect who works with mud and moss, using the latter in a truly artistic way, except when it is tempted, as it so often is, to desert the shelving rocks by the waterfalls or along the brows of the wooded slopes, for the painted porches of our houses or the sawed timbers of our outbuildings, where its moss is incongruous and gives away the secret it so carefully seeks It cannot by any sleightto guard. of-hand, or of beak, use moss on a mud nest so as to blend it with a porch or timber background. But in the niches of the mossy and lichen-covered overhanging rocks of the gorges and mountainsides, where its forebears practised the art of nest-building and where it still often sets up its "procreant cradle," what in the shape of a nest can be more pleasing and exquisite than its mosscovered structure? It is entirely fit. It is Nature's own handiwork, and thoroughly in the spirit of the shelving rocks.

The pewee uses no mud and no moss. It uses lichens and other wild, woodsy things, and its nest is one of the most trim and artistic of wild-bird structures; it is as finished and symmetrical as an acorn-cup. It is cup-shaped, and sits upon a horizontal branch of beech or maple as if it were a grown part of the tree-not one loose end or superfluous stroke about it.

Two other species of our fly-catchers, the king-bird and the great-crested flycatcher, differ in form and coloration as much as they do in life habits-the kingbird being rather showily clad in black, gray, and white, with a peculiar, affected, tip-wing flight, haunts the groves and orchards, while the great-crested flycatcher is rufous or copper-colored, with a tinge of saffron-yellow, and haunts the woods, building its nest in a cavity in a tree.

Nature repeats herself with variations in two of our sparrows—the song-sparrow and the vesper-sparrow, or grassfinch. The latter is a trifle the larger and of a lighter mottled gray-and-brown color, and has certain field habits, such as skulking or running in the grass and running along the highway in front of your team. It does not wear the little dark-brown breastpin that the songsparrow does, and it has two lateral white quills in its tail which are conspicuous when it flies. Its general color, and these white quills, suggest the skylark, and it was doubtless these features that led a male lark which once came to me from overseas, and which I liberated in a wide field near home, to pay court to the vesper and to press his suit day after day, to the obvious embarrassment of the sparrow.

The song-sparrow is better known than the vesper to all country people, because it lives nearer our dwellings. It is an asset of every country garden and lawn and near-by roadside, and it occasionally spends the winter in the Hudson River Valley when you have carelessly or thoughtfully left a harvest of weed seeds for it to subsist upon. It comes before the vesper in the spring, and its simple song on a bright March or April morning is one of the most welcome of all vernal sounds. In its manners it is more fussy and suspicious than the vesper, and it worries a great deal about its nest if one comes anywhere in its vicinity. It is one of the familiar, halfdomesticated birds that suggest home to us wherever we see it.

The song-sparrow is remarkable above any other bird I know for its repertoire of songs. Few of our birds have more than one song, except in those cases when a flight song is added during the mating season, as with the oven-bird, the purple finch, the goldfinch, the meadow-lark, and a few others. But every song-sparrow has at least five distinct songs that differ from one another as much as any five lyrics by the same poet differ. The bird from its perch on the bush or tree will repeat one song over and over, usually five or six times a minute, for two or three minutes, then it will change to another strain quite different in time and measure, and re-

peat it for a dozen or more times; then it drops into still another and yet another and another, each song standing out distinctly as a new combination and sequence of sparrow notes. And a still greater wonder is that no two songsparrows have the same repertoire. Each bird has its own individual songs, an endless and bewildering variety inside a general resemblance. The songsparrow you hear in Maine or Canada differs widely from the one you hear in the Hudson River Valley or on the Potomac. Even in the same neighborhood I have never yet heard two sparrows whose songs were exactly alike, whereas two robins or meadow-larks or bluebirds or wood-thrushes or vespersparrows or goldfinches or indigo-birds differ from one another in their songs as little as they do in their forms and manners, and from one end of the country to the other there is little or no variation.

During ten days by the sea one July I was greatly entertained by a songsparrow which had a favorite perch on the top of a small red cedar that stood in front of the cottage where I was staying. Four-fifths of the day at least it was perched upon this little cedar platform, going through its repertoire of song, over and over. Getting its living seemed entirely a secondary matter; the primary matter was the song. I estimated that it sang over two thousand times each day that I heard it. It had probably been singing at the same rate since May or earlier, and would probably keep it up till August or later. latter part of July and the whole of August of the same season I spent at Woodchuck Lodge in the Catskills, and across the road in front of the porch there, on the top of an old plum-tree, a song-sparrow sang throughout the greater part of each summer day, as did the one by the sea, going through its repertoire of five or six songs in happy iteration. It, too, sang about three hundred times an hour, and nearly always from the same perch, and, as most assuredly was the case with the seaside bird, singing within earshot of its brooding mate. But its songs bore only the most remote general resemblance to those of its seaside brother. When, early in August, the mowing-machine laid low the grass in the meadow on the edge of which the old plum-tree stood, the singer behaved as if some calamity had befallen it, as no doubt there had. It disappeared from its favorite perch, and I heard it no more except at long intervals below the hill in another field.

The vesper-sparrow has a wilder and more pleasing song than the songsparrow, but has no variety; so far as my ear can judge, it has only the one sweet, plaintive strain in which it indulges while perched upon a stone or boulder or bare knoll in a hill pasture or by a remote roadside. The charm of its song is greatly enhanced by the soft summer twilight in which it is so often uttered; it sounds the vespers of the fields. The vesper-sparrow is invariably a groundbuilder, placing its nest of dry grass in the open with rarely a weed or tuft of grass to mark its site. Hence its eggs or young often fall victims to the sharpeved, all-devouring crows, as they lead their clamorous broods about the summer pastures. The song-sparrow more frequently selects its nesting-place in a grassy or mossy bank by the roadside, or in the orchard, though it often leaves the ground to take to a low bush or tangle of vines on the lawn.

We have two other sparrows that are close akin—indeed, almost like fruit on the same tree, yet with clear-cut differences. I refer to the "chippie," or social sparrow, and the field, or, as I prefer to call it, the bush sparrow—two birds that come so near being duplicates of each other that in my boyhood I recognized only the one species—the chipping-sparrow, so much at home in the orchard and around the door-yard. Few country persons, I fancy, discriminate the two species. They are practically of the same size and same manners, but differ in color. The bushsparrow is more russet, has a russet beak and feet and legs, and its general appearance harmonizes more with country surroundings. The two species differ in about the same way that the towndweller differs from his rustic brother. But in the matter of song there is no comparison—the strain of the bushsparrow being one of the most tender and musical of all our sparrow songs,

while that of the "chippie," or the hairbird, as it is often called, is a shuffling repetition of a single unmusical note. The wild scenes and field solitudes are reflected in the bush-sparrow's song, while that of the "chippie's" is more suggestive of the sights and sounds near the haunts of men. The pure, plaintive, childlike strain of the bush-sparrow—a silver scroll of tender song—heard in the prophetic solitude of the remote fields on a soft April or May morning is to me one of the most touching and pleasing bits of bird music in the whole round year.

The swarms of small sparrows that one sees in August and September in the vineyards and along the bushy highways are made up mostly of bushsparrows. There is little doubt but that these birds at times peck and haggle the grapes, which "Chippie" never does. The bush-sparrow builds the more compact and substantial nest, using more dry grass and weedy growths, and less horse-hair. It is the abundant use of hair that has given "Chippie" the name of the hair-bird.

The hair-bird appears the more strikingly dressed of the two. Its black beak and legs, the darker lines on its plumage, the well-defined, brick-red patch on its head easily separate it to the careful observer from the other species. When you have learned quickly to discriminate these two kinds of sparrows, you have made a good beginning in conquering the bird kingdom.

The Garland of Memories

BY HESPER LE GALLIENNE

WOULD that I sat within some pleasant glade
Where I could hear the throstle tune his song,
Or watch the sunlight play in shadows long
Over the meadows, back into the shade.
Could learn to know that beauty cannot fade,
That once a song is sung the air still clings
About the spirit of the one who sings—
That nothing ever dies that once was made.

Then should I feel that life was not in vain,
Tho' sadly dark and seared its flowers had lain
In the deep dust about my weary feet;
And I should gather up each withered stem
To weave a garland—oddly bitter-sweet—
Then wear it—a symbolic diadem.