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S. T. Frost,

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Birds— their migrations and sojournings.

FROM

*Harpers New Monthly Magazine, Vol. XXXII,
January, 1866.*

BIRDS—THEIR MIGRATIONS AND SOJOURNINGS.

OBSERVING birds with reference to this subject, we shall find that they divide themselves naturally into four kinds:—*First*, Those which remain with us throughout the whole year; *Second*, Those which stay during summer only; *Third*, Those which remain during winter only; and, *Fourth*, Those which are but transient visitors, passing and repassing between their winter resorts farther south and their breeding-places farther north.

First to be mentioned are our proper resident birds, which bravely abide with us throughout the year, and enliven our seven months of sober earth, leafless trees, and cirrus cloud. These are the partridge, quail, blue-jay, woodpecker, hen-hawk, owl, and crow. They are among the wildest of our birds, the shyest of man although seeing him most. They make no regular migrations at certain seasons, but, unless disturbed, will live out their life close to their favorite haunts, realizing doubtless, in many instances, the fancy of Wordsworth in "Hart Leap Well."

An examination of their wings will readily show how unfitted are most of the species for extended flights. Those of the quail and partridge are very small—mere flippers—and their flying, which is a kind of flutter, serves admirably to launch the bird suddenly upon the wing and to bring it from the start into rapid motion; but it is very unlike the steady sweep of the "sail-broad vans" which sustain the wild-geese for so many hours in the high air. It is a common belief that the partridge can fly but a single breath at once; and it is a fact that he does not continue in the air longer than the loon and other divers remain under water, and that numbers will accumulate along the banks of narrow rivers, unwilling to trust themselves to cross. Xenophon informs us that the soldiers of Cyrus's expedition caught bustards in the open Arabian plain; "for they flew but a short distance like partridges, and soon tired;" and, under the circumstances, the assertion respecting either bird is not improbable.

These birds seem to be a kind of connecting link between those whose wings only assist their legs, and those whose wings entirely sustain them in the air; for they are swift runners, and both begin and end their short flight with a run. Fifty years ago the partridge, when started by the dog, merely flew up into the nearest tree like the wild turkey, and "treeing" was the technical term for the use of the pointer or setter. But from having been so much hunted and shot at his habits in this respect have changed. He now springs up suddenly and steers in all haste to some covert, making the woods resound with the whirring of his small but compact pinions. But when his flight is voluntary it is slower and without the noise. I was once watching a flock of pigeons when a large bird passed into the tree as quietly and silently as a bird of prey, but when shot it proved to be a partridge.

Woodpeckers are also poor flyers, reaching one tree from another by leaps through the air rather than by flying, much in the manner of flying squirrels, and using the tail as well as the wings. But they are splendid climbers, not merely hopping about among the branches like most birds; but running down the trunks head-foremost like cats. The blue-jay has much the same habit, and is by no means a famous flyer. The owl also, from the looseness of his plumage, flies silently, as his business requires, but yet heavily. The wing, to be best suited for long flights, must have both strength and compactness of plumage. That of the owl has the one, that of the partridge the other, whirring as it cuts the air; that of the wild-geese both. The remaining birds of the first class make some irregular migrations, as will appear.

Next are the well-known species, which pass the breeding season of five months in our latitude—that of the State of New York. Not following any of the classifications yet made, which are in a great degree artificial, we shall find that they present about forty varieties.

Of these the chip-sparrow, bobolink, lark, chewink, woodcock, plover, killdeer, tipup, whip-poor-will, night-hawk, and meadow-hawk build upon the ground. The red-wing, yellow-bird, wood-thrush, cat-bird, small blue crane, and sparrow build upon bushes. The barn, chimney, and eave swallows build where their name would indicate. The bank-swallow and kingfisher build in holes which they dig in the banks of streams. The phoebe has her nest under open buildings, the wren and martin in boxes made and provided for them; the woodpecker, bluebird, sparrow-hawk, pigeon-hawk, and wood-duck in holes and hollows of trees; and, finally, the robin, dove, oriole, humming-bird, crow, blackbird, king-bird, eagle-cuckoo, shrike, pigeon-crane, indigo-bird, red-bird, night-heron, osprey, and wax-wing upon the branches. To these must be added the cow-bunting or blackbird, which lays its eggs in other birds' nests and allows them to rear its young. It is a common notion that the cuckoo does the same; but I have found the American cuckoo sitting upon eggs like other birds, and confirmed the fact by repeated and careful observations. Of all the inland birds of New England and New York that is, indeed, a *rara avis* which is not included in the above. Even a great forest like the Adirondac gives no additions to this class, for they are birds of civilization, found only where there are groves, gardens, fruits, plowed fields, and buildings; in short, man and his works.

The third class is made up of a few species which breed to the northward, passing the winter with us only by way of southern sojourn. They are the snow-birds, some species of the owl, and perhaps some of the woodpeckers.

The fourth and last division consists of those which breed in Arctic regions and visit us only in the way of migration. The species are comparatively few, but the number of individuals is

immense. Some pass high over our heads, like the brant or common wild-geese, or even among the very clouds, like the loon and gull, alighting only in the great lakes; others, as the duck, working more slowly up and down our rivers and water-courses; or, like the snipe family, along the sea-coast; all having their homes in higher latitudes. In books and cabinets they are frequently jumbled together with our resident birds, as if belonging to the same region. Specimens, indeed, of almost every variety are seen and shot at, for they are all aquatic. But they are in no sense birds of our State or region any more than a Canadian is our fellow-citizen because, on his way to Newport, he may have been seen on our steamboats or killed on one of our railroads.

Birds belong only where they breed; they have homes only where they rear their young; and the gulls, geese, ducks, eider-ducks, and birds of that class not only do not now nest, but never have nested, in the latitude of New York. The accounts of persons who have been carried away captive by Indians of our early history into unbroken forests, and the legends of the Indians themselves, show that the habits of these birds were the same then as now. To reckon these transient visitors as summer birds is simply a contradiction of terms; for all birds breed in the summer, and where they breed they are residents, not visitors.

At the most northern point reached by Kane, in latitude 82° N., the rocks were crowded with sea-swallows, ducks, gulls, and geese, breeding as early as the last of June. Only such conditions of climate as these regions afford can feed the myriads whose nests crowd whole islands. For three months of delightful summer the sun is almost constantly shining, and on the savage Labrador coast may be termed "intensely" hot. Vegetation, which never knows drought, has been preserved fresh and green just as the warm snows of August and September found it, and needs not to spring up, but only to grow, at the first call of the steady spring. Stimulated to an almost unnatural development, it sends forth succulent stems and roots which, with adhering molluscs, serve the Arctic birds with food. Dr. Kane has given us a picture of lively life. He says:

"It was near the close of the breeding season. The nests were still occupied by the mother birds, but many of the young had burst the shell and were nestling under the wing, or taking their first lessons in the water-pools. Some, more advanced, were already in the ice-sheltered channels, greedily waiting for shell-fish and sea-urchins which the old bird busied herself in preparing for them. Near by was a low island or rock-ledge. The glaucous gulls—those cormorants of the Arctic seas—had made it their peculiar homestead. Their progeny full-fledged and voracious crowded the guano-whitened rocks, and the mothers, with long necks and gaping yellow bills, swooped above the peaceful shallows of the eiders, carrying off the young birds seemingly just as their wants required. The gull would gobble and swallow a young eider in less time than it takes me to describe the act. For a moment you would see the paddling feet of the poor little wretch protruding from the mouth; then came a distension of neck as it descended into the stomach; a few moments more and the young gulls were feeding on the ejected morsels."

In these regions the birds remain at their breeding-places about three months. Those of our locality average about five. Thus the Arctic birds are one month in making the distance down to us, and the same in going back. They arrive in time to go southward with our latest summer birds. To both the remainder of the year is one grand excursion to the tropics and return thence. The biennial journeys of the wild-geese would encompass the globe, and others of the migratories are capable of long flights; but if they find suitable stopping-places they prefer to accomplish the way by easy stages, keeping near the thermal line, just out of the shadow of winter.

When we see the triangles of wild-geese passing to the north in the spring, or even hear them at midnight in the air, we are not to suppose that they are making the vast distance to their breeding-places in one flight, for their Arctic resorts are by no means ready for their reception, being fast locked in ice for a month longer; and we have seen that they do in fact employ that time to make the journey. The flocks are passing at such times from Delaware or Chesapeake bay, or from Long Island Sound over a thickly settled country to the lakes of Northern New York, which flight would require from dusk till dawn—for the velocity of birds' flight is generally overstated. When our swiftest water-fowl are started from our rivers, even before a steamboat, when they would fly their fastest, they do not keep up with the express trains along the bank. A flock of birds coming upon you suddenly will frequently dive in passing, and in that downward flight will move for a distance very swiftly; but it may be asserted that no animal, bird, beast, or fish can move fairly forward faster than one mile in a minute. The ordinary flight of the swiftest birds is much slower than this.

The note of Arctic birds is usually accounted monotonous and harsh, but when on their long journeys it is heard from the upper air and thus mellowed by distance, it has a peculiar charm and interest. You hear the loon while he is out of sight, and the cry seems unearthly, lost, and painful; but witness how boldly and with what unvarying directness he strikes out his lofty sky-line, and it then sounds wild and exultant. The call of the wild-geese, especially when heard in their night-journeys, has an indescribable melody. I once knew an old hunter, whose ducking-gun had raked many a cove of the Hudson, who asked to be buried with his head to the river that he might "hear the wild-geese go up in the spring."

If we ask the causes for the coming and departure of our own summer birds, we are commonly referred to the seasons as a sufficient explanation. We are told that they will come with the warm weather and leave at the approach of winter, and yet if we note their appearance, the same species or even the same individuals for successive springs, we shall find that they are not so dependent upon the weather; and

their departure is evidently from no inability to endure without inconvenience a much greater degree of cold than they usually experience. They always leave warmer weather in the fall than they find in the spring. Individuals of species which leave early for the south will sometimes remain during the winter if by any means they may find food; some species of the same family remain while others go southward, and finally resident birds will sometimes make irregular migrations if they can obtain more abundant supplies.

Swallows and bobolinks, for instance, make their appearance in the upper valley of the Hudson about the last of April, and leave late in August. September—perhaps October—is milder than May, and we can not attribute their departure to the cold. And representatives of various species which leave early for the south, especially robins, may be found at any time during the winter under the dense cover of evergreens, where they grow on protected hill-sides, and the ground thickly laid with fallen tresses of white pine and hemlock, while the shingle-like boughs shut out the severest snows. I have known larks, which are among the very wildest of our summer birds, to remain all winter about barn-yards, when the cattle were not stalled as now, and the feeding ground was more extended. On one occasion, when we were improving a fine flax-day in February, an old lark with a heart upon the breast almost as perfect as that within, while scratching and burrowing in a heap of chaff, was pounced upon by a large hen-hawk; but the prey being somewhat obscured the aim was not fatal. A lively scuffle followed in the chaffheap, and for a time it seemed the old adage would be falsified; but the old lark was tough and vigorous, and finally slipped away, and then, mounting up as only a freed lark can, she struck off in a straight line, looking back over either shoulder alternately, giving an indignant and terrified “yirp,” “yirp,” with every successive jerk of her wings.

This hawk—the noblest bird of our woods now that forests and eagles are gone—does not leave at the approach of winter. You may see him on one of those clear still mornings which usually follow a snow-storm, perched on the horizontal limb of an oak, and, if you have no gun, you may come near enough to catch his expression as he turns his clear gray eye down upon you. I once shot one of them after a long snow-storm in mid-winter, when, being sorely pressed by hunger, he was feeding on a carcass placed as a bait for the crows. The other species, down to the little sparrow-hawk which builds in the hollows of trees, though having as much endurance as he, and a habitation somewhat suited to winter, all finding their prey among migratory birds, with them, now as in the time of Job, “stretch their wings toward the south.”

Some species of the hawk family migrate irregularly in flocks, or rather collections. I saw a remarkable instance of this last October. A

cluster of about sixty, so high that they appeared like swallows, were wheeling in graceful lines, and diving through and through among one another, but still all moving in one direction, toward the northwest. I have seen other instances when they passed over more directly and consecutively, but also at a great height. Other instances of much larger numbers have been mentioned, but such are not frequent. Old hunters used to regard them as “signs,” and tell of a vast host before the war of 1812. There is indeed something ominous in their silence and unusual manner, and we may remember that, from having seen six vultures, Romulus took heart and built a city. The whistle of the hawk when sailing in the upper air always comes down to us plainly, though from a great height, because of its clearness, but on these occasions they are always silent. Birds of the hawk family follow the migrations of birds on which they prey, and when they had appeared in these collections wild pigeons had been numerous in the adjacent woods. In the instance mentioned of last autumn pigeons had appeared in great numbers on the white oaks; attracted, not by the acorns, of which they are so fond, but by a species of caterpillar which sheared off every leaf, leaving whole forests as if passed over by a fire. But the caterpillars had disappeared, and with them the pigeons and the hawks were a hunting-party in pursuit.

The pigeon flies much more swiftly than the hawk, and is safe unless the latter comes unseen and gets fairly above, and even then, in open flying, it can easily get out of danger. But in such cases fear often fails to lend wings. I have seen a hawk get above a pigeon by coming suddenly upon him, and the poor bird, lowering gradually to avoid the clutch, was pressed to the very ground and caught, in a life-struggle of five hundred yards. A sparrow-hawk pouncing upon a flock of blackbirds may have his pick if his aim is sure; but if he miss the whole flock are in the air above him, and find it pastime to keep the vantage. So with the doves and their traditional enemy. The hawk can no more overtake his prey in fair flight than a lion can catch an antelope. Some of the falcons are swift flyers; but birds of prey in their flight are bold and silent rather than swift, and depend upon strategy more than speed.

The rearing of their young is the great mission of migratory birds in their summer home; and to this fact we must look for an explanation of the phenomena of migration and sojourn. This is the only use they make of our summer. They come and build when food for their young is ready, and leave when it is no longer suitable for that special purpose. That food consists almost entirely of worms and insects—the tender worms which feed on the juices of the early leaves. The putting forth of vegetable life is very rapid and the sole work of early spring. The long warm summer adds nothing to the length of the stem or to the number or size of the leaves. Its work is to mature. The

spring bough resists the wind by its softness and pliancy; the autumn branches by maturity and sturdy strength. And during the intermediate summer, while the sap is fluid or passing into pulp, the leaf is sucked by larvæ, for which it is at once birth-place, shelter, and sustenance. The juice is the food for the larvæ, which are the food for the birds in the season of the young. When this food fails the birds cease to breed, and they leave for the south when their summer mission is ended.

As we say of the birds, so of the insects; they migrate from the leaf when it no longer furnishes suitable food for their young. And, still further, in neither case is the cold the necessary cause. We are accustomed to say that the leaves are stripped by the cold; the truth is, they fall because they are ripe, and warm weather would remove them as effectually. All these things work together, but the cold is a concomitant rather than a cause. If the frost should come earlier, the leaves would only wither and cling to the boughs; if later, they would be already fallen through ripeness. The white oak seems to be growing here on its northern limit; certainly it is the last to put forth its leaves. "Plant corn when white-oak leaves are big as a squirrel's foot," was the Indian rule. The October frosts find them yet green and growing, and they consequently do not fall at once, but often only wither upon the branch, where they cling and flutter through all the winter gales, until the tender power of the spring bud pushes them away.

Worms and insects are the almost exclusive food of all birds during the breeding season. Even if any other were suitable it is not produced early enough for the purpose. All the fly-catchers, of course, limit themselves to these. You may watch swallows from May until September, and have them constantly in sight, and yet never find them alighting any more than the petrel, except at their nests, or perhaps in giving their young the first lessons from the ridge of the barn to the dead top of some old apple-tree. They never touch grain though the barn should be filled, nor seeds of any kind. They find their food in that myriad of flies whose buzzing fills the upper air every where, over wood and field and town, during the hot days of summer. These are out of sight, but you may hear them so plainly that, though you may be familiar with the sound, you sometimes think they must be a swarm of runaway bees. Toward evening, or at the approach of a storm, they descend nearer to the earth, and then the low flight of the swallow becomes a sign of rain.

But not the class of fly-catchers alone, but also birds which are graminivorous most of the year are examples of the same fact. The bobolink, the reed-bird of the Delaware, and the rice-bird of the low flats of the Mexican Gulf, feed their young and subsist themselves upon worms and insects during the breeding season, like the robin and the lark; and even the crow and hawk at that time are further instances.

There is, therefore, no excuse for the wanton destruction of birds, even if a man who would wantonly shoot a bird were conscientious about excuses. Those insects which pass the winter in a state of torpidity are revived very early; indeed, a very fine day in winter will give you the sight of buzzing flies and spiders as lively as in summer any where along the sunny slopes of mossy rocks. But insects are also hatched early. As soon as the twelfth of April I noticed a swarm of young mosquitoes of a large kind bursting their swaddling bands and rising from the surface of a pond, a southeast storm of wind and rain, and by no means a gentle one, prevailing at the time.

When the breeding season is over, and the young are grown, most species begin to assemble in flocks, and then become graminivorous. These flocks are, in most instances, young birds, the old ones having left earlier. That birds guide their young in their southward journeys is a pleasant fancy, and nothing more. Almost all our birds breed twice in a season, and the oldest children always receive early and sometimes rough instruction in the art of self-reliance, and the parents quietly leave the last brood, freeing themselves most expeditiously from family cares. You will find very few old red-breasts among September robins, and not even the faded summer plumage of an old bobolink among many flocks. It is a common belief that they change their color thus suddenly. The truth is, the flocks are all of young birds. Wild pigeons are said never to pick up the beach-nuts in the woods near their breeding-places, but to leave them for their young; and this desertion of other birds may be only the same kindness. Certain it is, they seek elsewhere the same kind of food which is ready here, and by which their young are sustained.

This assembling in flocks for the southern journey—for they generally come in the spring by pairs—marks a change in habits, place, and food. Those which have passed the summer in dense swamps and thickets now come into the open fields, and the shy acquaintances of your summer walks in remote, still woods, will now return your visits, and husk out our lettuce heads and steal flower seeds from your very door.

There are two mountain ash-trees under my window, and the fruit proved very attractive to a flock of wax-wings. An old gentleman, an invalid, who lived opposite, wished it to be preserved, for the red berries were pleasant to see, brightened by winter's sun and snow, and relieved eyes weary of the same prospect. So one morning, when the tree was as full of birds as berries, I raised the window and thrust out a double-barrel loaded with powder only—the little pilferers eying me meanwhile with good-natured impudence. When I fired they disappeared over the tree-tops in terrible fright and confusion; but having held a roll-call in a maple grove, and finding none missing, they at once returned and resumed breakfast with the

greatest zest and cheerfulness; and though I fired several times into the tree, and once so near that one was stunned by the wadding, they were always back again and ready for another shot. Of course not a berry was left on the tree or under it.

Birds do not remain long when thus assembling together. In fact, they are already on their journey, most of the flock being made up of those which have passed the summer a little farther north.

They move southward by short flights and delayed journeys, lingering perhaps for days about secluded grain fields, their numbers constantly increasing by fresh accessions. Sometimes these flocks, as those of the blackbird, become very large, numbering thousands, even at this point of their journey, and alight on sowed fields, scattering over a large space, every bird in eager motion, those in the rear constantly flying over the heads of those in front, moving in this manner that all may have an equal chance for insects and grain. The wild pigeons feed in this manner, hunting for beech-nuts in the woods, or snails on the barrens and flats, producing a steady roar that fills the forest. In the morning not a redbreast will be in the flock; in the afternoon it will be composed entirely of male birds. During migrations familiar species appear in much greater numbers, and also a few new or rare ones, which breed farther north, and are seen only at this time.

About the last of August you may observe the colonies of swallows much enlarged by arrivals of their northern cousins, the whole company evidently preparing for a journey without impedimenta, and as full of life and loquacity as a company of speculators inventing an oil city. Thus it will be in the morning, in the evening not a swallow can be seen. This disposition to aggregate, and also to change haunts, is seen also in our resident birds. The quail and partridge pass the winter in small flocks, and crows, which now, as in Homer's day, may be called "lone flyers," will desert some sections during the winter months and collect in other favorite localities in great numbers. They would be numerous in the valleys of the Passaic, Naugatuck, and Mohawk rivers during the summer, but in winter scarce one could be seen, while in the valley of the Hudson their numbers would be increased fourfold. The great number of these birds during winter is one peculiar feature of this valley, and whoever sketches a winter twilight along the Hudson must not leave out .

"The blackening trains o' crows to their repose."

Toward evening they begin to pass to their roosting-places, flying from one wooded hill-top to another in longstraggling lines, which are constantly filling up as they proceed. They roost in the pines which grow on the steep hill-sides of the western bank, and on the trees of low islands, difficult of access from their surroundings of deep mud and shallow water; and in the morning they will be returning in the same

manner, flying very high if the morning be quiet and cloudy, but scudding along under shelter of fenees and forests if the wind be high and cold. Every corn-field entices deserters until all are scattered over the wide country during the day. Sometimes along the Naugatuck, where a tall hill thrusts up its head into the region of pines, the crows would find a resting-place until late autumn, but when winter set in they always deserted the wind-swept peaks. But along the Hudson they found better picking in the finely-cultivated corn-fields of the eastern valley, and, what is probably more rare, secure roosting-places.

The crow makes no regular migration southward, but stays with us and takes the chances—sorry chances though they may appear to one looking over a winter landscape. It would seem a wonder that he should subsist; but the same problem is presented in the case of the wolf and vulture, and indeed, at times, of most of the birds and beasts of prey. They all suffer much from hunger, if a natural condition may be termed suffering, or if their necessary supplies were any thing more than a small part of what they would consume. "Half a pound of animal food daily" has been given as a necessary supply for the crow; but the weight of the bird is only about one pound, and the quantity given is an ordinary weekly supply during a season of scarcity. It is certain that he has "neither storehouse nor barn"—the Bible being more correct on this point than some modern authority. There is no food that he can lay up, and no place where he can store it. If on the earth the snow which covers the ground would cover his supplies, if any where about the trees something of the kind would be found, but no indications of such are ever discovered. Moreover he changes his residence, as we have seen, which would render such supplies useless. When the cold is extreme, and the whole surface, even the points of the hills, are covered with snow freshly fallen, and not yet blown away from any spot, the crow is often pinched with hunger, and shows that he too,

"For all his feathers, is a-cold."

At such times the sable fellows will resort to the barn-yard even; and they may be seen perched on the stakes about the stalk-stacks the very picture of shivering, expectant hunger, waiting for the morning foddering to be thrown to the cattle in the hope of a nubbin which the boys had overlooked in husking, or the but of an ear which their wrists were too weak to break. Farmers' boys sometimes kill two dozen with a single barrel, and nail them up conspicuously against the side of the barn, as an Indian would exhibit his scalps at the door of his wigwam.

The crow, like other carrion birds, has a strong beak but weak claws. He never seizes or carries any thing whatever with the latter, and never catches any thing more nimble than snakes or frogs, which he flays in the most bungling and unscientific manner, very unlike the skillful management of the hawk family. The hawk holds

his food down with his claws while eating, doubles his head under until the strength of the upper beak is brought to bear directly against that of the claws, the movement being upward and backward and striking in toward the body. Neither the claws nor the beak of the crow is capable of any thing of this kind. The disposition to store what is not wanted at the moment is observable in almost all birds and animals which have been trained. I once knew a tame raccoon which would thrust his paw into your pocket and pull out money which he would hide under the carpet, and yet he was by no means miserly or even provident, for he never laid by any thing for winter except his own person, which he used to roll up and deposit in the haymow. And a tamed crow will sooner carry away the bright piece of a broken dish than any thing it might contain.

It may be asked what does the crow find to eat if not his winter stores. We certainly can not undertake to provide half a pound of flesh or its equivalent, but we can mention many articles by which he is fed: carrion, offal, the pickings of barn-yards and highways, frozen apples which hang all winter upon seedling trees, the berries of bitter-sweet, basswood, and sumach, the seeds of grass, golden-rod, or seeds of any kind, chestnuts, frost-grapes, the eggs of insects in rough bark, all serve in times of want to make up his winter bill of fare.

Our resident birds, and others which perform their migrations by short flights, appear to observe but little order in the flock; but Arctic birds, in their long overland journeys, always preserve the form of an acute-angled triangle, or, according to the common saying, "like an old-fashioned harrow." Birds dislike to fly before a wind, as it then catches and ruffles their feathers, and this wedge-like form is best adapted to obviating the resistance of a head-wind. The leader only encounters the full force, every other bird being shielded by his predecessor, and also assisted by the forward motion of the air as a boat in the wake of others needs much less propelling power. The leader, however, does not retain his post during the whole passage, but becoming weary with greater labor allows the others to pass over and himself falls back in the rear, while the next assumes the leadership. "Utter confusion of the flock at the loss of the leader" is probably imaginary, for it will often resolve itself into divisions without confusion, each preserving its peculiar wedge-like form.

Nothing can be more marked or distinct than the differences among birds in their manner of flying, and not only can the various species be thus readily detected as far as they can be well seen, but also the destination and purpose of the flock, or of single birds, may be correctly guessed in the same way. Whenever they approach a wood or water, where they will alight, there is a peculiar change in the flying, in the shape of the flock, in the relative position of the individual birds, while yet a great way off and before the line of flight is yet altered. When the hawk is sailing in the air he is not on business, only

taking an airing, nor yet when perched on some staff in the dead top of a tall tree, looking for all the world like the standard of the Tenth Legion; but when "he hasteth to his prey" he skirts swiftly and silently below the level of the wood, or, sitting on the lower boughs, he watches like a guerrilla sharp-shooter, keen and dangerous. He never descends from great heights directly upon his prey; there is no stunning shock from the momentum of a descent; it is the converging clutch of those terrible talons, which contract and close with force as to a natural position when the bird is dead, which does the work. I have seen the hawk strike his prey many times, and the position in seizing was precisely that of alighting. The vulture will sometimes, it is said, shoot down from the summits of the Andes to the very brink of the sea, passing through the climate of three zones and the most abrupt barometrical changes in as many minutes; and the hawk and eagle sometimes glide down from inconsiderable heights, but not directly upon their prey. I have seen a flock of pigeons sit for an hour in a dry tree, engaged on their morning toilet, while a hawk was sailing over the woods at no great distance, each in full view of the other. The power of eyesight of birds thus on the look-out is truly wonderful. You may sometimes see a domestic turkey, when leading her young into the fields, with one eye turned upward to the sky, and uttering a low and continuous sound of warning. If you look sharply you will discover a hawk at a great height and distance, but it was detected by the parent bird the instant it entered her vast field of vision.

One hindrance to the communication of familiar knowledge on the subject of birds is the different names by which they are known in different places, and this is especially true of those intended to be descriptive. Observations of professed ornithologists have usually been made in the tropical latitudes, since there, in the winter season, all the birds may be found together except the resident birds of the temperate zones, which are comparatively few in number. The names they give us are often those of another region, where their habits during the winter are very different from those during the summer at their northern homes. Thus we should not readily discover in the bobolink of our meadows the rice-bunting of Audubon. In many instances one common name is as good as another, if there were only a common understanding. What we have called the partridge is sometimes known as the grouse, and again the pheasant; and then the name partridge is given to a smaller bird which in the Hudson valley is usually known as the quail. The former is about twice as large as the latter—is a bird of forests, the latter of fields and bushes; the former eats in winter the buds of trees, the latter finds his food on the ground, and seldom alights even in bushes, but always on the ground or on fences. The wax-wing, cedar-bird, and cherry-bird are different names for the same in-

dividual; so the boboliuk, rice-bird, and rice-bunting; the chewink, swamp-robin, swamp-thrush, and oven-bird; the yellow-bird and goldfinch; the robin and red-breasted thrush; the wood-thrush, brown-thrasher, and northern mocking-bird; the golden-winged woodpecker, and high-hole, the nuthatch, quank, and chickadee; the chip-bird, chip-sparrow, and ground-sparrow; the oriole, hanging-bird, and Baltimore oriole; the shrike, butcher-bird, tyrant-bird, and blue jay-hawk, and others.

Many of these names are given without suffi-

cient reason; in some instances they properly belong to different birds, but familiar names and familiar observation is better at this stage of our knowledge of Natural History than scientific classification. We must learn to distinguish objects in Natural History as we distinguish foreigners, neighbors, and friends, by their looks and ways, and new instances by comparison with the known. Among the birds, at least, there is not wanting to every variety some well-defined peculiarity in flight, nests, food, or voice.

IN MEMORY.

OLD Greece hath her Thermopylæ,
Brave Switzerland her Tell,
The Scot his Wallace-heart, and we
Heroic souls as well!

The graves of glorious Marathon
Are green above the dead;
And we have royal fields whereon
The trampled grass is red.

O not alone the hoary Past
Spilled precious princely blood!
O not alone its sons were cast
In knightly form and mood!
Perennial smells of sacrifice
Make sweet our sickened air;
And troth as leal as Sydney's lies
Around us every where.

Swords tried as that Excalibur
Which graced King Arthur's thigh—
What time our battle instincts stir,
Flash bare beneath the sky.
We feel the rowels of Honor prick
As keenly as did he,
Who sowed his savage epoch thick
With perfect chivalry.

Cœur-de-Leons on every field,
Sweet saints in every home,
Through whose dear helping stands revealed
The joy of martyrdom!
Compassed by whose assuring loves
Our comrades dared and died,
As blithely as a bridegroom moves
To meet his waiting bride.

Though tears be salt, and wormwood still
Is bitter to the taste,
God's heart is tender, and He will
Let no life fail nor waste.

O mothers of our Gracchi! when
You gave your jewels up,
A continent of hopeless men
Grew rich in boundless hope!

Renown stands mute beside the graves
With which the land is scarred;
Unheralded our splendid braves
Went forth unto the Lord:
No Poet hoards their humble names
In his immortal scrolls;
But not the less the darkness flames
With their clear-shining souls!

Beneath the outward havoc they
The inward Mercy saw;
High intuitions of Duty lay
Upon them strong as law;
Athwart the bloody horizon
They marked God's blazing sword,
And heard His dreadful thunders run
When but the cannon roared.

Shield-bearers of the Sovran Truth!
We count your costly deeds,
Devoutly as a maiden doth
Her consecrated beads.
You thrill us with the calms which flow
In Eucharistic wine;
And by your straight tall lives we know
That Life is still divine.

RECOLLECTIONS OF LORD PALMERSTON.

THE political deeds and misdeeds of the veteran statesman whose name heads this paper and his personal character were intimately associated. There may not at first sight seem much connection between the stalwart octogenarian, wrapped in an old morning-coat, stalking over his lands in the early gray of the morning—directing which trees shall be felled, what fences repaired, suggesting an improvement here, an alteration there—and the powerful Minister to whose words, only the day before, all Europe listened; but the two were inseparably allied. Lord Palmerston's personal habits influenced his statesmanship infinitely more than his statesmanship affected his personal habits. The vigor he derived from his healthy, athletic life he carried into his administration of public affairs; and much of the trust which the English nation reposed in their aged, self-willed Prime Minister was attributable to his hearty participation in all their sports, his identification with all their prejudices.

Palmerston, in fact, was a representative Englishman. Whatever his opinions were on a given subject, those opinions were pretty sure to be the opinions of the great bulk of the English nation. Whether he led the country, or, as is more reasonable to suppose, followed his instinctive notions of what the will of the people would be, this much is certain, that throughout

his long career—extending from the time of the “Son of St. Louis” and the First Napoleon down to the present day—whichever way he went the English nation went with him. It is hard to say whether his prodigious vitality was the cause of his mode of life or the effect of it. Perhaps a little of both. Up to within a very few months of his death he entered into every manly amusement with the zest of a youth of twenty. He watched the annual cricket-match between the public schools of Eton and Harrow with as much interest as if only yesterday he was a boy among the Harrovians. In the yearly Oxford and Cambridge University rowing-matches, the town in which his undergraduate days were passed could always claim him as the most devoted of its partisans.

On the race-course his beaming face and jaunty form were known and welcomed by every sporting man; and to have won the “blue ribbon of the turf” would have pleased the aged statesman better than half a dozen Parliamentary victories. He was very near doing it once with his horse “Mainstone,” but at the last moment the “crack” broke down (not without suspicion of foul play), and Palmerston was destined never to gain the wish of his heart. Though, like his great political opponent, Lord Derby—with whom in private life he was on the best of terms—he never betted upon his