

THE
NEW ENGLAND MAGAZINE.

NEW SERIES.

FEBRUARY, 1900.

VOL. XXI. No. 6.

SLEEPY NEIGHBORS.

By William Everett Cram.

IN every part of the world where the winters are sufficiently severe, there is pretty sure to be found a certain proportion of the wild animals that manage to do away with the most unpleasant part of the years, as far as they are concerned at least, by tucking themselves up in some out-of-the-way corner and sleeping or dozing or hibernating the time away, each according to its own particular taste, until spring comes round again. And certainly no more satisfactory method could be devised for spending the winter, either as regards economy or personal comfort.

It is probably to this habit that the dormouse of the old world owes its reputation of being the most ridiculously sleepy and drowsy little beast in the universe, though I fancy that a good many of the animals on this side of the Atlantic could give him points on the matters of taking protracted naps, as might naturally be expected in a climate where the temperature is liable to vary over one hundred degrees in the course of a twelvemonth. The dormouse, it would seem, does not depend entirely on its faculty for sleeping, to while away the long winter hours, but in the autumn puts by a store of hazelnuts and different seeds, and whenever the weather turns warmer for a few days, though it is in the very depth of the winter, he wakes up for a luncheon and a breath of fresh air, and then turns in again for another nap, so keeping a general idea of the weather as the mild English winter wears itself away.

But how much does the oldest

woodchuck know of the New England winter? He can only realize that there are spring, summer and autumn, and then spring again, with only occasional flurries of snow and severe frost occurring at long intervals, perhaps a dozen times in the course of his life. If, as seems probable, the woodchuck really sleeps all winter long, then his waking hours occupy an extremely small portion of his life, for during the entire summer he spends the greater part of his time in his hole; and as he never takes his meals there, it is hard to imagine how he can occupy himself at such times except in sleeping, being, perhaps, the least industrious animal in existence except when engaged in digging his hole, at which times he works away at a tremendous rate until it is finished; but once it is completed, he seldom attempts to enlarge or remodel it in any way, but spends his days in luxurious ease, coming out to get his breakfast soon after sunrise, while the dew is still on the grass, at which time I fancy he makes his most substantial meal, though he may occasionally be seen feeding at any time of day. At noon he is pretty sure to make his appearance above ground for luncheon, but apparently spends more time than in sunning himself than in eating. Late in the afternoon he again shows himself, and feeds until nearly sunset, when he descends into his burrow for the night. It is not often that he is obliged to go many steps from his doorway in order to fill himself, and by autumn he has usually reached a

perfectly ludicrous state of obesity. There are usually several openings to the burrow, connected by well beaten paths; similar paths radiate off into the grass in all directions, from one clump of clover to the next, and only too often to the bean patch or garden where it pleases him to eat out the tender inside of several cabbage heads in a single night. Beans he strips of leaves, pods and everything, and he is not averse to ears of corn and young pumpkin vines; in fact, there are few things raised in an ordinary vegetable garden which he does not occasionally exhibit a taste for. He is also fond of sweet apples and fruits of various kinds, frequently making his home in the orchard for the purpose of enjoying them. When the grass is tall enough he likes to move about in the various paths he has made, nibbling here and there, as suits his pleasure, and sitting bolt upright from time to time to look about him. His attitude towards his enemies is apt to be one of obstinate defiance. Other wild animals of his size, almost without exception, prefer, when in the proximity of houses, to remain in hiding during the day, only venturing out under cover of darkness. But the woodchuck often digs his hole within a few rods of a farmhouse and swaggers boldly about the garden at midday helping himself to whatever appeals most strongly to his appetite. When pursued he scrambles in frantic haste for his burrow, his black heels twinkling in the sunshine as he goes, but on reaching safety he is likely to turn about and thrust out his nose to chuckle defiance at his pursuers. If cornered, he is always ready to fight anything or anybody, and a dog lacking experience in such matters is likely to get the worst of it, for a woodchuck's incisors are weapons not to be despised. If their den is dug out, the woodchucks often manage to escape by burrowing off through the soil, after the manner of moles, filling up the holes behind them as they move along, and evidently not coming to the surface until sufficient time

has elapsed to insure their safety,—though how they manage to avoid suffocation in the mean time is a question difficult to answer. They are often killed with shotguns, though this is no easy matter to accomplish; for though not a difficult animal to approach, the skin of an old one is pretty nearly a quarter of an inch thick, and the bones of the head are so solid that it requires the heaviest kind of shot and a gun that carries close and hard at ordinary shooting range. The majority of those that are killed are caught in steel traps at the mouths of their burrows. As soon as the woodchuck feels the grip of the trap on his foot, he settles back into his den and pulls with an amount of strength that is simply surprising, and often secures his liberty. If unable to free himself in this manner, he usually digs away the earth and blocks up the entrance of the hole with himself inside, and the owner of the trap is obliged to dislodge him as best he may. This is hard enough when the victim is a woodchuck, but if, as often happens, it proves to be a skunk, the result is truly disastrous. If left in the trap for any length of time, the woodchuck frequently releases himself by biting off his foot just below the jaws of the trap, but is less extravagant and wasteful in this matter than the muskrat, who not uncommonly leaves half an inch or more of leg sticking up above the trap, apparently gnawing it off wherever it is easiest and most convenient.

This is the woodchuck of the fields and cultivated lands. Many woodchucks, however, prefer to dwell in the pastures, where the grass is shorter and sweeter and they are less likely to arouse the ire of the owner of the land. Here they are obliged to wander farther afield in order to satisfy their appetites, but are generally in good condition for all that, and never appear to have any trouble in laying on a sufficient supply of fat during the summer to carry them over the cold season. In the pastures they are fond of sunning themselves on top

of old stumps and smooth bowlders, the color of their fur serving to make them comparatively inconspicuous when so engaged.

Then there is the woodchuck of the forest and woodlands, who really deserves the name of woodchuck, as it was in all probability first applied to the species by the early settlers,—chuck, or chucky, I believe, being a term frequently used in Devonshire and other English farming districts to designate little pigs, who were sometimes spoken of as barnyard chuckies; so that woodchuck might very properly be translated as little pig of the woods,—not an altogether inappropriate title, at least as regards disposition.

The real woodchuck of the woods, instead of spending his days in the sunlit fields or open hard-wood groves and orchards, digs his hole among the rocks and ledges, beneath the roots of great hemlocks and pines, where the sun hardly penetrates and the decaying tree trunks are crossed and tumbled against each other overhead, supported and held in position by those that are still standing. Here he scrambles about among the underbrush and fallen branches, subsisting on berries and whatever green stuff is to be had in its season, probably feeding on edible mushrooms when they are to be obtained, like the partridges and squirrels who are his associates. He may frequently be seen of a summer afternoon stretched in the sun along some half prostrate log, evidently glad to take advantage of whatever of the sun's rays manage to penetrate among the shadows of his retreat. Enjoying as he does comparative immunity from the attacks of men and dogs, and having at the present day very few natural enemies to avoid, he should, and in all probability often does, live out his allotted time; and it is no uncommon thing to find the bones of these animals in hollow logs and similar places, showing no signs of having suffered a violent death. A careful observer of nature

once told me that he had once seen a woodchuck, apparently very old and feeble, laboriously digging a shallow hole in the soft earth, and that on returning, some hours later, he had discovered him curled up at the bottom of the hole quite dead, undoubtedly having died of old age after digging his own grave and crawling into it. He believed this to be a regular custom with them, and said that he had met with a number of people who asserted the same thing.

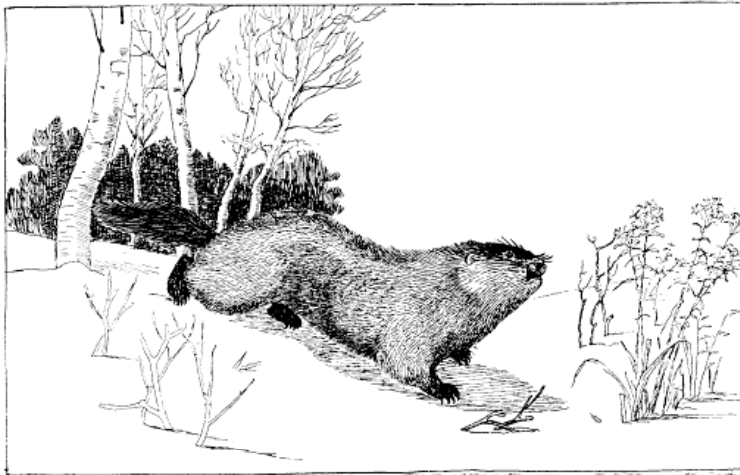
In one respect the forest woodchuck does not have so easy a time of it as his brethren who abide in the open country, seldom attaining to such an extreme condition of corpulency, and in consequence being compelled to awake and crawl out of bed much earlier in the spring, often making his appearance when the snow is still several feet deep. Such unfortunates are obliged to worry along as best they can until warm weather, seeking out the spots of bare earth beneath the evergreens and gnawing ravenously at the bark of trees or anything that can possibly be made to answer as a substitute for food. They are soon pitifully thin and so active as hardly to be recognized by one familiar only with well fed summer specimens.

Woodchucks are seldom seen in the open pasture until the snow has about disappeared and the turf begins to feel soft under foot, with green grass and clover starting up in sheltered places, while those of the cultivated grass lands are still later about showing themselves, so that it would certainly seem that the duration of their winter nap depended largely on the food supply of the preceding summer. Still it is just possible that all the woodchucks return to the woods to "den in," in order to obtain a more even temperature than would be possible in the open ground. Instances of woodchucks having been unearthed in a state of hibernation in the winter are common enough, but whether in the woods or in the open appears uncertain.

I have in open winters dug out several burrows which I know had been inhabited by woodchucks during the previous summer and autumn, in order to ascertain if possible the true state of affairs, and have found them all empty; but perhaps the inmates were sufficiently aroused to burrow off into the surrounding earth as they do in summer, though I found no evi-

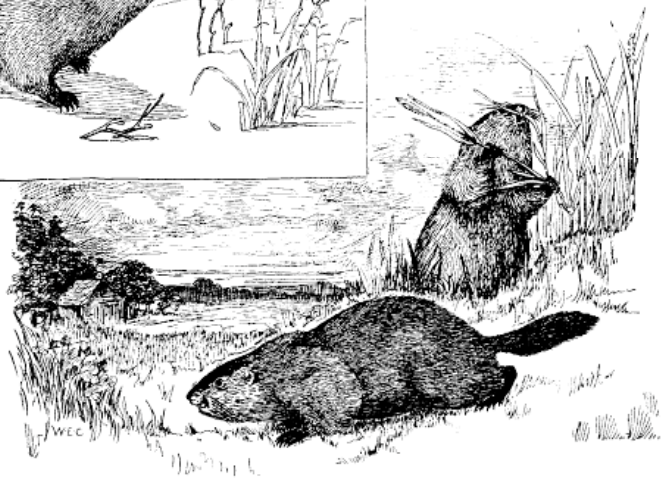
Generally speaking, the color of the woodchuck is some shade of grizzly brown above and dark reddish or rusty brown beneath. The face, paws and tail are black, and the cheeks and ears grayish white—the fur on the back being dark, almost or quite black, next the skin, then snuff color, then black again, more or less tipped with white. Different specimens vary

greatly, however, in shade, from pale straw color or yellowish white to dark coffee brown, sometimes almost black. Others are dull whitish all over, while in many instances the reddish color predominates. The fur is



WOODCHUCKS IN WINTER AND SUMMER.

dence of this having been the case. On the other hand, woodchucks do not seem to be any more abundant in the woods in the spring than at any other time, so that on the whole it seems probable that most of them at least spend the winter in their summer homes and sleep until their supply of fat is exhausted. As for the ancient superstition of their coming out of their holes on the second of February to predict the kind of weather that is to prevail for the next few months, it is truly a very excellent and entertaining superstition in its way, but not to be taken too seriously. Woodchucks may occasionally come out as early as that, but certainly not often; and when they do, I am very much inclined to think that they stay out for the remainder of the season, be the weather what it may.



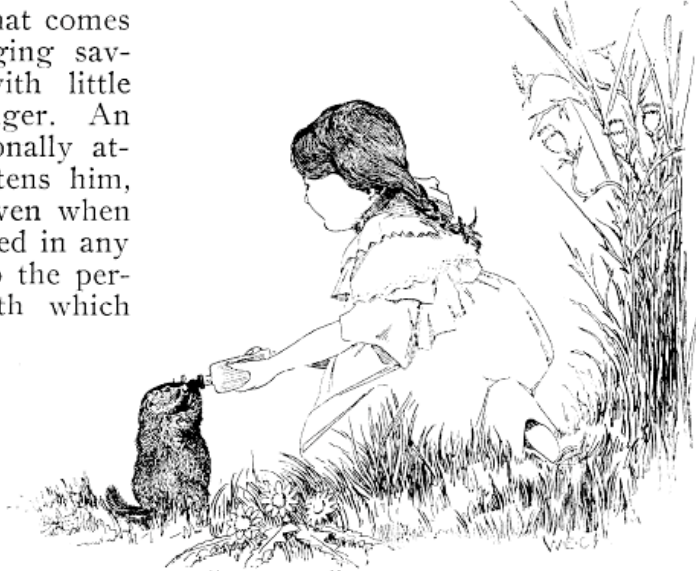
usually rather thin and coarse; occasionally, however, and especially in the case of those who appear to suffer from insomnia and are obliged to come out of winter quarters in March, or even earlier, it is much thicker and richer in appearance, approaching in quality that of the raccoon or badger. These cases, however, are not frequent enough to give the skins a market value, though the woodchuck himself would hardly be likely to let a little thing like that trouble him much. A full grown specimen is usually about twenty inches in length without including the tail, which is six or seven inches long. One frequently hears of

them two and a half or even three feet in length and weighing twelve or fifteen pounds; but most of these accounts are of uncertain origin, to say the least. The weight of different specimens usually varies from four to eight pounds, according to the season.

In summer the rambler often meets little woodchucks only a few weeks old, wandering about the fields alone and unprotected, having been driven from their homes by their hard hearted parents as soon as they were able to shift for themselves. These little waifs are not apt to show any alarm on being approached, commonly settling back on their haunches and attempting to bite anything that comes within reach, or else charging savagely at the intruder, with little husky, gurgling cries of anger. An old woodchuck will occasionally attack the person who threatens him, sometimes it would seem even when he is not cornered or confined in any way. But his is nothing to the perfectly reckless courage with which the youngster enters into the combat as if he felt perfectly sure that he were going to have an easy thing of it. As soon, however, as he is quite convinced that you are not going to retreat, and that he is hardly likely to be able to dispose of you to his satisfaction, he starts off on the gallop, but as yet without any especial symptoms of fear, though if you persist in heading him off, he at last comes to realize that he is entirely at your mercy, and a wholly different expression comes into his eyes, he begins to tremble and shiver all over, and finally gives up all attempts to fight or run away, simply crouching in the grass in abject terror.

I once obtained possession of a little woodchuck that had been brought home uninjured by a dog. If I remember rightly, the original price of the animal was thirteen cents, with a much damaged fish line and hook thrown in. He was much too young

to eat solid food, so we fed him on milk with a bottle and rubber nipple. When being fed he always sat up perfectly straight, grasping the rubber firmly between his little black hands, which always looked as if clothed in close fitting black gloves, so sharply was the line drawn between the black of his paws and the brown fur on his wrists and shoulders. When nearly satisfied he would grip it so tightly that none of the milk could escape and, taking it from his mouth, turn away his head for a few seconds of breathing space and then fall to again. He grew rapidly on this diet, and soon developed a lik-



"CHUCKLE" AT DINNER.

ing for green things generally, especially caraway blossoms. As these grew far out of his reach, often three or four feet from the ground, he found it necessary in order to get at them to sit up beside the stem and, grasping it in his paws, bend it over towards him, pulling it down hand over hand until he had reached the umbel shaped cluster of flowers, every particle of which he ate, allowing the stalk to spring back into place when he had finished. Strangely enough, he never troubled the vegetables in the garden in any way, although allowed to wander about the place at his own discretion. He managed to get along fairly well with the cats, though

there was not much affection wasted on either side. Whenever he saw one of them drinking milk from a saucer, he liked to come up softly from behind and nip its heels, and then scuttle off to some place of concealment in time to escape punishment. He often persisted in this amusement until the cats retired in disgust, whereupon he would proceed to help himself to the milk they had left. If he felt sleepy, he would sit upright, letting his head hang down until his nose almost reached his hind feet, and then whop over on one side, rolled up into a perfect ball. Late in the season, he began to make extensive tunnels about the doorsteps and underneath the paths, the caving in of which was the cause of several mishaps to various members of the family. Although perfectly familiar, he was never affectionate, and towards the close of summer he left us for his native heath; and the rest of his history is hidden in obscurity, though it is safe to assume that he lived to grow up and eventually developed all the selfish and bearlike traits characteristic of his family.

Only the other day an instance occurred which would seem to indicate



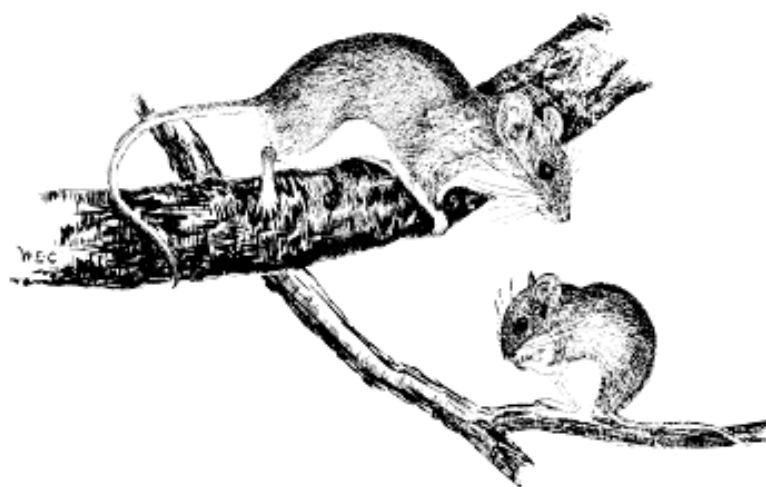
DORMOUSE.

that the woodchuck of the woods retires to his den much later in the season than his cousin of the fields, who is seldom seen abroad much after the first of September. On the first of November I came across a hollow ash tree, prostrate above a little brook in a swamp not far from my home, and noticed that some creature or other had been carrying dead grass into it quite recently. I fixed a trap in the hollow and the next day found a woodchuck held captive there, a typical woodchuck of the forest, as lean and active as a squirrel, with soft white-tipped fur almost as thick as a coon's. When I released him, he refused to run, but showed fight pluckily enough for several minutes, and then unexpectedly bolted by me into his hollow log, down which I

could hear him scrambling to his nest, which appeared to be situated at the end of the cavity where the tree forked into several branches, for on breaking off a small branch here I could see that the interior was filled with new dried grass and leaves. Undoubt-



CHIPMUNK.



WHITE-FOOTED MICE.

edly he intended spending the winter there, and I imagine would find it quite as comfortable as the usual underground retreat, if not driven out by the rising waters in time of thaw. I recall once seeing what looked like a woodchuck's track in the snow about the last of November. The animal that made it had been wandering about the woods, prying into every stump and hollow log, perhaps in search of a bed; but that was years ago, and I am not even certain that it was a woodchuck's track at all.

The hibernating habits of the chipmunk are strikingly like those of the dormouse; though unlike the dormouse and most other hibernating animals, the chipmunks are seldom more than comfortably fat on retiring in October. As several weeks are generally believed to elapse before the final sleep of winter overtakes them, it is quite probable that they occupy themselves in the mean time with acquiring a sufficient amount of fat to last them over until spring; for I am unable to learn that they ever show themselves out of doors between the first part of November and the last of February, though in March and April they are sure to be out in the sunshine of every warm day we have, to retire and become dormant again, like the dor-

mouse, at the approach of a cold wave or snowy weather. Those first few weeks of confinement in November must be a strange experience for such an active sun-loving creature as the chipmunk. To go down out of the bright October sunlight into a chamber utterly devoid of even the smallest glimmer of light of any kind, there to remain grop-

ing about in the dark among his companions for food packed away in the nest itself or in side galleries branching off from the main chamber, eating and sleeping in those cramped quarters and getting ever drowsier and drowsier, at last losing consciousness altogether, to awake and become aware in some inexplicable manner that it is time to come out into the daylight once more,—this must indeed be a life of strange contrasts. But while the dormouse is supposed to be chronically sleepy at all times, owing probably to its fondness for being abroad at night and sleeping all day, even in the longest days of summer, the chipmunk when it is awake is most unmistakably awake from sunrise to sunset, apparently without even a nap at midday when the days are at their longest and hottest.

The gray squirrel, flying squirrel and most of the wild mice appear to become dormant in varying degrees, though often seen abroad in the cold-



RACCOON.

est weather, the gray squirrels being pretty sure to be out on every still sunny morning in the winter, and the flying squirrels whenever we have a thaw or warm air from the south. Of our native mice, the long-tailed jumping mouse appears to be the only one habitually given to hibernating during the entire winter. This remarkable creature, which is really not a mouse at all, though everywhere known as such, is usually rare in this part of the country, and I believe is not generally abundant anywhere; but occasionally, once in every fifteen years or thereabouts, they become quite common in summer in meadows and grass lands,—a most inoffensive kangaroo-like little thing, with an astonishing long tail, that goes bounding off over the grass before you or cowers trembling in the stubble, sometimes allowing itself to be stroked or even taken in the hand without offering resistance or attempting to escape. They are said to pass the winter in their underground nests, remaining dormant until the last of May or the first of June. The meadow mice inhabit extensive tunnels beneath the snow, where they can ramble about and explore the stubble for grass seeds and tender shoots in comparative safety. They have frequent doorways admitting them to the upper air, and at night are often out scampering back and forth across the snow, leaving an interesting tracery of footprints on its white surface, and are also often seen abroad in the sunshine among weeds and bushes that have remained uncovered. In severe seasons they depend largely on the bark of different fruit trees and shrubs, and even appear to find the resinous bark of the ground

juniper palatable, the vanishing snow in the spring frequently revealing stems and branches stripped bare of their covering beyond all possibility of recovery.

The white-footed mice, or wood mice, lay up large quantities of nuts and seeds, those of the linden appearing to be preferred by them to all others. They seem to hibernate in a rather irregular manner, large numbers being up and doing at all times, in spite of the weather; and they are generally ravenously hungry for meat of any kind, gleaning whatever bits may be left by the larger flesh-eating animals after their meals, and guaw-



MEADOW MICE.

ing hungrily at any scrap of bone they may happen to come across.

Most northern bats become thoroughly dormant in cold weather, and it has been stated on good authority that their daily sleep is in reality hibernation, differing from the sleep of other warm-blooded animals in the same manner that their winter hibernation does. But this probably only refers to certain species. The red bats that spend the day behind my blind apparently only sleep in the ordinary way, as they frequently get to crowding and nudge and poke each other with their sharp bony elbows, becoming half awake and squeaking peevishly as they endeavor to arrange

themselves more comfortably for the remainder of their nap. But this activity may be due to the increased irritability of the muscular fibre, which is said to be an invariable accompaniment of hibernation. When I threw open the blind last October, exposing them to the full glare of the afternoon sunlight, they maintained the same position and showed little sign of awakening, but half an hour later had disappeared, though the sun was still several hours high. This year the blinds were left open for the first part of the summer, and the bats were obliged to look up new sleeping quarters. In July I closed the blinds, hoping to entice the bats back to their former apartments; and, sure enough, about the first of the month I was delighted to see a solitary individual hanging by his toes in one corner of the window fast asleep. Wishing to have him pose as model for an illustration, I unceremoniously routed him out and deposited him on my desk, where he spent a most unhappy morning, losing all patience with me before the portrait was half completed,—which was hardly to be wondered at, considering the circumstances. As often as I tried to get him to change his position, he would break forth into shrill stuttering protests and snap viciously at everything within reach; but he soon quieted down on being left alone, and slept complacently close to my hand while I sketched him. Several times he escaped and flew deliberately downstairs, which I think few birds would have the intelligence or coolness to do. All those that I have seen in similar circumstances fluttered helplessly against the glass or ceiling and absolutely refused to fly downward under



HOARY BAT.

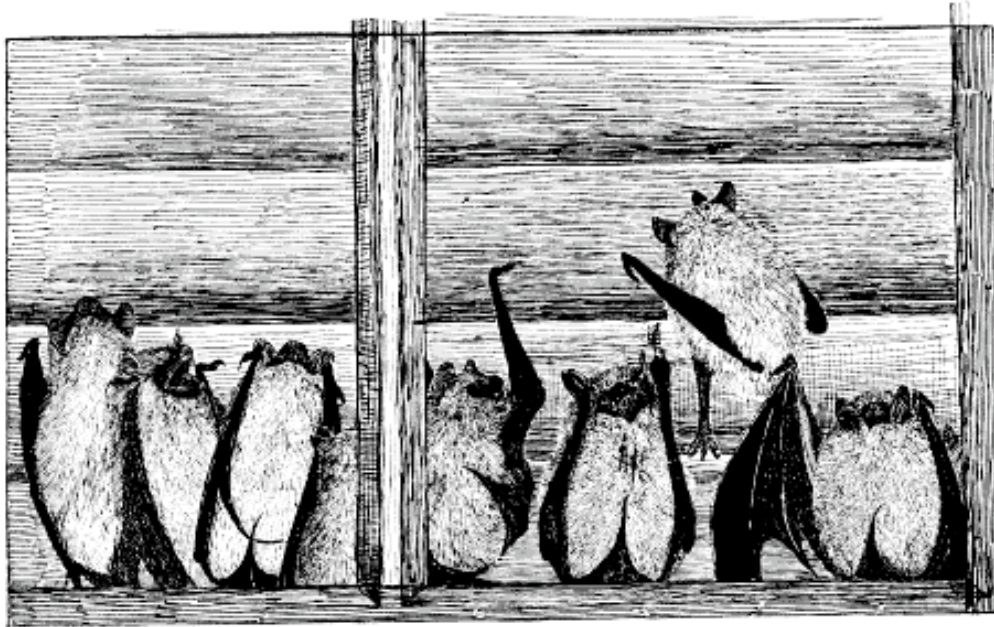
any provocation; but my bat flew up or down with equal willingness, and from room to room, earnestly searching for a passage to the open air. Whenever he felt tired he would hang himself up in the fold of a curtain to rest, apparently being fast asleep as soon as he was fairly settled. Glass he soon learned to avoid as slippery and treacherous; but the mosquito screens furnished better foothold, and the way he would scuttle about over these was something marvellous. Finally I carried him out doors and gave him his freedom, and, in spite of the sun, he seemed to find no difficulty in seeing, but started directly for the barn window, which was partly open, and entered it as readily as the swallows did. No one seeing him at the time could reasonably have accused him of blindness; nor did the term "blind as a bat" seem applicable when you caught the gleam and sparkle of his wicked little eyes, peering out from beneath his woolly eyebrows.



SKUNK.

He evidently decided that he had chosen an unsafe sleeping place, and for a little while the window was deserted; but in a few days I noticed a smaller specimen of his race in the opposite corner, and the day following there were nine of varying size ranged along the upper sash in their usual characteristic attitudes. One near the middle of the row was wide awake; washing himself after the manner of a cat, he would lick his foot or a portion of his wing and rub his head with it the wrong way of the fur, and

Judging from those in the window, it would appear that bats are not given to occupying the same roosting places with any great degree of regularity, but spend the night chasing insects wherever these are to be found in greatest abundance, and hang themselves up to sleep where daylight happens to catch them. I kept an exact account of the number sleeping in the window during the month of August of the year 1898, beginning with the first Saturday, and soon noticed that for some inexplicable reason they



BATS IN THE WINDOW.

scratch himself rapidly behind the ear with one of the little thumb nails at the bend of his wing, the long bone of his forearm beating a tattoo on the glass beside him as he did so. The elasticity of the wing membrane is truly astonishing; he would seize an edge of it in his mouth and stretch it into all kinds of grotesque shapes in his endeavor to get it clean enough to suit his fancy, and sometimes, when at work on the inside, he would wrap his head up in it entirely, the thin rubbery stuff conforming to the general outline of his skull in the most startling manner.

were given to congregating there on Sunday nights, and that their numbers usually fell off until the middle of the week, and then increased again until Sunday. Here are their numbers as I set them down each day on my calendar: Saturday, 4; Sunday, 16; Monday, 9; Tuesday, 4; Wednesday, 2; Thursday, 5; Friday, 10; Saturday, 10; Sunday, 18; Monday, 10; Tuesday, 2; Wednesday, 0; Thursday, 0; Friday, 1; Saturday, 1. The third Sunday I was away, and so failed to take account of them, but on Monday there were 3, and 2 on Tuesday. For the next three days the window was

unoccupied, Saturday I found 1, Sunday 2 and Monday 3, after which they abandoned the window almost entirely, though I occasionally found a solitary specimen snuggled up in one corner of the sash. I find that they habitually sleep in the barn in the narrow space between the ridge pole and the roof boards, though whether their numbers vary there from day to day as they do in the window, I am unable to ascertain. I have an idea that they also spend the winter there, for they are said usually to choose some such place to hibernate in.

As twilight comes on, the bats in the window begin to grow somewhat more restless, scrambling down from time to time to peer out between the slats as if to pass judgment on the weather. Then suddenly one of them launches out and downward at an angle toward the earth for a few yards, then sweeps up and away among the tree tops. Another follows, and then two or three together, till in very short time the blinds are empty; but outside in the darkness the bats are zigzagging about in pursuit of their supper.

There appears to be a certain similarity between the winter habits of the black bear, raccoon and skunk. None of them lay up any food, but they become immensely fat at the approach of cold weather and retire to their dens early in the season, the bear and raccoon in hollow trees and caves, and the skunk in some burrow, usually the abandoned home of a woodchuck. Sometimes a dozen sleep together in one hole for warmth, and seldom less than four or five. It is not uncommon, too, for several raccoons to spend the winter together; but bears, I believe, always sleep singly. There are always individuals of all three species that are unable to lay on a sufficient amount of fat to allow of their becoming dormant, and in consequence they are compelled to continue their hunting until well into the winter, probably only getting a few weeks of uninterrupted sleep at most. Although apparently depending on their supply of

fat to sustain life, most animals of this class are as fat on awaking in the spring as when they retired months before, but lose flesh rapidly on resuming their activity, and in a very few days are surprisingly lean. It is said that an animal that is really dormant may be submerged in water or carbonic acid for several hours without injury, though the experiment sounds a little too cruel to justify putting it to the test. But none of the warm-blooded animals ever reach that state of absolute torpidity attained by reptiles, insects and similar cold-blooded creatures, in which breathing utterly ceases, allowing them to be frozen solid for months without suffering any apparent ill effects,—like the celebrated Egyptian snail in the British Museum, which was gummed to a board for four years, and then revived on being moistened, and lived for two years in captivity.

Nearly all insects hibernate. This is not true of honeybees, which depend on their supply of honey for nourishment and on their closely packed numbers and activity for warmth. Ants also lay by considerable quantities of food, but hibernate in cold weather. I have frequently cut into dead trees in winter and found the large black ants packed in their galleries, sometimes nearly a quart in a place, frozen so hard that they rattled like hail or bits of ice when dropped, and so brittle as to make it difficult to avoid breaking them to pieces. But when placed in the sun they revived slowly, and crawled about in an aimless sort of way until chilled by coming into contact with snow, when they quickly relapsed into their former condition. Those ants that keep aphides in a state of domestication and depend largely on the sweet substance secreted by them for food are said to become dormant at precisely the same temperature as the aphides, as if unable or unwilling to keep awake after the supply of their favorite food is cut off.