

The Sportsman Tourist.

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YELLOWSTONE PARK NOTES.

YELLOWSTONE NATIONAL PARK, Sept. 10.—*Editor Forest and Stream:* The weather here is fall-like, reminding me that winter will soon be here. Some of the days are quite hot, with cold rains and wind in the evening, the rain being snow on the mountains. The drifts of new snow on the higher peaks have come to stay until next spring. Some of them are already 5ft. deep. With all the unpleasant weather this is the most enjoyable time to visit the Park and will be for a month or six weeks.

I have little to report about the game in the Park. Antelope are seen every day on Mount Everts by residents of Gardiner. Porters have reported seeing buffalo and elk in the Queen's Laundry Basin.

The topographers connected with the Geological Survey, whose special work this year has been to make surveys of the Geyser Basins and Mammoth Hot Springs, are camped at the Norris Basin, having completed the survey of the Upper and Lower Basins. The scale on which the work is being done will accurately show the situation of every geyser, spring and pool. These properly named and mapped out will do much to prevent the confusion of names so indiscriminately applied, and if enough of the maps are published, one can be placed in the hands of every visitor, doing away with the unsightly signs that now deface so many points of interest and remind one of advertisements, and the labeled objects in one of Mrs. Jarley's wax work shows.

The geologists of the Survey are at work on the east side of the Yellowstone Lake. This season will enable them to about finish their work in the Park.

A party of specialists, with Prof. Ward in charge have been at work in the East Fork country on the petrified woods and plants to be found there in great abundance. Their work for a short season shows some 800 pounds of specimens. Road Superintendent Lamartine has been out with a party to locate a wagon road from the Upper Geyser Basin, following the Fire Hole River past the Lone Star Geyser, across the Continental Divide to the Shoshone Geyser Basin, along the south shore of the Shoshone Lake to the east end, then recrossing the Divide to the west arm of the Yellowstone Lake, striking the lake at the Lake Shore Springs and Geysers, and following the shore of the lake to the outlet. This road is part of a system contemplated by Captain D. C. Kingman, when he was in charge of improvements in the Park. Congress neglecting to appropriate any money for the purpose, no work has been done at these points. As most of the country over which this road would be built is open parks, a comparatively small sum would be required to do the work, which would open up a most interesting part of the Park scarcely ever visited by tourists.

Travel in the Park by stages is falling off. Travel by wagons and camping parties from neighboring territories is quite heavy. This popular manner of visiting the Park increases in favor every year.

Cooke City and Gardiner, Montana, the two towns close to the northern boundary line of the Park, are almost depopulated by the stampede to Nye City and Castle, two new mining camps in Montana. H.

CAMPING OUT.

Editor Forest and Stream:

Having just returned from a summering in the Adirondacks I read with peculiar pleasure your editorial in the current number of FOREST AND STREAM, on the subject of camping out. Those parodies upon woods life—the so-called camps, formed of fanciful, well-built cottages, some of them as costly in their appointments as a town residence need be—are gradually encroaching upon the wilderness until one who is a lover of nature undefiled is compelled to seek other haunts each year deeper in the forest, in order to escape the duke with the skull cap and penitentiary suit, and the novel-reading, be-rouged and powdered female, who play at camp, as it were, in a house furnished with luxurious tête-à-têtes and downy beds. Each recurring summer these people journey with their Saratogas to the wilderness, play billiards and lawn tennis, swing in hammocks for a few months, do little fishing and hunting by proxy, clothed in immaculate linen and flashy jewelry, and in the fall return to their city homes to boast of having spent the summer in camp in the North Woods. Very seldom can you find among them one who can appreciate the beauty, grandeur or delight of a broad view from the mountain top, or a pedestrian trip through the virgin thicket with its endless succession of surprises. Not one of them ever experienced, or have the capacity to experience, the subtle pleasures that lie in the rod and the gun, the lonely camp and the bath in the sparkling waters of the brook, the homely meal prepared by the guests who eat and the healthful appetite that is earned by exercise, the song of the nightingale and the cry of the lynx, the dash of the deer and the play of the trout, and the dreamless sleep by the camp-fire and under the shining stars. No, they have no idea of the glorious life a true camper leads. They gather up their dog-carts and four-in-hands and journey to the wilderness merely to be in the fashion. Thank heaven! there are some portions of the Adirondacks yet to be reached only by the stream and the trail.

Mr. Wing in FOREST AND STREAM of July 28, under the caption "Hard Lines in the Adirondacks," gives a touch of the discomforts attending a life in the wilderness. But probably he went in too early in the season to avoid the annoyance of the mosquito and the fly, for I was not greatly troubled with them. I surrendered more blood to the mosquitoes in one night in a hotel at Toledo than I shed during my five weeks in camp.

Another thing: Mr. Wing doubtless pushed ahead too far each day and wearied himself by excessive labor. One should travel moderately at the start, increasing the extent of the day's journeys as the muscles harden to the work, and at the end of a week or two he will be surprised at the distance he can travel and the hardships he can undergo in that bracing atmosphere without fatigue. I mention this because I know that Mr. Wing does not complain under ordinary difficulties. Years ago while I was encamped upon one of the wilder islands of the St.

Lawrence, I peeped out from my tent one midnight and saw a pale-faced boy lying upon the ground near by rolled in blankets and sleeping in the moonlight without other covering than the starry vault of heaven. It was this same plucky Ralph Wing, who had paddled along the margins of the great lakes in a little canoe with meager outfit, and was cheerfully roughing it to a degree that would have disheartened many a veteran of the woods. During the years that have intervened since then, in our respective canoeing wanderings our eccentric orbits have several times undesignedly crossed each other and we two have briefly renewed our fragmentary acquaintanceship. This year we missed striking hands in the Adirondacks by probably a day or two.

Western canoeists must cruise more extensively than their paddling brethren of the East. Wherever I go in my canoe, east, west, north or south, I see the flash on some quiet lake or mountain stream of a Western double blade, but to see an Eastern canoeist I must go to the East. The tendency of the East is toward racing, that of the West toward cruising, although there are notable exceptions to the rule. The cruise of the Western man seldom gets into type; the racing of the Easterner is his commonplace event. The perfect canoeist that is to be evolved in the coming years must combine the qualities of a perfect cruiser with those of a perfect racer; but seldom do we see them united in one person in these days of the infancy of canoeing. ORANGE FRAZER.

WILMINGTON, O., Sept. 12.

WACHAPREAGUE.

Editor Forest and Stream:

"Where the deuce is Wachapreague?" I have heard said more than once. I propose to tell through your valuable journal and also some of the attractions and advantages it presents for sportsmen. Virginia owns two counties on the Lower Peninsula, bounded by the Atlantic on the east and the Chesapeake Bay on the west. Cape Charles is the lowest point on the Peninsula. The New York, Philadelphia & Norfolk Railroad runs the entire length of the two counties, with two trains daily each way. We have a daily mail, and New York, Philadelphia and Baltimore papers reach us the day they are published. There is also daily (except Sunday) communication with Baltimore by the Eastern Shore Steamboat Co. to Onancock (ten miles) and to Bogg's Wharf (eight miles).

The nearest stations on the railroad are Only (seven miles), Milford (three miles), and Keller (five miles).

Wachapreague is on the river of the same name that runs in from the ocean—the ocean is distant about three miles in a straight line and some six by the river, as the river has many turns. Vessels passing up and down the coast are in plain sight of the town. The tide rises and falls some 5ft.; you can carry 10ft. some three miles up the river at mean tide, I mean above Wachapreague. There are some 300 inhabitants, mostly oystermen and fishermen.

There is not a healthier place on earth. We are not troubled with mosquitoes, and during the past summer, when Long Branch, Atlantic City, etc., were rendered almost uninhabitable by them, we had none. Malaria is unknown.

Wildfowl, i. e., black ducks, blackheads, brant and geese, etc., are plentiful, but difficult to come up with, as the people are not conversant with sinkbox shooting and the waters are too extensive and the tides rise and fall so as to make bush blinds inconvenient. To sum it up, to one accustomed to the convenience of the Chesapeake Bay shooting above Baltimore, as I have been, ducking here is too hard work. However, with scows and batteries, such as they use at Havre de Grace, the wildfowl shooting should be excellent. Quail are abundant, but later in the season, after being shot at, they become wild and take to the woods. There is not a tolerably decent bird dog either in or near the town.

The fishing is unsurpassed on the Atlantic coast, north of Florida. It commences the latter part of April and lasts until late in November. We have weakfish, spots and pigfish, the last the best pan fish in the world, also sheephead, black and red drum. The sheephead do not take the hook kindly, but it is great fun to strike them with grubs at night with a light. I have killed nineteen of a tide, and others many more. The weakfish, spot and pigfish are taken inside, in the many channels and branches of the river and in the broad water between the islands and the mainland. The black drum are caught principally in the surf.

But from the middle of September until the run of fish south ceases, is the time for our great fun, when we go out on the ocean. I have never caught a tarpon, but there is far worse sport than to be fast to 30, 40 or over 50lb. red drum on a 300yd. 15-thread line. I have sometimes been over an hour bringing them to gaff. They make quite as good a fight as a striped bass, and what is better, drum of that size are plenty while striped bass are not. Of course drum can be caught outside as early as June, but the sharks and dogfish bother you. It is great fun to go after shark properly rigged for it.

In October the big weakfish of 10 and 12lbs. commence to run, and then the man with the rod and reel is in his glory. The people here use the hand line exclusively, as they can catch more, which is an object to them, as they salt them for winter use. Until the Accomac Club bought a place here I had the only rods and reels in the county. You would have laughed to have heard the comments of the natives on the 15-thread line. "Dou you 'spect to ketch a drum on that? Why, he'll tare you up." It so happened the first time I went out, with two companions, I struck the first drum. "Give him line." "let him run," and lots more of advice. I was not a novice with the rod and reel, but it was by far the biggest fish I was ever fast to. I quietly remarked, "My friends, this is my private funeral; please let me alone." After taking viciously some 200yds. of line, the fish circled around the boat, twice making the line hiss as it cut through the water; then he weakened, and in some thirty minutes I had him side up at the boat. One of the men grabbed him by the gills and slid him over the gunwale. To say I was proud but feebly expresses it, and I was made more so by such comments from my companions as "Well, if I hadn't seen it I'd never believed it," and "it sartainly beats anything I ever seed." I caught two that day, one of 30lbs. the other of 52lbs.

The shore or beach bird shooting is excellent and close at hand, but the birds are not near so plenty as a few

years ago. There are no finer oysters in the world, and in any quantity. Hard clams abound, as do scollops; there are very few soft shell clams, and hard crabs are plenty, but not much used except for bait. For some unaccountable reason nearly all the crabs are the she ones, the big Jimmy crabs going up the bay shore.

After giving this far from exhausting account of the attractions of this place for persons fond of outdoor sports, I will now tell you what is the principal cause of this communication. My place is about an acre in extent, running down to the river. Next door to me is another place rather larger than mine, with a new house (four years old) on it, and all necessary outbuildings. It is the property of a person nearly eighty years old and his wife, not much younger. Their children are not willing for them to live there by themselves, and the place is for either rent or sale. Now, Mr. Editor, I have not one cent of pecuniary interest in this place, but I do desire, as is quite natural, to have a congenial and companionable neighbor or neighbors. The house has some eight good-sized rooms to it, with porches back and front, it has some really architectural merit. The yard, like mine, runs to the river, and there is an excellent garden of more than an acre adjoining that can be rented with the place, not bought. The drinking water is most excellent.

By thus bringing the place to the notice of your subscribers, I am in hopes that some of them may be tempted to join together or individually rent or buy one of the most desirable places for shooting and fishing I know of. The fishing being mostly in smooth water and inside, is equally as desirable for ladies as for gentlemen. There is still-bathing within 100yds. of the house, and surf bathing a short distance off. The rent asked (also the purchase money) is so ridiculously low to a "city man" that I prefer giving it by private correspondence. Of course after either renting or purchasing they can make their expenses what they please in the way of furniture, table, etc.

There are two clubs in the county now; one the Accomac club of some twenty members, about four miles down the river (Mr. Wood, of tarpon fame, is a member of it), the other is at Revels Island and has some one hundred members, I believe, from all parts of the country. It is very inaccessible, being a long sail to it. Mr. Hamilton Diston, of Philadelphia, owns, I think, several shares in it, and his steam yacht Manatee is a frequent visitor to our waters for shooting and fishing.

Of course no one would rent or buy simply on my representations and without visiting the property. I assure any proposing renter or purchaser that I have very poorly presented the desirability of the place to those fond of outdoor amusements.

I will be happy to correspond with any one who may desire to know more particularly about it, and give them the price and rent, which is trifling, but I request any correspondent will be so kind as to give me either New York, Philadelphia or Baltimore references. My desire for this must be evident. If satisfactory I will be glad for any proposing visitor while inspecting the place to be my guest.

Any letter addressed to "Wachapreague, Accomac Co., Va.," and inclosed to the FOREST AND STREAM, will be promptly forwarded to me.

Natural History.

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THE AMERICAN BADGER AND ITS CONGENERS.

BY R. W. SHUFELDT, U. S. ARMY.

SIR WILLIAM HENRY FLOWER, F. R. S., Superintendent of the Natural History Collections in the British Museum, in his classification of the Mammalia, divides his SECTION ARCOIDEA into four families, viz.: the *Mustelidae*, the *Procyonidae*, the *Ailuridae*, and the *Ursidae*. In the present connection we have to do but with the first of these, the *Mustelidae*, and this family Professor Flower divides into three sub-families with their genera as shown in the following arrangement:

LUTRINÆ.

Lutra—The Otters.
Aonyx—Species from South Africa and Java.
Enhydriodon—Extinct.
Enhydra—Sea Otters.

MELINÆ.

Mephitis—The Skunks.
Arctonyx—The Sand Bears.
Mydax—The Teledu.
Meles—European and Asiatic Badgers.
Taxidea—American Badgers.
Mellivora—The Ratsels.
Helictis—Species from Asia.
Ictonyx—The Cape Polecat and others.

MUSTELINÆ.

Galictis—The Grison: the Tayra, etc.
Mustela—Martens and Sables.
Putorius—Weasels, Polecats, Ferrets, Mink, etc.
Gulo—The Gulton or Wolverine.

According to this eminent authority we see, then, that Badgers and Badger-like animals fall into the subfamily *Melinae*, of the Family *MUSTELIDÆ*, of the SECTION *ARCOIDEA*.

Mr. F. W. True, the Curator of the Department of Mammals of the U. S. National Museum, presents us with a somewhat different arrangement from this. Mr. True divides the ORDER *CARNIVORA* into two suborders, the *Pinnipedia* (with three families) containing the Sea Lions and Seals; and the suborder *Fissipedia* or Terrestrial Carnivores, with five families, the third of which being the *Mustelidae*, containing the genera representing in the main the three subfamilies of Professor Flower, given above.

In our United States mammalian fauna we have two species of Badgers, the American Badger (*Taxidea americana americana*), the subject of the present article, and the Mexican Badger (*T. a. berlandieri*), the latter being found upon our southwestern border, from whence it extends into Mexico.

Upon glancing at either of the above schemes of classification, it will at once be observed that the nearest kin

to our Badgers is the European Badger (*Meles taxus*), and certain Asiatic and Japanese species (*M. leucurus*, *M. chiensis* and *M. anakuma* of Japan). And, more remotely affined to these, we find our several species of skunks (*Mephitis*); the Sand Bear of the mountainous regions of Assam and northeastern Hindostan, where it is called the Bear Pig (*Bhali-soor*); and those interesting animals from India and south and west Africa, known as the Ratels (as *M. indica* and *M. ratel*).

For a long time, and some writers do still, confound our species (*Taxidea*) with the European Badger (*Meles*), but in reality they are very distinct animals. (See art. "Badger," Brit. Encyclo., 9th ed., for a recent example

Texas, Iowa and Wisconsin to the westward, and used to occur much further east.

Prof. J. A. Allen found marked differences in the skulls of Badgers from specimens collected in widely separated northern and southern districts, and anatomically the animal presents us with much that is highly interesting. Another writer tells us that "the Badger differs from all other mammals in having the lower jaw so articulated to the upper, by means of a transverse condyle firmly locked into a long cavity of the cranium, that dislocation of the jaw is all but impossible, and this enables those creatures to maintain their hold with the utmost tenacity."

We must also note that Badgers vary both in color and

standing, as it does, higher on its legs, presents us with a very good combination of a bear, a pig, and a badger; but the limitations of space will prevent me from entering upon any description of the habits of this highly interesting representative of our group, from India.

Badgers subsist upon a very varied diet, consuming indiscriminately fruit, birds' eggs, insects, frogs, small mammals, nuts, and roots; our American Badger, however, has been found to be far more carnivorous in its tastes than its European cousin.

These animals spend most of their time during the day in the deep and extensive burrows which they are so eminently fitted by nature to excavate. They come



FIG. 1.—THE AMERICAN BADGER (*T. a. americana*).—ADULT MALE.

of retaining our species in the genus *Meles*.) Professor Baird has remarked that, "This genus is so strikingly different from *Meles* as to render it a matter of astonishment that the typical species were ever combined." (Mamm. N. Amer., p. 201). If one will compare the head of the American Badger here given in Figure 1, with my drawing of the head of a European specimen in Figure 2, it will be seen at once how different, both in form and coloration, these parts alone are; and further, these differences are fully supported by the remainder of the economies of the two species.

Our Badgers then are plantigrade carnivora, and the best and most elaborate account of the form, structure, and habits of the American Badger, that the writer knows

size, depending upon the locality in which the specimens are collected; but these variations imperceptibly merge as we come to compare series from all parts of the geographical area over which the species is known to range.

For the past three years the present writer has resided at Fort Wingate, New Mexico, and during this time has seen a number of Badgers which were collected in the vicinity, and for a long time had a fine one in captivity. But the largest of all the specimens of the American Badger that I ever saw or read about was a specimen recently captured here (Aug. 14) by Mr. M. B. Miller of Philadelphia. This animal actually measured, from "the tip of his nose to the tip of his tail" 32in., and was a splendid adult male, of correspondingly magnificent pro-

abroad and feed chiefly at night, and it is the rarest thing in the world to find a pair of them together on either occasion; for some reason or other the sexes pursue their avocations usually apart. In sections where they are plenty, however, we may occasionally catch an old fellow away from his stronghold, when he will be seen to literally flatten himself out and endeavor to creep back unobserved to his hole. Seven or eight years ago, while hunting through Wyoming, I once surprised a large Badger in this very way, and did not sight him until he was within about 20ft. of his burrow, when, my gut being loaded with buckshot (as I in turn was also being hunted!), I opened upon him, and distinctly saw that he was struck in several places by the balls. He absolutely



Fig. 2.

RIGHT LATERAL VIEW OF THE HEAD OF A SPECIMEN OF THE EUROPEAN BADGER (*M. taxus*).

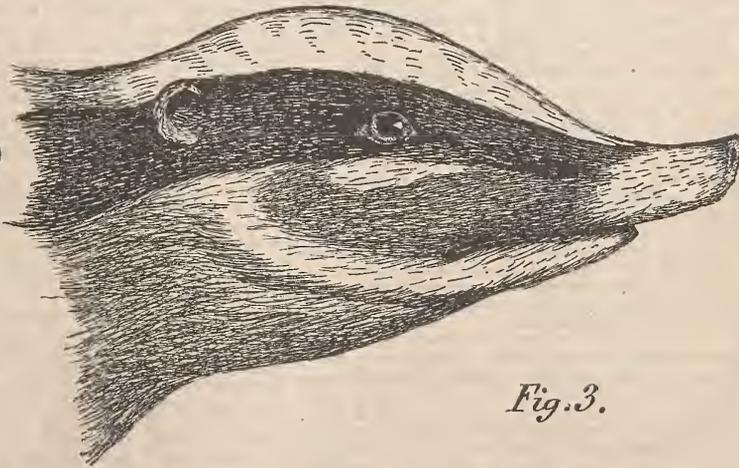


Fig. 3.

SAME VIEW OF THE HEAD OF THE SAND BEAR OR BADGER OF INDIA (*A. collaris*). BOTH FIGURES DRAWN AND REDUCED BY THE AUTHOR.

anything about, is given in that very excellent work, the "Fur-Bearing Animals," by Professor Elliott Coues. Omitting the more lengthy parts of this eminent authority's description, and briefly quoting the essential characters for our purpose here, the American Badger may be said to have the "top of head darker than other upper parts, with a median white stripe; sides of head below the eyes, and its under surface, white, with a dark patch before the ear; limbs blackish; body-coloration above a grizzle of blackish with white, gray or tawny, or all of these; below uniform whitish, shaded or not with gray or tawny. Form stout, thick-set, indicative of great strength and little agility; body broad, depressed; head flattened, conoidal; tail and limbs short; feet broad and flat [five toes on each foot]; fore claws enormous, highly fossorial. Pelage of body and tail [which is short] long, loose, shaggy, and of coarse texture; shorter and closer on the head and feet."

The American Badger is found in this country from

portions. I was permitted to make a photograph of this specimen, and from this, by a method which rendered an absolute accurate copy, I made the drawing presented in Fig. 1, which will give the reader an excellent idea of the general form and coloration of our Badger. It represents him in the very act of commencing to burrow, which captive adult specimens will do at first whenever the opportunity offers, and it is truly remarkable to see how rapidly they will make a sizable excavation in the ground, absolutely making the earth fly with their powerful claws during the operation.

As comparison enhances all study in animal forms, I made also two other drawings (Figs. 2 and 3) for this article; one of the head of the European Badger (*M. taxus*), and the head of an Indian Badger or Sand Bear, alluded to above (*Arctomys collaris*). These figures show the predisposition to black and white longitudinal banding in all badgers.

This Sand Bear with its long piglike tail and snout, and

made the dust and stones fly in his rage, and bit himself as he rolled over and over in his agony; notwithstanding this he recovered himself sufficiently to reach his burrow before I could head him off, or thought it necessary to deliver him another shot.

Sometimes when one runs into his burrow he may in a moment or two suddenly appear at its entrance again to inspect the intruder, and I've seen Indians take advantage of this habit by running up suddenly to the entrance and deliberately kill the animal with a pistol shot as he showed his head. Indians frequently capture them, too, by running upon them mounted on horseback, and dismounting as near them as possible, complete the chase and capture them on foot.

Few animals, however, prey upon or even molest the Badger, and man proves to be his worst enemy; indeed, they are strong and determined fighters, and even wolves and coyotes do not care to interfere with them, and generally offer a wide berth when they chance in their way.

Game Bag and Gun.

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TIGE.

Our Badger is very fond of young "prairie dogs" (*Cynomys*), and undoubtedly feeds also upon many other small mammals which inhabit the same regions, gophers and mice. Audubon figured his Badger with a horned lark (*Otocoris alpestris*) in its claws, but we must believe that the animal captured, in this case, was a sitting bird, for it by no means possesses the requisite agility to take birds in any other way. It has not been satisfactorily proven that the American Badger is as fond of honey as the European species is long known to be, which latter will dig up bees' nests to obtain the luxury. The taste, however, runs in the family, as the generic name of the Ratel will indicate (*Mellivora capensis*).

So far as trapping Badgers goes, the writer has no experience with it, but I have often wondered how a very ingenious trap the Indians have for the "prairie dogs" would work. The Indians will take a small barrel with both ends knocked out, and stand it up on end so as to include the entrance to the burrow; they then fill it with sand, and continue to do so until it ceases to run down the slanting descent of the burrow, and the barrel itself is full. The "prairie dog" soon wishing to get out, comes up to the entrance, and finding it filled with sand loses no time in scratching his way through it and through the sand in the barrel, but this material immediately fills in behind him as he digs, and upon appearing on the sand on the outside and on top of the barrel the waiting Indian makes a rush for him. The doomed animal quickly turns and endeavors to find his way back through the sand to his burrow, but the Indian wheels the barrel one side, and running his *barred arm* down through the loose sand in it firmly grasps the struggling marmot and drags him once more into the light of day, when he ignominiously knocks him on the head, as the good quality of the flesh of this ground squirrel is well known to most Indians. It would interest me very much to see this tried on some wily old Badger just to see how he would take it, but I would advise the wearing of cast-iron gloves while engaged in fumbling in the sand in the barrel to ascertain "if the bar was thar."

My captive Badger, an old one, soon became quite tame, and when in a good humor allowed one to stroke and even handle him. He was fed principally upon raw meat, but ate nearly anything and everything that was offered him. They are very fond of water and drink a good deal. Incidentally I would like to remark here that I have kept tame "prairie dogs" too, and have a most engaging little pet of one now, and it is a very prevalent and very erroneous notion that they do not drink water, for they are more than fond of it, and at once show the effects when they cannot obtain their regular supply. These little animals will also eat almost everything they can get a hold of, and I have already published in *Science* their fondness for raw meat, but some people would smile to see mine sit up on his haunches and enjoy a slice of oyster pie. But we are digressing, and to return to our Badger, I would, before closing, call attention to some of the economic uses of the animal, and to do this I cannot present the matter in better form than to quote from Coues's admirable account already alluded to; this distinguished mammalogist says that "The flesh of the Badger, like that of the Skunk, is eatable, and doubtless often eaten by savage tribes, though not to be recommended to a cultivated palate."

The specimens I have skinned, even the young one before mentioned in this article, emitted during the process such rank and foul odor as to be simply disgusting. The Badger yields a valuable and at times fashionable fur, used for robes, and for muffs, tippets and trimmings. Thousands of shaving-brushes are said to be annually made from the long hairs, which are also extensively used in the manufacture of artists' materials, one of which is a "badger-blender." In 1873 the London sales of Badger skins by the Hudson's Bay Company were 2,700, at prices varying from one to seven shillings, averaging 1s. 6d. The leading American journal of the fur trade in 1876 quoted Badger skins at \$1 for prime, 50 cents for "seconds," and 10 cents for "thirds." The colors of the Badger pelt, though not striking, are pleasing, being an intimate and harmonious blending of gray, tawny, black, and white, the colors ringed in alternation on individual hairs. The gray predominates, the general "tone" or effect being a grizzled gray, which has given rise to the well-known adage "as gray as a Badger." ("Fur-Bearing Animals," pp. 288-289.)

We still stand in great need of concise accounts of the more obscure habits of our Badger, and so far as I am aware, there are no published accounts of accurate and reliable details of the reproduction of the species, nor the periods of gestation and lactation, subjects as yet, I believe, unknown to science.

And, those who may be residing in parts of the country where Badgers are plenty, can make a very acceptable contribution to our knowledge of American mammals by collecting and making careful observations on these subjects and duly publishing them.

SPARROWS DRIVEN OUT BY WORMS.—Sing Sing, N. Y.—Until two or three days since a brood of English sparrows have had their roosting place in a Virginia creeper, just outside a window of the room where I am writing. This year the web caterpillars have been unusually abundant in the neighborhood of Sing Sing. They are found crawling everywhere in the village. After they had stripped a mulberry tree—that grows at the end of the piazza—they seized upon this Virginia creeper. A number of them are now denuding it, and at length have exposed the covered angle of the chimney, where the sparrows had their cosy roosts. Such behavior on the part of the caterpillars has been too much for the sparrows. They have had to give way and move off. This time the sparrows have been driven out by the worms.—A. H. G.

Our extinct volcano has always been the admiration of our townspeople and of the strangers who have come within our gates. Rising by a graceful elevation on one side, from its long cape stretching far out into the western waves, displaying at its top the perfect rim of its crater leaning gently over toward the town, and its other side running abruptly into a ridge of peaks that drop down lower and lower till they are lost in the interminable mass of mountains to the north, it stands a most notable landmark and beautiful background to the island-gemmed bay of Sitka. We have often heard it compared to Vesuvius, and the bay to that of Naples, by travelers who had seen the glory of the Mediterranean, and we have given our fancies play in picturing the grand effect that must have illuminated these rugged peaks, and the tumultuous billows of the dark Pacific, when Edgecombe was sending forth his volcanic flames.—*Sitka Alaskan.*

HOW the changing season brings changing moods! With the soft April winds, with the willows growing green down by the spring came the impulse to get rods and reels in shape; now with the air sharp and keen with September frosts, and the willows withering in the cold winds that will soon leave their long gaunt arms swinging in the winter blasts, rods and reels are forgotten, and our twelve-bore is brought from its resting place.

This has been a season of disappointment to me, and bright anticipations have been turned to sad experiences and painful realities. When about ready to start for the Mastigouche Lakes a great shadow filled those June days, and through its darkness I carried a dear friend to her long home. September came, which I had looked forward to for my Canada trip, and found me bolstered up in bed. As I lay there I found pleasure in living over again pleasant days spent in camp; remembering how beautiful were the woods, how bright the waters that hurried down from their fountains hidden far back among the hills to swell the waters of Pine Creek, as it too hastened to the sea.

We had broken camp; a lumberman with his ox team had come to take us out to our new camping place some ten miles away by the roundabout wood road, while across the mountain it was hardly half the distance. Dana and Jake, my companions around many a camp fire, started with the team, while I concluded to go over the mountain, promising to meet them at the lumberman's house, from which we were to start in the morning for our new hunting grounds. I strapped my blanket on my shoulder and taking my rifle started on the tramp, first taking a good look at my compass that was to be my only guide through the pathless woods. A long walk brought me to the summit; a forest fire had killed the timber and it would have been a desolate place only that the fire as it burned the great trees away opened up a vista as beautiful as I had ever looked upon. Away toward the Susquehanna the hills lay dark in their own shadows; to the east, the mountain tops reflected the golden light of the setting sun. I stood on a carpet of crimson and green, where the polished leaves partly hid the bright wintergreen berries, and looked upon the beautiful picture deep forgetful of the long walk before me. At last a great deep shadow came over the mountain and filled the valley; the sun dropped out of sight, no twilight seemed to stand between the day and the night; and before I realized it I was shut in by the darkness. It was too dark to think of going further, so finding a large pine, that after fighting flame and storm had been beaten to the ground, I started a fire, piling against the trunk the limbs that were scattered near. Eating a piece of jerked venison that fortunately I had in my pocket and for dessert a handful of berries, I wrapped my blanket around me and was soon asleep, tired out with my tramp; it was that full resting that only a tired hunter—one who loves the woods—ever enjoys.

Soundly I slept, and only awoke as the gray dawn told of the coming day. But where was I? In my dreams I had forgotten the experience of the day before; all around me was the ocean; as far as I could see was the slow, still motion of its waves; no shore in sight as it stretched out until it met the sky; here and there were little islands, just such as the one on which I stood. For some moments I gazed and wondered. A little flame started up from the embers of my fire, then I remembered that not long ago, somewhere, I had started a fire against a great log; there was the log nearly burned through; in the flickering flame I saw my rifle covered over with a strip of bark; little by little I unravelled the mystery; as I wound up the tangled thread the sun lighted up the heavens and touched the top of the waves until they burned like fire opals; higher and higher it rose, and as it sent its warm rays deeper and deeper, this great sea of fog lifted and floated away in fleecy clouds; the little islands, on one of which I stood, were the tops of the hills that had lifted their heads above the mist, and all night long had been looking up to the twinkling stars. Along the valley of the big creek the fog lingered, and by these white signal flags I could trace its way to the river. A walk of an hour brought me to the little clearing. "Well, we thought you were lost" was the greeting of my friends.

While eating our breakfast we discussed our plans and wondered how we would make out with our footsore dogs, whose feet were so tender, running on the frozen ground (for the good name of the party, let me say we only used them for "ridging"); they were broken to come back after starting the deer and never ran longer than a half hour, and the little tracking snow was fast disappearing. Our host told us he had a good dog, and if we would spend the day with him he would show us a deer in an hour. He was a whole-souled fellow, and the generous way in which his invitation came decided us at once. His long, full-stocked rifle was taken down from behind a pair of great spreading antlers, and we started for the log shed to get the dog. As he pulled the pin a great surly brindle bulldog pushed his way through the door, and only after a cuff from his master did he cover his teeth that he had been showing to the strangers. Our surprise was only increased when, with a laugh, John said, "There, boys, is Tige, the best deer dog in the country." We had our doubts about it, but thought by sundown we would know for ourselves.

Across the creek and into the woods we filed and hastened up the ascent until we reached a bench half way up the mountain, stretching along its side for a long way. North of us, and in a sag of the mountain, was "Dark Hollow," where our guide told us he would start the deer. Dana was to take his place on the other side of the bench; Jake was to stay near where we stood, while I was ordered to go on through a piece of large timber to find a knoll, and there to take my stand. I noticed John was very particular in his instructions to me, and as he turned to leave us there was a smile on his face as he said, "Young fellow, keep your eye out." In a minute he was hid by the bushes, his brindle dog close at his heels.

I hurried on and soon found the grove of great trees, and on the other side the little knoll where I was to take my place. The air was cold and chilly under the shadow of the tall pines, although the bright sunshine came sift-

ing through their tops. Soon I had a fire built; standing against the tree I kept a keen watch. Somehow I had a presentment that a deer was to come that way and he was to be my venison. Far away through the timber I caught a glimpse of something on the move. I hardly had time to reach my rifle before a noble buck came bounding into sight. He kept a straight course toward me until within a hundred yards, when he quickly turned at right angles. I threw my rifle into an open space ahead of him, and as soon as I saw hair, I pulled. As the smoke lifted I saw him floundering on the ground. I loaded my rifle as I walked toward him. Once or twice he rose up on his hindlegs, but could not straighten up in front. I felt quite sure I had broken his shoulder; but what was my surprise to see him jump up, and before he fairly started the brindle dog Tige had him by the nose. The most savage fight I ever saw was between this great buck and the fierce dog; they were so "mixed" I was unable to get a shot, until the deer with his antlers was pressing the life out of the dog as he held him down; a quick shot and he rolled over dead. I took out my knife and walked up to cut his throat, when the dog turned his blood-shot eyes toward me, and with an ugly growl gave me to understand he claimed this meat and to keep hands off. Soon echoing through the woods came the words, "Let him alone, let him alone." I thought there was little need of his making quite so much noise or telling me so often what I had already found out. Soon John came in sight. After cutting a great ox goad he walked up to his dog and ordered him away; but only after using the whip could he make him mind; several times I thought he would fly at his master. This I found to be an old trick, and with every deer he pulled down his master had to give him a like thrashing.

The rest of the party hearing the shots soon found us, and the story was told. Dana calls out, "Shot twice, did you miss once?" "No sir!" "Well, there is but one ball hole." There the deer lay stretched out showing the side that was toward me at both shots; I was puzzled. We noticed one of his horns was off, but thought that in the fight it had been broken. We turned him over and there was only the mark of one ball as it passed out. "Here it is," and Jake showed where the first ball had plowed a groove along the skull and cut half the horn away at the very base; so the shot I thought had broken his shoulder had only stunned him and he was getting his senses as the dog came up. We soon had him dressed. John as he brings the pole on which we were to carry our game calls out, "Say, fellers, I s'pose it is pretty late, but I guess I ort to have told you, my dog never barks; he runs swift and orful still." I then brought to mind how swiftly that deer ran when he came into my sight, how every hair seemed to stand on end as I first walked up to him, frightened an hundred fold more by this wolflike enemy than a hound baying on his track. As we hung him up in the shed that afternoon we found he weighed 195 lbs., the largest deer I ever killed. I tried to make friends with old Tige as I fed him, and all voted that "he was the best dog in the country." SPRUCEWOOD.

CENTRALIA, Pa.

MAINE WOODCOCK SHOOTING.

WOODCOCK shooting in Maine is something of a novelty, and yet under game protection there begins to be something of a chance for that best of sport. In locations where twenty or thirty years ago such a bird as a woodcock was not known there is pretty fair shooting to-day. This pertains to portions of the State not more than forty or fifty miles from the seashore, since in the interior and the more northerly portions of the State the climate is thought to be too severe for the woodcock to thrive. My attention has been called quite forcibly to the possibilities in regard to this bird in that State within a few days. The 5th day of September was a legal holiday in Massachusetts, and it was possible for me to get away to the woods. With work finished on Saturday evening, 7 o'clock found me on board the cars on the Boston & Maine, bound for Lewiston, and then up into Oxford county, where the grouse are fairly plenty. No thought had been given to woodcock, though the open season had begun on those birds on Sept. 1, the same as on the partridge. By 2 o'clock A. M. I was at Lewiston. A few hours of needed rest were taken, but shortly after daybreak I had started, gun in hand and on foot, for Hebron, a town fifteen miles to the north of Lewiston. My gun was in the case, for it was Sunday morning, a legal close time, in all seasons, on game in the Pine Tree State. But the beauties of that September morning I shall not soon forget. The weather was perfect. Not a breath of wind, and yet the air was crisp and frosty. All Lewiston and Auburn, cities including some 40,000 or 50,000 inhabitants, was as silent as the morning itself. As I left the town almost a feeling of loneliness crept over me, and I thought perhaps I might see even a social dog, but no dog came in sight. A single Thomas cat made a leap from a front yard fence as I passed, and ran after a rival, catching him astern and administering a drubbing that made a good deal of fur fly, even if it hurt no further.

I had started out for a long walk, though I by no means intended to walk the whole distance to Hebron; for an arrangement had previously been made for Horatio to start with the team at about the same time that I left the town, and to drive toward Lewiston, on the new road, till he met me. But this new road proved to be just what I wanted. It has been built but a few years and for a number of miles there are no dwellings on it. It runs up the valley, beside the pond and mainly through the woods. The first human being I met was a milkman on the road to Auburn with his cans and a quantity of sweet corn and other vegetables, evidently for the Sunday dinner of some of his customers. He saw my gun, though in its case and he accosted me with:

"Going to try the woodcock to-day?"

"No; possibly I may try them to-morrow. But it is close time in your State on Sunday."

"That's so; thought possible that you didn't know it. But seein' it's you, you can really get some woodcock up the valley to-morrow and not go mor'n five miles from Lewiston. The corn canning shops are all running about here just now and the gunners are nearly all at work; so that the birds are undisturbed. I went out only an hour the next day after the law was off and I got four."

"Well," thought I, "that is pretty good for a milkman's shooting." I had hardly gone half a mile further when I met another milkman.