Gibson, W. H.

Dnd cradles.

(1890)

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January 21, 1922.

VOL. VIII. N^o 1.

JULY 1890

PRICE 25 CENTS.

SCRIBNER'S MAGAZINE

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By W. Hamilton Gibson.

PUBLISHED MONTHLY
WITH ILLUSTRATIONS

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BIRD CRADLES

By W. Hamilton Gibson.

THAT is but a superficial student of ornithology who is content to know his birds by the mere specific characters of anatomy, plumage, and egg; who shoots his bird and names the dead body afterward, by the analytical key—a songless ornithology. Even though he shall name his specimens at a glance—Latin tag and all—he may yet have less *ornithology* in his soul than his unlettered country cousin—the old miller, perhaps, who will tell us that “the hang-bird has been there on such a morning, unravelling his bagging or stealing his tie string;” who will point out to us “the teeter-bird that picks the water-bugs from the wet stones for his long-legged fuzzy young ’uns;” or the “little brown chap with speckled breast that builds a nest jest like an oven, year after year, down yonder among the weeds below the mill, and calls ‘*queeche, queeche*’ every time I look out of the window.” Does he not *know* his birds, even though he might fail to identify their skins?

Even the amusing testimony of the savants of the French Academy who presented to Cuvier for identification a description of a certain “red fish that walked backward” is not without its distinct value. “Of course,” replied the naturalist instantly, “you mean a crab, though it is not a fish, neither is it red, nor does it walk backward.” The learned tyro would at least show his “fish” where he

found it in its native element, and though his vision appears to have been somewhat askew, his was a worthier aim and attitude than the other extreme of exact science which has to do merely with museum specimens, with a ready list of synonyms in place of an inspiring reminiscence, with wire and tow as a substitute for animation and song.

"A bird

Nest of the Redstart.

in the hand is worth two in the bush" is a pagan motto for the ornithologist. "The bird is not in its ounces and inches," says Emerson, "but in its relations to nature; and the skin or skeleton you show me is no more a heron than a heap of ashes into which his body has been reduced is Dante or Washington." The true ornithologist knows his bird in the bush before he converts it into a specimen; and to truly know his bird in its bush he must have been admitted to its *home*. Neither the color of the plumage nor the shape and decoration of its egg, while so essential in the scientific classification of the bird, are any index to its conscious being—the true bird. Bobolink doffs his white cap, not from desire or volition, but because he can't help it. These functions are fulfilled in spite of the bird and are beyond his control, while even the finer attributes of habits and song may be said to be scarcely less spontaneous and automatic.

Not so the nest—the home, the cradle. In these exquisite fabrics, materializations of the supreme aspirations in the life of the bird, we have at once a key to

its mind, an epitome of its loves, its hope, solicitude, providence, its individuality, its energy, caution, intelligence,

reason and economy, discrimination, taste, fancy, even its caprice and whim, almost of its humor.

In their arts we may learn something of their mental resources, even as the antiquary will find in the remnant decorated relics of an extinct people testimonies not disclosed by the mummy. To know the nidification and nest-life of a bird is to get the cream of its history. We may snap our fingers at vocabularies and synonyms.

Even an empty nest is still eloquent with interest. A few of them have been gathered about me as I write; and how beautiful they are! Here is one picked up at random. Not a rare specimen from the tropics, but an every-day affair of our country walks. What an interesting study of ways and means and confident skill! Hung by its edge from a horizontal fork of a maple twig, with a third of its circumference unsupported, it is yet so boldly wrought that this very span shall serve as the perch of the parent bird. Its edge is plainly compressed, though barely depressed, by evident continual use, and considering the nature of the materials at this portion its stability was perfectly insured. What nice discrimination in the choice of strands by which the nest is anchored to the swinging bough, its support being almost entirely dependent upon a cer-

tain brown silk from the cocoon spider (*Argiope Riparia*).

Often in my rambles have I pulled this floss from its round tough cocoon suspended among the weeds, and wondered whether the loom might not yet prove its utility! And here it is, adjusted with artful design just where its need is most apparent, and its strength recommends it, lapping and overlapping the forks and extending across the span from twig to twig where it is interwoven and twisted with strong strips of bark and long wisps from the stalk of the milkweed, or similar hempen substance. The economy of this spider silk is manifest in all the five nests of this kind which are before me, and while it appears occasionally lower down in the structure, these outcroppings prove to be only the ends of the loops which encompass the twig and are securely anchored among the interwoven meshes of the fabric. The reliance of the bird on the strength of this material would seem perfectly plain, for in the nests wherein it is largely employed, much fewer strands of bark are passed about the twigs than when the inferior white cobweb is used at this point of support—a fact which I have often noticed.

The cobweb element forms an important amalgam in the nests of all the vireos, of which the above will be recognized as a specimen. Laid on in snowy tufts, or artfully twisted into fine threads—I cannot believe this twisting to be accidental—meshed about the basket framework or drawn across some precious bit of hornet nest or glisten-

ing yellow birch-bark or newspaper clipping, or hung below in fluffy tassels, it is a recognized badge of this particular tribe of feathered architects, whose pendent nests are among the most picturesque of all our birds. The hereditary art of nidification of the vireos has probably suffered little change through the ages. As a rule their nests, unlike those of other pensile builders, are wrought from nature's own raw materials, and, even as we generally find them, might have been constructed a thousand miles from the haunts of man or a thousand years ago. And yet, in one particular respect, it must be admitted the nest often betrays the degenerating human contact. It is an admitted fact that many of the vireos manifest a strange fascination for the newspaper, fragments of which are often a conspicuous contamination in their motley fabrics, composed most commonly of generous strips of white and yellow birch, hornet's nest, dried leaves, grape-vine bark, asclepias hemp, bits of

Allen's Humming Bird at Home.

The Politician (the White-eyed Vireo).

wood and pith, and various other ingredients.

It was this well-known propensity of the bird that won it the name of "the Politician" from an ornithological friend of Wilson; an appellation especially given to the white-eyed vireo, although from my experience the others are equally deserving of the soft impeachment.

How often have I paused in the woods to study the strange ingredients of these vireos' nests, of which I have dissected at least a hundred, in many of which the newspaper had formed an element. And why is it that I am always led with such eager quest—yes, even at the risk of life and limb on one occasion—to scan these ragged, weather-beaten fragments of print, as though consulting the oracle! 'Tis true they usually disclose but little intrinsic reason for their conspicuous preferment, though I *do* remember one or two exceptional instances; once in my boyhood, when I enjoyed a great laugh at the disclosures of one such literary fragment, the precise nature of which has escaped me, save that it was an advertisement having a comical relation to the bird world. But my memory is distinct of having brought the editorial selection home in my pocket, where it was subsequently forgotten and reduced to pi among the jack-knives, buttons, jack-stones, and other usual concomitants of the small boy's outfit. The nest I well remember. It was suspended in a small thicket and variously sup-

ported by the bend of a bramble and stalks of hard-hack and meadow rue. I did not see the birds, as the nest was abandoned, and though not a typical vireo's nest, it was so conspicuously decked out with editorials and advertisements that, out of respect to Wilson, I was constrained to accept it as a bad case of "the Politician."

It has remained for the red-eyed vireo, however, to reward my curious pains for enlightenment as to the editorial discrimination of these

a matter in which the volition of the bird had no part whatever!

It has always been a favorite pastime with me, in my autumn walks, this dissecting of abandoned nests of all kinds,

A Bit of Lace.

nests, and considering the popular name which Wilson has bestowed upon the bird, "the Preacher," from its well-known habit of launching precepts by the hour from its tree-top pulpit—the text from my nest would certainly seem to reinforce his happy title. In this nest are about six pieces of newspaper, of various jagged shapes and sizes; but among them all the only complete sentence anywhere to be discovered in the print—and this appearing as though obviously treasured—is the following: "*Have in view the will of God.*"

And yet I suppose there are those who would affirm that this selection was

then disclosed to view in the denuded woods—this unravelling of the warp and woof of these nature-woven fabrics, extracting the secrets of the downy bed of warblers, analyzing the queer components in the hollow of a stump, picking apart the felted masses in deserted woodpeckers' dens, since plainly occupied by chickadee, creeper, blue-bird, nuthatch, or crested flycatcher, and disclosing by the aid of a magnifier a wide variety of curious textile elements. How endless and whimsical the choice of building materials for which nature has been laid in tribute by the bird, from the tree-top cradles of the orioles to the soft feather-

beds of the wrens, the curled-hair mattress of the chipping sparrow, the basket cribs of the starlings among the rushes, the mossy snuggeries of the oven bird, and the adobe of swallow, phoebe, and robin, with their various

preferences of pine-roots, bark, strings, feathers, hornet's nest, caterpillar hairs, wool, skeletonized leaves, cobwebs, spider-egg tufts, fur of various animals, pappus of seeds of all sorts—dandelion, thistle, cat-tail willow—gleaned from the thickets, the trees, the air, the barnyard, the stable, the poultry-yard, even from your vestibule door-mat or window-sill.

The individual preferences of a few of our more common birds afford a number of interesting facts. "When I want a horse-hair for my compass-sight," says Thoreau, "I must go to the stable; but the hair-bird, with her sharp eyes, goes to the road." The nest of the chipping sparrow is commonly lined with horse-hair, a

fact which has won the name of hair-bird to the species; although several others of the sparrows, notably the field sparrow and song sparrow, are equally partial to this particular carpet for their nursery. Burroughs recounts the bold incident of a sparrow

picking a hair from the body of a horse. Who ever sees a coon-hair in the woods? And yet here is the solitary vireo that gleans in the crafty trail of that animal, through fern and brier and hollow logs, and rarely fails to feather her nest with the soft fur. What is the secret of this

In the Track of the Coon.
(A Vireo searching for hairs for nest-lining.)

Two Visitors to the Caterpillar Nest.

peculiar preference? In the wilder regions of the country the hair of the deer is also said to be a common substitute or accompaniment. Certain observers claim that the red-eyed vireo has an occasional fancy for squirrel-hair, which is sometimes found in considerable quantities in its nest. I have found what I have assumed to be the abandoned nest of the solitary vireo, distinguished mainly from the others by the hairy lining and the employment of moss and lichen within the interior; one nest being plentifully lined with sheep wool from a neighboring pasture. The snow-bunting would be at a loss in its boreal nest without the fur of the arctic fox. Various of these cradle-building ingredients readily recommend their utility in the qualities of strength, pliability, warmth, etc., while others again are only to be accounted for on the hypothesis of the passing

whim or humor of the builder. Twigs, strips of tough bark, string, wiry roots, grass, spider silk, cocoons, vegetable strands of one kind and another, all appeal to our sense of the fitness of things, but what special advantage is indicated in the following instance of caprice? Here is the worm-eating warbler, for instance, whose nest is seldom free from dried hickory and chestnut catkins. The oven bird's hut is generally intermeshed with fruiting stems of urn moss, with their dried spore-caps. The Nashville warbler is partial to a mesh of pine needles and horse-hair; while the purple finch considers hog-bristles and horse-hair a more suitable compound. The Kentucky warbler, and various other warblers, show a preference for the pith of weeds. Perhaps the prairie warbler has discovered some rare virtue in cast-off caterpillar skins that ordinary humanity cannot guess. Its nest, I am told, usually showing a penchant toward this singular ingredient.

But this bird is not alone in this odd choice, of which others of the warblers and the vireos occasionally avail themselves. In addition to spider silk, and

cocoon silk, I have occasionally discovered evidences that the web-tent of the apple-tree caterpillar is occasionally raided for material, having identified numbers of the caterpillar skins among the web meshes of the vireos and redstart. The oriole visits the web-nest too, but on a different errand for her cradle. I once observed one of these birds mysteriously prying about one of these tents. It left me hardly time to guess its object, but quickly thrust its head through the silken walls and took its pick of the fattest caterpillars in the squirming interior, carrying them to

what it evidently considered as more appropriate surroundings in the hang-nest above. I once found a nest of the red-eye which exhibited a marked entomological preference, being composed largely of the hairy cocoons of the small

The Haunt and Home of the Redwing.

tussock moth, and conspicuously decorated with a hundred or more of the black skins of the antiopa caterpillar, of all ages. What a singular waste of energy one would naturally think was here revealed in the search for a material which at best must be a rare ingredient in the wild gleanings. But the inference does injustice to the bird's intelligence. Assuming that there is an advantage in the material, and granting the bird even a school-boy's knowledge of the habits of a conspicuous insect, few substances could be acquired at a less expense of time than these withered skins; for the caterpillars of the antiopa live in swarms of hundreds, sometimes of thousands, in the elms and swamp willows, and leave their black, spiny, cast-off skins—of all their five periodic moults—attached to the denuded branches upon which the larvæ have fed.

In another amusing specimen I found a large piece of hornet's nest, four inches broad, arranged

as a pendant, and dangling from this a string of brilliants that glittered like emeralds, and which proved to be three dead bluebottle flies entangled in spider silk. Whether or not the bird had appreciated the especial attractions of some particular remnant of cob-web thus enriched, or had deliberately adjusted the flies by way of ornament, I could not

A Specialist in Snake-skins (the Crested Flycatcher).

determine. But it is undeniable that a similar decorative sense is frequently displayed in their nests, certain rare treasures being held in reserve for finishing touches of adornment, even as I once actually witnessed the careful adjustment of a bright green iridescent feather of a peacock beneath a pendent nest in a rose-bush just outside the closed blinds of my room. What twitterings of congratulation, mutual suggestion, and experimental touches are the dainty prize found its final setting!

In the same bush I discovered, later, a small, narrow wisp of lace, abandoned to the antagonism of the thorns, though not without obvious evidences of struggle and disappointment—fresh commentary on a well-known text in proverbial philosophy.

There is obvious wisdom in the use of cocoons and hornets' nests, so much sought after by pensile builders—compact, tough fabrics in themselves, they are naturally chosen for their strength. But it is not easy to explain, on any grounds of utility, the uncanny discrimination of the great crested flycatcher, whose nest in the hollow tree would seem to demand no thought for other qualities than softness and warmth. Once, in my boyhood, while investigating the fascinating hollow in an old willow-tree, where I had once surprised a

day-dozing owl, I found the familiar matted felt at the bottom largely inter-mixed with fragments of snake-skin. Knowing the habits of snakes in the casting of their skins, having once or twice found them in the grass, I fell to wondering whether it could be a common practice of the black snake or "racer," to climb a tree for the purpose of exuviation. Later on the mystery was solved, having learned in my ornithology that the great crested flycatcher considered the snake-skin the *ne plus ultra* of nest-linings. The nidification of this bird usually takes place in the deserted retreat of the woodpecker, and is seldom without its complement of one or more snake-skins, which are frequently interwoven in a bed of hog-bristles and feathers, rather indicating a peculiar fancy for *exuviae*.

But here, again, who knows but what some stray vireo's nest—those catch-alls, samplers of nature's nest-textiles—may not have given the flycatcher the hint.

I have a vireo's nest in my possession which is largely composed of snake-skins, and they are frequently thus found.

The purple finch, according to some authorities, is addicted to a similar whim occasionally. Of course, either of these exceptional cases may represent nothing more than a successful raid on some abandoned nest of the flycatcher.

The toad is said to habitually swallow its cast-off skin, in which case the red-eye must have once surprised him in the gastronomic act, for in one of my analyses of these nests, I discovered an unmistakable fragment of one of these skins, tipped with its tiny pellucid glove.

The winged seeds of plants are a staple article in the harvest for the nests. The great order of

Compositæ feathers the cradles of thousands of our birds, enveloping their egg-treasures or fledglings in a bed as soft as swan's down; the plummy seeds of thistle, milk weed, dandelion, and lettuce being probably the most favored.

Nuttall gives us a pretty picture of the home-building whims of the yellow warbler—a prize for the cabinet truly!

"The nest is extremely neat

The Dandelion Mystery Solved.
(A Redstart nest-building.)

and durable; the exterior is formed of layers of silkweed lint, glutinously though slightly attached to the supporting twig, mixed with some slender strips of fine bark and pine leaves and thickly bedded with the down of willows, the Nankeen wool of the Virginia cotton grass (*Eriophorum Virginicum*), the down of fine stalks, the hair of the downy seeds of the buttonwood (*Platanus*), or the pappus of compound flowers, and then lined either with fine bent grass (*Agrostis*) or down and horse-hair, and, rarely, with a few accidental feathers," presenting a fanciful bit of bird architecture as well as a keen piece of analysis, in which the erudite botanist is as conspicuous as the ornithologist.

One other "yellow bird," the goldfinch, builds a similarly exquisite home, but reserves its nesting till a much later season than most of our birds, a fact which has caused no little discussion among naturalists; the commonly accepted, though hardly satisfactory, theory having reference to a scarcity of the required seed-food for the young during the vernal months. In a similar vein of reasoning it might be claimed that the nesting was deferred to await the ripening of certain favorite plummy seeds of which the structure is usually composed. One theory is as good as the other, for both are somewhat shattered by numerous instances of nidification as early as the middle of May, in which the nest is of course composed of seasonable downy elements; for the willows and poplars then offer their silken tribute, and the dandelion balls cloud the meadows.

For some years I was puzzled to account for a certain mutilation which I had often observed on the dandelion. As is well known to some of my readers, the dandelion usually blooms three consecutive days; after which the calyx

A Good Place for a Wren's Nest.

finally closes about the withered flower, and withdraws beneath the leaves. Here it remains for a week or more, its stem gradually lengthening while the seeds are maturing, until, on the fourteenth day from the date of first flowering, the smoky ball expands. For some days prior to this fulfilment the seeds are practically full feathered, the growing pappus having forced the withered petals from the tip of the calyx. On several occasions I have observed the side of their calyxes torn asunder and the interior completely emptied of its contents of a hundred or more winged seeds. I had attributed the theft to some whimsical caterpillar appetite, until one day I surprised the true burglar in the act. I observed a small black bird rummaging suspiciously in the grass,

and suddenly saw him fly to a branch near by with a tiny puff in his bill—a downy tuft on one side and a bundle of seeds on the other—the spot from which he flew disclosing one of the tell-tale rifled calyxes of the dandelion. The bird, not immediately identified, soon

start. I subsequently discovered the nest in a low-hanging fork of an apple-tree, and a dainty structure it was, exquisitely adorned with gray moss and skeleton leaves and in this case showing an unusual preference for dandelion seeds, with which its soft bulk was well

felted. Inasmuch as there were thousands of the dandelion bulbs opening every sunny day this feat of forage was not one of anticipation of a natural harvest; rather a question of economy of labor—a whole dandelion ball at one compact pinch. Wilson gives the nest material of the yellow warbler as

“silk-weed floss and willow cotton,” which present a singular incongruity as to chronology, the willow cotton being a buoyant feature of the May breeze, while the asclepias does not take wing until late August and September, the silky seeds of the previous year being then of course obliterated. Is it possible that the warbler, like the redstart, may anticipate the bursting pod by an occasional burglary, assisted perhaps by those hairy caterpillars which so often lay bare the interior? How else the bird could procure the material is a mystery.

The “cat-tail” is an inexhaustible store of down for the later nest-builders. Packed with incredible compactness in its cylindrical equilibrium, when once ruptured—the keystone among the feathered seeds once removed as it were—what a revelation! The magician’s inexhaustible hat is not a circumstance to it. Rolling out in fluffy masses, a very effervescence of down, which seems to multiply to infinity even after launching in the air. Unless my estimate of bird-wisdom is much overwrought, it finds its way into many a warm nest.

But it is not alone to the soft seeds

Ruby Throat Humming Bird, Blue-gray Gnatcatcher, and Black-and-white Warbler.

spread its name abroad in the rosy gleam from its fan-shaped tail—the red-

of plants that the nests are indebted for their downy lining. Here is another picture of a dainty home, and one that may be verified in the woods if our eyes are only sharp enough. If the nest of the yellow warbler is a *chef d'œuvre* what shall be said of this, the work of the small blue-gray gnatcatcher, one of the most refined art-treasures among our native nests? It is usually hung among the twigs of a tree, somewhat like that of a vireo, though sometimes placed on a branch. The body of the nest is closely felted together with the softest materials of the forest bird scales, dried blossoms, vegetable downs, and the delicate cottony substance which envelopes the unfolding fronds of fern, with flexible skeletons of leaves as an external framework. The rim of the nest is generally contracted. But the most marked feature of the structure is its ornamentation; the whole exterior being closely thatched with small, brightly-colored, greenish-gray lichen.

The woolly, unrolling fronds of many of our ferns are a familiar feature of the spring woods, and offer at this season, and later, from the mature stems, a tempting crop to a number of our more diminutive birds, including the various warblers, the black and white creeper, and humming-bird, etc.

This exquisitely soft, buff-colored material, for convenience called "fern-cotton," however, is not all from the ferns. A close analysis with the magnifier discloses a diversity of elements. Some of it has been sheared from the mullein. The woolly bloom from young linden leaves and buds of white and red oak have already been identified in the substance, the stems of everlasting have furnished a generous share, and there are doubtless elements from a hundred other sources best known to the birds. Some of it, too, has already served in the winter snuggery of the horse-chestnut bud beneath the varnished scales.

I once observed a tiny bird, presumably a kinglet, gleaning among the opening leaves, now webbed and festooned with the liberated soft yellow down, that most beautiful of all the spring's revelations of bursting buds, so aptly figured by Lowell in the provincial tongue of Hosea Biglow:

"The gray hoss-chestnut's leetle hands unfold
Softer'n a baby's be at three days old."

How irresistibly does this recall that companion couplet in the "Pastoral line" from the same memorable paragraph, so true to the spirit of the vernal season:

"In ellum shrouds the flashin' hang-bird
clings
An' for the summer vy'ge his hammock
slings."

For the skilful nests of the vireos have yet their matchless pattern in the work of that prince of weavers, the "hang-bird," or Baltimore oriole, whose swinging, pendulous nest is a masterpiece, not only of textile art, but equally of constructive skill, whether from an engineering or architectural point of view. What sagacious perception of means and intelligent discrimination in their employment are here disclosed! The trite maxim that "the strength of a chain is only that of its weakest link" would seem, on a superficial glance at the nest, to be entirely ignored by the oriole, the attachment of the nest often seeming to exhibit a daring dearth of material and in singular contrast to the elaborate density of the weaving below. A closer examination, however, shows a most sagacious compensation in the economy of this apparently weak portion, for here it will be found in almost every instance the toughest fibre in the entire nest has been concentrated, in most cases that have come under my observation; and in three specimens now before me, consisting of remnants of strings, fish-line, strips of cloth securely twisted and looped around the forked or drooping twigs, the loose ends below being intricately interwoven among the gray hempen fibres of which the body of the nest is composed, the whole structure being literally sewed through and through with long horse-hairs.

Remembering Wilson's investigations into the similarly compact nest-fabric of the orchard oriole, from which he disentangled a strand of grass only thirteen inches long, but which in that distance was thirty-four times hooked through and returned in the meshes, the relation of which fact led an old lady acquaint-

ance of his to ask whether "it would not be possible to teach the birds to darn stockings," I was led to test the darning skill of the hang-bird which uses the horse-hair in true regulation style. With much labor I succeeded in following a single hair through fourteen passes from outside to interior in the length of about ten inches, which I was then quite willing to assume as an average as to the total, which would doubtless have reached at least thirty stitches. When this is multiplied by the hundreds of similar sinews with which the body of the nest is compacted some idea may be formed of its strength.

Two types of the nest, both beautiful specimens, are now before me. One, a true example of the "hang-nest," being suspended from the tips of the long, drooping branches of an elm, while the other, more ample, is hung from a horizontal fork of a maple. It is larger at the mouth than the first, but like it is suspended from stout strings, twisted round and round the twigs and spanning the fork. For a long period the nature of this peculiar gray hempen fibre which forms the bulk of the oriole's nest was a puzzle. And even now that the tough material has been identified principally as the dried strips of the stalks of common milkweed, which Nuttall observed the bird to tear from the plants "and hackle into flax," I am not aware that the hint of the oriole, as to its evident utility as a textile for the spinning-wheel or loom, has ever been respected. A strip of this tough dried bark, even when drawn firmly across the finger-nail, separates into the finest of flax, almost reminiscent of the milkweed seed-floss in its white glossy sheen.

The oriole's nests are not all made in the same mould nor of the same material, but generally reflect the resources of the locality in which they are built. There are numerous instances of anomalous nests, in which the eager quest of the bird has been artfully humored by the housewife, or the ornithological curio hunter, resulting in works of questionable art sophisticated with all manner of contaminations—rags and ribbons, tape and lampwick, or perhaps patriotic pendants flying the national colors of red, white, and blue, in particolored

zones and strips of red flannel. In contrast to these I cannot but revert with relief to that beautiful fancy which Chadwick has woven into one of these beautiful nests, and in which the intertwined golden and silvery locks of childhood and old age tell a pathetic story.

In one case at least the hint of the oriole would appear to have been appreciated, his nest having first introduced to the public the utility of the black flexible compound which is so common an ingredient toward the centre of our costly "curled-hair" mattresses.

During a recent Southern trip I noted one or two of these pendulous mattresses of the oriole, their black color giving little hint to the observer of the gray Southern moss of which they are really constructed. In the Long Island Historical Rooms there is a specimen of one of these Southern nests, fully eighteen inches long, composed entirely of this glossy black fibre—a veritable piece of hair-cloth to all appearances, no single thread, I believe, showing its familiar gray complexion, the entire material having been presumably abstracted from the drying-poles of the "moss gatherers," beneath whose arts the Southern moss is converted into "genuine curled hair" by the rotting and subsequent removal of the gray covering, leaving only the black shiny core, which is duly shipped and subsequently sold and "warranted" at fifty cents a pound.

In strong contrast to the foregoing products of warp and woof is the humbler art of the plastic builders—the adobe-dwellers among our birds. Of such are the robin—true child of the sod, with its domicile of mud and coarse grass—and the thrushes generally, the phoebe, pewee, and the swallows. Solid and substantial fair-weather structures, they are yet far inferior in the scale of architectural intelligence; for while in the textile nests even a drenching rain serves but to amalgamate the mass, the mud-builders are often at the mercy of the storm; a possible fate which is not always anticipated in the selection of a building site. In the case of the swallow beneath the eaves, and the phoebe under the bridge, the home is safe, but the robin occasionally pays a heavy penalty for the daring exposure of its

nest, the fair structure of the sunshine literally melting away in the rain. During the past wet season two such mishaps occurred upon my lawn, the nests having disentangled and fallen in a shapeless mass, scattering the egg contents upon the ground.

Recently I chanced upon another reckless nest, that of the yellow-billed cuckoo, or rain-crow, in the top of an apple-tree, if, indeed, the loose pile of sticks could be dignified by the name of nest at all, being more suggestive of a gridiron, through which the outlines of the head and the long projecting tail of the bird were distinctly perceptible against the sky. As I climbed the tree the bird flew to the neighboring branches, uttering an occasional hoarse croak in its familiar tone, obedient as it were, to a periodic pumping stroke of the long tail. I found the nest occupied by a single fledgling, and was moved to congratulate the remnant for having managed to reach his pin-feather days without tumbling out of bed, which I fancied must have been the fate of his presumably former bed-fellows, for the edge of the open pile of sticks was lower than the centre whereon he rested.

Examples of this sort of nest-building are happily not common, and in the case of this bird, a near congener to the European cuckoo, though entirely without its parasitic habits, it would seem to have a somewhat parallel sin of shiftlessness. In all the four nests of this bird which I have found, this contributory negligence toward the destruction of its offspring has been manifest. My fancy has sometimes suggested the query whether this may not be an example of the process of evolution from a lower parasitical to a higher state, the dawning intelligence in the art of nest-building.

The turtle-dove is accused of a like carelessness in the construction of its nest. The night-hawk and the whip-poor-will, though building no nest at all, are more considerate of their babes, at least assuring them against the fate of the cuckoo's brood by nesting on the ground.

Last summer I was favored with a rare neighbor in the shape of a red-headed woodpecker, not a common

visitant in Connecticut, at least in the section familiar to me. Remembering that this was the bird whose flashing plumage and flaming scarlet head kindled the ornithological fervor of Wilson, which led to his subsequent fame, my visitor came doubly recommended. The nest was excavated on the under side of a large branch of an apple-tree near the house; and even though naturally safe from observation, the bird seemed little desirous of concealment, pirouetting about the elm trunk close by the window and speeding like a rocket directly to its nest.

At first thought the peculiar conditions of the woodpecker's nest would appear to offer advantages of safety above those of other birds, as in truth it does, being at least secure against the hawks and owls and foxes. Yet it is by no means invulnerable. The black snake has a well-known fancy for young woodpeckers, and has often been surprised within the burrow, to the horror of the small boy oölogist, perhaps, who is thinking only of the rare white eggs as he feels the depths of the hollow. The birds are also an easy prey to the murderous red squirrel, one of the arch enemies of our nesting birds. Last year two of my woodpecker fledglings fell his victims, and only a few weeks since a whole family of flickers, which built in a large neighboring maple, were well-nigh exterminated by the same brigand. Two fully pinioned fledglings were found dead on the ground beneath the hole, each with an ugly gash at the throat, and one of which the squirrel was observed dragging by the head, while endeavoring to ascend the trunk—treating birds like pine-cones—dropping his cone first to enjoy it at his leisure. But one survivor of the brood was seen later, and this doubtless followed the fate of the others. The woodpeckers, in addition to serving their own ends, are also pioneers for a number of smaller fry among the birds, the deserted tunnels being in great demand for apartments, and often a prize won only by supreme strategy or victory among the bluebirds, nut hatches, creepers, wrens, and chickadees, though the last has been known to excavate its own domicile. Indeed, to the wren a hole of any kind possesses great

attraction, it "will build in anything that has an accessible cavity, from an old boot to a bombshell," says Burroughs. But whether a palatial tin box, a post-hole, a tin oil-can, auger-hole, pump-spout, pocket of an old coat, wheel-hub, or tomato-can, the interior is always brought to the same level of luxury in its copious feather-bed.

I remember once, in the days of my early ornithological fervor, discovering a wren's nest in a shallow knot-hole of an old apple-tree. The bird scolded and sputtered at the entrance like a typical setting hen, and even suffered herself to be poked from the hole; and if there be those who think that birds cannot swear, they should have witnessed the subsequent vocal exercises. The feather-bed disclosed twelve pinkish eggs by actual count, for I remember in humiliation my scandalous pride at having "eleven duplicates for trade."

There are a number of especially well-known favorites among the nests which should be mentioned, either one of which is a sufficient quest for a summer's walk.

There is the grass hammock of the indigo bird, so artfully swung between two or three upright branches of weed; the skilfully woven basket of the red-wing blackbird in the bog, either meshed within its tussock, twisted into the button-bush, or suspended among the reeds. Then there are the quaint covered nests of the oven bird at the edge of the brook, the bee-hive of the marsh-wren among the sedges, or the Maryland yellow-throat in the swamp, and the rare snuggeries of the golden-crested wren and blue, yellow-backed warbler—the former a tiny hermitage, built on the branch of an evergreen, composed of moss and lichen, with only a small hole left for entrance, and the interior lined with down; the latter a dainty den, constructed, according to Samuels, of the "long gray Spanish moss (lichen?) so plentiful in the States of Maine, New Hampshire, and Vermont. The long hairs of the moss are woven and twined together in a large mass, on one side of which is the entrance to the nest—a mere hole in the moss. The lining is nothing but the same material, only of finer quality." I have seen but two specimens of this

nest—one composed entirely of the long gray lichen which beards the patriarchal trees of our Northern forests and the other of a shorter species found on fences and rocks.

The nest of the blue-winged yellow warbler is really worth a search. Few of our ornithologists have found it. According to Wilson, it is usually placed in a bunch or tussock of long grass, and is in the form of an inverted cone or funnel, the bottom thickly bedded with dry beech-leaves, the sides formed of the dry bark of strong weeds, lined with fine dry grass. These materials are not placed in the usual manner, circularly, but shelving downward on all sides from the top, the mouth being wide, the bottom very narrow and filled with leaves.

Nor must I forget to mention that curious and anomalous three-, four-, and once I believe five-storied nest which occasionally rewards the search of the persevering oölogist—a true piece of architectural art, each compartment perhaps with its single repudiated speckled egg—a monument as it were to the intelligence and indefatigable pluck of the yellow warbler in overtopping the wit of the parasitic cow-bird, each story of the curious domicile being erected over the insinuated portentous egg, and sufficiently separated therefrom to insure against its incubation, when the bird shall at last have exhausted her adversary's resources and nestled in peace on the summit of her lofty pile, an apt, if facetious embodiment of "Patience on a monument."

We have already alluded in superlative terms to the nest of the blue-gray gnatcatcher, but even that artistic production must yield to its easy rival and model of the humming-bird, in truth the prize among all our nests. Well does the ruby-throat deserve the golden medal which he wears upon his breast. From picture or cabinet specimens this beautiful mimetic structure saddled on its branch is familiar to most of my readers, few of whom, I am sure, will ever have disclosed it in its haunts, even though the eye may have rested on it a dozen times. The construction of this nest, barely an inch and a half in diameter, is well described by Wilson: "The outward coat is formed of small

pieces of bluish-gray lichen, that vegetates on old trees and fences, thickly glued on with the saliva of the bird, giving firmness and consistency to the whole as well as keeping out moisture. Within this are thick matted layers of the fine wings of certain flying seeds, closely laid together; and lastly the downy substance from the great mullein and from the stalks of fern lines the whole. The base of the nest is continued around the branch, to which it closely adheres; and when viewed from below appears a mere mossy knot or accidental protuberance."

I have found but two in my lifetime, but am confident that a systematic search among the orchards in the glittering trail of the bird as he leaves the trumpet blossoms, would reveal one or two more. For there is a strange inconsistency in the bird, which, in spite of its secretive art work, does not hesitate to reveal it by her tell-tale actions, hovering about an intruder's head like a sphinx moth in the twilight, and, far from decoying one's attention away from her treasure, like other birds, deliberately settling herself thereon in preference to alighting elsewhere—a conscious jewel that would seem to know its most appropriate setting.

The United States is favored with but a dozen species of the humming-bird, only one of which is found east of the plains. But what glints and gleams and scintillations and spangles among the flowery tropics! where the hundreds of species of these sun-gems sport among their suggestive legion of companion orchids, each feathery atom with its

especial whim of nest, here suspended among waving grasses, there hung upon a tendril or poised upon a leaf, or perhaps glued flat upon its swinging, drooping tip. But there is a choice even among diamonds, and it may be doubted whether even the famed tropics afford a more unique example of artistic refinement than this of our native Western humming-bird, described by Dr. Brewer, a species only recently discovered by Mr. Allen, whose name it bears.

"This nest is of a delicate cup-shape, and is made of the most slender branches of the hypnum mosses, each stem bound to the other and all firmly tied into one compact and perfect whole, by interweavings of silky webs of spiders. Within it is finely and softly lined with silky vegetable down. Even in the drawer of a cabinet, without its long natural framework, it is a perfect little gem in beauty. What, then, must it have been in its original position, with the graceful, waving leaf of the maiden-hair fern for its appropriate and natural setting. It was fastened to the fern not two feet above the ground, and to this frail support it was secured by threads of spider-webs so slender as to be hardly visible."

We know not what other nest-treasures yet await us in the woods. There are many rare finds yet in store for the ornithologist in the long list of bird-species, well known by their skins, and even by their songs, but whose nidification is wrapped in mystery—dozens of the warblers, sparrows, flycatchers, and vireos, and others yet awaiting their true historian.

THE RIGHTS OF THE CITIZEN.

IV.—TO HIS OWN REPUTATION.

By E. L. Godkin.

THE first condition of all permanent associations of men, however primitive, is that each member should, in a greater or less degree, enjoy the confidence and good opinion of his fellows. No social organization, however rudimentary, could hold together for any great length of time unless the majority of those composing it were satisfied that they had in common certain ideas about the things which most concerned the safety and welfare of the community. This common stock of ideas need not be, and, as a general rule, has not been, what civilized men call morality. Civilized notions of right and wrong may have but little, if any, place in it. But it always imposes certain obligations in the matter of fidelity to custom, and of mutual help and succor in times of danger, necessity, and tribulation, the non-fulfilment of which calls forth some sort of social penalty. In all pursuits of tribal life, whether the particular undertaking be war, or hunting, or marauding, or merrymaking, or marrying, the savage is expected to behave in the manner prescribed by the customs and traditions of the community, so that his fellows may depend on him. No man in the tribe can keep his social place unless the other members are able to foresee how he will act under any given set of circumstances. This is the necessary basis of all gregarious existence, even that of animals. Buffaloes or wild horses could not live in herds, or wolves hunt in packs, or wild geese fly in flocks, without some sort of general understanding or agreement as to gregarious conduct, violation of which would entail death, or expulsion, or desertion.

Darwin and Spencer think that out of this gregarious sympathy and co-operation grew civilized morality, as a neces-

sary result of the working of the social instinct. Whether this view, or the opposing one that morals are the creation of the Divine will, be the correct one, makes little difference for my present purpose. What is certain is that the need of mutual help, on which gregarious existence depends, created the very first form of individual property, the earliest of individual belongings, in the shape of social repute. No matter how far we go back in the earlier forms of society, even in those in which individual ownership of material things can hardly be said to exist, in which lands are held for the common tribal benefit, and even game is turned into the common tribal stock, we find that there is always one thing which is each man's *peculium*, which, though of no use to anyone else, is to him the most valuable thing on earth, namely, the estimation in which he is held by the other men of the tribe with regard to the principal social virtue.

I say "the principal social virtue," because every community, civilized or uncivilized, arranges social virtues on a scale of its own. At the top of the list it places the virtue which it considers most important to its own existence and prosperity. In barbarous or military communities physical courage naturally occupies this place. The highest honors are reserved for the successful fighting man, and the deepest scorn heaped on the man who shrinks from fighting. Courage was, in truth, the only foundation for respectability all over Europe in the Middle Ages, except in the commercial Republics, where it was supplemented, if not supplanted, by financial probity. To-day it has sunk into a very secondary position in all commercial communities, and has been almost lost sight of in others, as is shown by the disappearance of the duel. In the former, in order to be respected by his neighbors, a man must, as a gen-

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