were unheard of. The old Bowersock opera house yielded theatrical diversion, and while most student patronage went

The Graduate Magazine

to the gallery, some percolated into the parquet.

In closing this rambling story of life around Mount Oread twenty-five years ago, let me express a hope that I trust is shared by all alumni of the University. That is that some method may be found whereby the faithful, old-time guides of the students may be pensioned, retired with an honorarium, or in some method cared for in their declining years. Carnegie has recognized the justice of such a course by providing for the retirement, on fixed payments, of worthy teachers in sectarian and private institutions. The benefits of the Carnegie fund are withheld-and probably with reason-from State institutions, on the ground that the State owes it to its faithful teachers to care for them from the public treasury. But if, forsooth, the State neglects this important duty, we see the aged professor in the denominational school cared for, while he who has served the State suffers. The members of the faculty of my day-a quarter of a century ago-were loyal, devoted, able instructors. Those of them who remain in the service of the University of Kansas deserve recognition. I do not know that any of them need or have asked assistance such as I have suggested; but they should be given it without the asking,-not as charity but as money many times earned, the payment of which was delayed to the years when it would serve the best purpose. Several of our alumni are now on the Board of Regents. While providing handsome buildings and beautiful grounds for Mount Oread, let them not forget the silvered heads to whom the alumni of our CADMUS. institution owe everything.

A CHRONICLE OF CAMPUS NESTS

POR some lovers of bird-life, the song is probably the chief fascination; for others there is peculiar attraction in the changing marvels of the annual migrations. The study of winter residents has the advantage of offering

a well-defined, limited field. In some sense, however, the heart of the matter is found in the home life of the nest, with its variety of site, structure and seasonal background, its revelation of intimate habits of species and individual, its assured comedy or tragedy, and its final pathos when the first snow falls on the long-abandoned twigs and grape-vine and thistle-down.

On the University campus the nesting season opens with the appearance of the earliest flowers and closes rather late in summer, after the goldenrod has begun to gild the hill-sides. Birds-nesting may be a richly-rewarded hobby from about the last of March till the first of August: after that, the amateur natural historian may hie him, without just charge of caprice, to "fresh woods, and pastures new."*

Scientists, if they care at all, may or may not agree as to what determines the real opening of the spring. To the mere lover of nature, some slight event unimportant to science but strong in personal appeal, may mark the great change. By the middle or end of February the soft maples have partly passed from bud to blossom, the first voices of the robin chorus have at least rehearsed, the bluebird has flown warbling from post to tree-top, the grass is daily more green in the meadows, from which perhaps the meadowlark has uttered his first faint whistling welcome. Possibly the owls have already taken up home quarters in the hollow of some tree, and the prairie lark compared field with field for residence purposes. But it would take sharp eyes to find a campus nest.

Last year, there was no question of its being very springlike before the end of March. The concert of the frogs began during the first week. A campus ramble on the eighteenth discovered a few daring dogtooth violets blooming upon a sunny meadow. Soon after came those days of phenomenal summer quality, when the atmosphere was as fragrant as that

^{*}The following notes are based almost entirely on observations made in 1907. There is no pretense of completeness of record; but it is probable that this sketch gives a fairly adequate account of an average season, under the present conditions of the campus, as noted by those whose birds-nesting is solely for recreation and pleasure. The variations from season to season, in one limited locality, are among the causes which often hold the bird-lover true to his chosen hobby till death do them part.

of late May and the warmth more luxurious than that of many a July noon. The dragonflies hovered and darted, without appearance of surprise; the bees sang over the rich masses of the peach blossoms; the boys played barefoot along the little campus creek. No wonder that the campus birds began to build. A little before the end of the month a robin could be seen flying to its finished nest in a blooming redbud, a stone's throw from the Library; a pair of shrikes had nearly completed a home in a wild crab, and pewees had remodeled an old nest in an outbuilding, strengthening it with March mud and decorating it with fresh mosses. The nesting season of the Order of the Perch had begun.

A month in spring is a long period in the chronicles of nature, but it must here be treated as a unit. Before the end of April a host of migrant birds had arrived from the south, and the snowbirds and tree sparrows, companions all winter in the campus hedges, had departed for the north. The dramatis personae of the play had undergone no little change. Insect life began to assume some characteristics of midsummer, with the arrival of early monarch butterflies from beyond the Gulf. Hardly had the month opened before the bloom of Indian tobacco whitened a campus patch some ten feet square-perhaps the first large color mass from flowers for the year. During the month the campus was beautified by thousands of common violets, by a brilliant colony of a vellow variety (scabriuscula), and by the delicate clusters of the golden corydalis. The breezes bore the rich perfume of lilacs* and wild crabapple blossoms. By the middle of the month the cattle wandered across the campus pasture, near the meadowlarks and flickers probing for food. Soon the white-throated sparrows fluttered about the brush heaps, challenging one to distinguish their high sweet whistle from that of their kinsfolk, the Harris sparrows, who had haunted the copses and osage hedges all the winter. A few warblers arrived, brilliant in summery white, black and gold.

The increase in the number of nests was very evident. A half-dozen robins had built stout structures; sometimes low and near the tree trunk, in one case high in lesser branches swayed a foot or more in the strong wind of the twenty-ninth, with the mercury only two or three degrees above the freezing-point. Several brown thrashers had lined their large, deep nests, low in the center of the osage hedges-nests so closely defended by thorns that a satisfactory glimpse often requires a "blood-sacrifice" from the observer, and so crowded among the tangled branches that one never ceases to wonder how so large a bird can there manage a single architectural movement. Mourning doves here and there had laid a few slight sticks across light branches or on the flat surface of a larger limb, some five to eight feet from the ground. There are few common sights in bird-dom more beautiful than the color, form and wondering eyes of a brooding mourning dove, but there is scarcely a more fragile or slovenly nest than that she rests upon. A pair of chickadees claimed squatter sovereignty over an old woodpecker hole in a fence post, and had lined it daintily with fine hairs. In another fence post a bluebird was cosily brooding day after day. Occasionally a bluebird will occupy a hole opening at the top, but this nest was of the more usual pattern, with roundish side entrance. One could approach the post, place the hand over the mouth of the nest, or explore the inner darkness by means of match or mirror, while the bird remained motionless upon her eggs-in "serene indifference" or "utter trepidation"?-true to her maternal duty. A bluebird flying gracefully nestward, with exquisite warble, 'the earth on its breast and the sky on its back'; gives one a sense of freedom and rapture. To watch the same bird crowded into a dark, narrow hole, its tail tilted up against the rough wall of the post, gives far other suggestions, ethical perhaps rather than aesthetic. The cardinal too who had been piping lovesongs since early in February, now sang of domestic bliss above its slight nest in the quince-bush.

^{*}In Duluth, women carried bouquets of fresh lilac blossoms as they left home for the Fourth of July picnics.

Before the end of the month the first-fruits of all this parental labor began to appear. The robins stood boldly on the edge of their nests and billed out food to the insatiable young appetites; the baby bluebirds snuggled together, willynilly, in the aforesaid post hole; pewees with yet unopened eyes crowded the nest on the barn timber, and in a cottonwood cavern some fifty feet above ground a fresh installment of hairy woodpeckers were buzzing like an incipient tornado of their native State. It is a strange, amusing sound, this of young woodpeckers in the nest, whether heard against the background of a university yell from hundreds of throats, or in the remote, solitary depths of a northern forest. The tumult in this particular nest could be plainly distinguished at the distance of over one hundred paces from the tree. It is an interesting comedy also to watch the studiously cautious approach of the parent to the nest, flight by flight, pause by pause, to and fro, when human observers are discovered. The hairy woodpecker generally appears to be a bird of particularly frank, bold nature, but the nature-wise tell us that many animals become wondrously transformed when the safety of their young is involved.

It is an interesting question how far weather conditions, within a brief, definite period, modify the chronology of the nesting events. The May of 1907 was the coldest May on record in Kansas. On the twenty-seventh, there was a "white frost"—the latest recorded date for that phenomenon. On the third the mercury dropped to thirty-three degrees, and there was a snowstorm more forbidding in general effect than many during the winter. During the blizzardy whirl of snow across the green lawns and the lilac blossoms, many of the birds ceased song, and some appeared bewildered and disconsolate. Yet the general severity of the month's weather did not seem to affect, in any remarkable degree, the seasonal progress in plant and animal life.

Changes in the bird personnel of the campus continued. Nearly to the middle of May the Harris sparrows lingered, then at last departed for their breeding places by Hudson Bay—where there are no summer sessions.* About the same time hummingbirds first flashed about the honeysuckles, sipping the blossoms, or perching for a brief bird-moment on some tiny branch. Of the fascinating, much loved family of the warblers, probably all had arrived who were coming at all. Some had settled down, while the great majority of those nesting farther north had already left by the end of the month. The voices of the chat, the cuckoo, the dickcissel and the Bell, warbling, and other vireos, became prominent in the everyday programme of birdsong. By the middle of the month the mockingbird was in magnificent vocal form. Insect life was in greater evidence—visible, audible, tangible.

In the flower world the variety of colors baffled exact description, unless one had the trained eyes of a painter. Here were the golden tints of puccoon; there were the shades of blue-purple in the violets and the spiderwort, of reddishpurple in the hounds-tongue, of brownish-purple in the feverwort (Triosteum perfoliatum). Some of the peach trees bloomed again. On one tree amid the new blossoms could be seen a young peach, about as large as a hazelnut. Occasionally in the grasses could be seen the rich red of a ripening strawberry. Some of the most delightful effects were those of immaculate whiteness. On the open hillsides, solitary or in small groups, bloomed the stalks of a fine white larkspur (Delphinium tricorne?); under the east maples of North College campus the mass of blackberry blossoms looked almost like new fallen snow; elsewhere, on the notable day, the veritable snow fell on the opened heads of the snowballs. Splendid also was the large area of anemone bloom, in the low damp ground north-east of the Chemistry Building. Add to the list, innumerable strawberry blossoms, the low heads of a white-rayed composite—and how many others?

During the month even careless eyes could readily discover

^{*}For some seven months of the year this handsome sparrow is one of the most abundant campus birds-Till comparatively recent years there have been no records of its breeding, and in some birdbooks of the effete East one will find scant account of its history at any season. It is distinctly a bird of the Mid-West.

some scores of campus nests, in state of building or already complete. The house wren played at carpentry by stuffing crannies full of cumbersome twigs. Another half-dozen robins, a little belated, finally decided to possess a home. Another fence post was occupied by a pair of bluebirds, that had warbled over McCook Field since mid-February. A brown thrasher nest might reasonably be expected for every few hundred yards of osage hedge, with a few hidden in the gooseberry bushes, for good measure. Eight or ten mourning doves followed the April pioneers, and their two white eggs were sometimes visible through the very flooring of the nest. Towards the end of the month, several catbirds began to build in the shrubbery, and in two somewhat secretive nooks in the grasses under trees, chewinks had fashioned their cosy retreats. By the twenty-third of May in 1906, two yellow warblers were anxiously watching eggs in their neat, compactly-woven structures, and a Bell vireo sang to draw one away from its treasures in the beautiful suspended nest characteristic of its family.

The progress of nest-building and occupation is an interesting detail of the entire season. Here are samples from the chronicles of May. One morning there was a partially constructed thrasher nest in a lilacbush. By afternoon, work had been so far pushed-and that without calling in the neighbors-that on first glance the observer declared it could not be the same nest. On the eighteenth, near a pair of vigorously scolding catbirds, were a few twigs and a piece of paper in a typical selection of a tree crotch. The next day the material had been increased, perhaps one hundred per cent, but there was no suggestion of finished form. On the twentyfirst not much progress was apparent, though perhaps the upper part had been slightly shaped. On the twenty-fifth, there was what could be called a nest, but the linings were still to be added. A few days later the structure was ready to be occupied. Delays are not always due to inertia. On the eleventh (in 1906) a yellow warbler was flitting about a completed nest. On the sixteenth it contained a cowbird's egg, buried, as often, almost out of sight in the bottom of the structure. On the twenty-third there were only two warbler eggs to be found, and a few days later the nest was abandoned.

Bird love-battles are doubtless to be seen earlier and later in the season, but two very interesting martial performances of chewinks were noticed this last May. The male duellists struck attitudes—and tones—entirely foreign to their more peaceful moments, while the utter indifference of the female during the issue of the combats was a most amusing feature.

Rather characteristic of May, at least for the "singing birds," are the first flights of the young. On the fourth the bluebirds of fence-post number one were at home, apparently without ambition to see the world; on the seventh the nest was empty. On the ninth nothing but chips was visible in fence-post number two. On the fourth the pewees on-rather than in—the barn nest had not opened their eyes, but on the seventh a gentle touch sent two of them in a clumsy flight of many yards, interfering with photographic plans; and on the ninth their brothers or sisters had followed suite. During the month young robins are seen, with the familiar spotted breasts and the humorous brevity of tail, several hundred yards from the nest, mastering greater ventures on the wing, under the guidance of anxious, proud, and perhaps gossipy parents. The same school of discipline in a family of jays or shrikes is also a rich episode of observation in the simple life.

With the increase of nests and of young, each season offers its repertoire of bird tragedies, as certain of performance as grand opera in Paris. On the ground far from any nest, one finds many an egg, punctured by the bill of some feathered robber—in so settled a region as the campus, probably most often by the jay. The nest with four eggs today has only three tomorrow, or all the eggs, perhaps the nest and the parents, have vanished. The fence must be mended, the old post removed, and unwittingly the small fragile eggs in the chickadee's nest are sacrificed. Last year the only young

0,

birds that happened to be observed out of the nest in April were lying dead upon the ground. The shambles of the shrike—in this connection, the "butcher-bird"—are a common sight in the neighborhood of nests of that species. Grasshoppers, field mice and snakes are frequent victims, but birds of smaller size are also slaughtered. The shrikes of this present chronicle were no reformers in this respect. They were fierce in the defense of their young in the nest, flying savagely at the mirror used for closer inspection, and they showed a similar vigorous selfishness, or wisdom, in food habits. One day, some hundred feet from the nest, an early junebug was noticed, firmly fixed on a barbwire, in some curious manner suggesting a sort of derisive glee on the part of the murderer—though this may be a case of the psychologist's fallacy. A few days later a mature Bell vireo was found impaled on the thorn of a neighboring tree, near of kin though he was to the destroyer. (See frontispiece, figure I.)

In May and later, the parasitism of the cowbird is much in evidence. This past season ten eggs were found in campus nests, distributed as follows: one in the nest of a brown thrasher,—a much larger bird than the parasite,—two in a pewee's nest, four in the nest of a dickcissel, two in the nest of an indigobird, one in the nest of a woodthrush. One was probably found also in a chewink's nest. In the previous season eggs were found in the homes of the yellow warbler and the Bell vireo. In many of these cases, partly perhaps because of the intrusion, the nests were abandoned; but it is no uncommon sight to see the young cowbird grow and flourish to the detriment of his fellow inmates. Pewees are frequent victims, and the parents often seem more anxious for the young cowbird than for their own offspring.

Springtide waited no longer for man or bird, but rolled on into summer. On an early and truly "rare" day in June, the University banquet table was decorated with thousands of daisies, gathered from fields within easy walking distance.

During this month there were great changes in the human actors of the campus comedy, but the bird performers remained essentially the same. The Tennessee warblers, to be sure, were singing for the first few days, but soon left for northern summer resorts. The cries of the crested flycatchers still resounded on North College campus; the voices of the indigobird, woodthrush, grosbeak, dickeissel and various vireos continued the chorus of May, while the gutteral notes of the cuckoo became more prominent. The wild roses bloomed richly on the northern campus, and in the shadows of its maples the starry campions clustered and the blackberries matured. On the dry, open slopes of the major campus there was fresh brilliant coloring from the yellow rays of coneflowers, the orange tints of butterfly weed, the delicate shades of wild bergamot, and the roseate nodding heads of prairie clover. At noontide and at dusk the intense crescendos of the cicadas pierced the air. The stroller on a summer evening heard a much stronger chorus of crickets and others insects than in May, and, weather permitting, the fireflies gave illuminations above the grasses.

Not a few species whose first nests had been discovered in earlier months continued to build and brood. There were still thrasher nests with eggs, and robin nests with young birds. A third pair of chewinks sang and scolded about their newly constructed home on the same day when a youngster of their tribe scrambled out into the cold world a few rods away. When the summer session registration was proceeding, several pairs of catbirds, oblivious of school privileges, were intent on the first duties of young housekeepers. Other species, heretofore careless or reluctant, now joined the company of home-makers. An orchard oriole nested in a peach tree, hatching some of the young by the twenty-fifth. Later than the middle of the month the nest of a Bell vireo, hanging cradlewise some three feet above the ground, contained but a single egg. A dickcissel, familiar singer since the first of May, built at last, but by the two blue eggs lay four brown

ones-of the cowbird-and the low nest in the weeds was soon abandoned.* The observant cowbirds also found the secret dwelling of an indigobird among the weeds, and cowbird chances to indigobird's were two to one, when human eyes investigated on the twenty-fifth. The woodthrush faced a similar problem, and solved it, in a fashion, by rearing two future songsters and one young parasite. Elsewhere the downy woodpeckers cared for their noisy offspring in the hollow of a stump, some twenty feet above the ground; adding thereby, so one may hope, to the spirited cries across the wintry campus for seasons yet to come. The authorities do not count the mockingbird a rare species in this locality, but even if a campus nest were found each summer, it would add a bit of Dixie sentiment to memories of the season. Most of the birds mentioned in this chronicle nest much farther north. The sight of a mockingbird at any season a few hundred miles north of Lawrence, would be counted a rare event in bird annals. Last year a nest was found in a gooseberry bush, some three feet above the ground, containing on June eighteenth four young birds about half grown. May an irresistible longing soon bring them back to Kansas. A June nest of the catbird, a very near relative of the mockingbird, did not fare so well. One day just about dusk the parents were heard making a vocal commotion, unusually loud even for them. A snake had crept upon the nest and was even then coiled about the body of a young bird, which it had crushed to death. The observer moved the nest some fifteen feet to a place of apparent safety, and the parents continued to care for the remaining children.

The rich purplish tints of ironweed crowned the long stalks, and the yellow-black corollas of the mallow known as "flower-of-an-hour" (*Hibiscus trionum*) were sprinkled along the parking by the museum. The sunflower and rosin-weed flaunted big rosettes of yellow, the thistledown floated over

campus areas, and the open pods of certain milkweeds displayed their beauties of brown seeds and silky fibres. The earliest species of goldenrod was already in bloom, giving a suggestion of autumnal days. It was July. Till at least the middle of the month, an excellent chorus of birdsong continued, in which the goldfinch, dickcissel, warbling vireo, chewink, indigobird and orchard oriole took leading parts. The simple cries of the red-headed woodpecker and the complex laughter of the chat were frequently heard, and the cuckoo often announced a rainfall—which did not always follow.

The number of nesting species and of individual nests very sensibly diminished. Very near the end of the month, however, there were yet young thrashers in the nest, and a family of three young cardinals were just setting out from home. The orchard oriole and the chat, the one a singer of wonderfully sweet and tender cadences, the other a mimic of large range and brilliant accuracy, had each added at least one family of young birds to the campus colony. A pair of woodthrushes, loved well among their kinsfolk who all claim special human affection, reared a second brood, and a pair of bluebirds nested for the third time that season. It is possible that the bluebird as a species has never fully recovered from the shock of a severe southern winter some fifteen years ago. Since that time it has seemed less abundant in many regions where formerly it was one of the most "common birds." The unconscious following of Rooseveltian doctrine by this campus couple is therefore a cause for special rejoicing. The cuckoos, in respect to date of arrival, period of prominent song, general associations, and season of nesting, seem birds of summer rather than of spring. With a July record for the yellow-billed cuckoo, this particular chronicle reaches its conclusion. A nest of this species was found in the grapevines, about three feet from the ground-a structure very slight for the weight of the bird. On the twenty-third there were three eggs; on the

^{*}This species seems to be generally a rather late breeder. An unbroken though by no means fresh dickeissel egg has been found in the nest as late as September twentieth.

twenty-fifth one of them had disappeared, and on the twenty-seventh the nest was abandoned, the two partially incubated eggs remaining. Some degree of tragedy therefore marks the final episode of this narrative, as it often does in the domain of fiction. And it is not entirely a matter of chance. Out of a total of eighty nests observed during the season,—nests fully constructed, evidently intended for domestic residence, and often containing a number of eggs,—thirty-six were either abandoned or destroyed. The largest percentage of such loss for a single species seems almost incredible. Of fifteen robin nests noted in the earlier part of the season, only one became the home of a living brood.

Several other species than those here recorded, without question reared their young upon the campus during the last season. Among those whose song, flight or feeding habits betokened permanent residence and probable nesting were the bobwhite, the meadowlark, the field sparrow, the warbling vireo and perhaps the goldfinch. The martins that chuckle and play about the cornices of Fraser Hall must surely build their homes in the crannies of the academic stones. Late in May a chattering band of chimney swifts may sometimes be seen in repeated flights through the upper branches of some campus tree, breaking off with bill or feet the frail twigs used in nest-construction; but whether these materials are carried into campus chimneys or to more remote quarters, is here left an open question. When the artificial lake becomes a reality, it may be possible, under favorable shore conditions, to observe the nesting habits of some of the lesser water birds. For the present one must be content to watch in early spring the changing formations of the clanging geese, as they pass across far above the campus, with the speed of eager migrants; or to note the wide-circling flights of an occasional jacksnipe, lone visitor for a day about the campus ravines.

In the early days of November, some low white asters were still blooming on the northern campus, and by the east-

ern border of the other campus a few delicately tinted corollas of the catnip lingered yet. Practically all real bird song had ceased for the season. Families of young warblers and hermit thrushes, many born far off in Canadian woods, had passed across the campus en route for southern haunts. The Harris sparrow had returned to spend another winter chuckling, whistling, and yipping about the hedges. Most of the young birds who had opened their eyes upon the campus had joined the southward movement. Many of the nests were cracked or frayed or fallen, and every one was vacant.

Gilbert White, in his famous "Natural History of Selborne." affirms that the richest region for the naturalist is simply the one most thoroughly explored. A French painter is said to have expressed a low opinion of any artist who can not find enough to paint during his entire lifetime within four miles of home. The spirit of these remarks is perhaps worthy of a larger following. Many of the great university campuses of America are still in a true sense natural regions-Wellesley has its vast stretches of meadow and woodland, Cornell its waterfalls of memorable beauty, Wisconsin the white-capped waves of Lake Mendota, and Washington the sombre secrecies of the ancient forest. Kansas may well claim a right to rank among this sisterhood, in respect to natural landscape. This brief, imperfect article upon some of her common birds may stand as a mere suggestion of her natural wealth in its entirety. S. L. WHITCOMB.