

DEER'S VITALITY.—Chicago, Ill.—*Editor Forest and Stream:* The article in your issue of Jan. 17 on this topic reminds me that I once shot a fawn (about eight months old), cutting its belly open in such a way that its paunch dropped out. It was running when I shot, and going to the place where I last saw it I found blood on the snow and took up the trail. Within a short distance of the first blood stains I saw where something belonging to the deer had been swinging back and forth at intervals, leaving irregular marks on the snow, and, not knowing the nature of the wound, I thought I had broken a leg. But on further investigation I found that all its feet were being firmly planted in the snow at each jump. I was puzzled until I reached a place where the deer had lain down. Then I saw that a portion of its entrails were hanging, and had left their imprint in its bed. It was in a river bottom, thickly grown with underbrush, and, though from this time on it lay down at the end of every hundred yards or so, it invariably jumped before I could get sight of it, and I followed it for, I think, fully a mile before it gave me a chance for a second shot, and when I killed it I found its paunch hanging out so that it touched the ground every time the deer did. The wound itself had bled but little, yet I was astonished that such an animal could run so far with its hay basket flopping hither and thither. Another mystery is that he did not catch on some of the brush he was constantly dodging through, and pull the whole business out of him.—G. O. SHIELDS.

DEER MUST BE PLENTY THERE.—Charleston, S. C., Jan. 23.—*Editor Forest and Stream:* I take the liberty of quoting from a letter received this morning from a friend from Flat Rock, N. C., who was here about ten days in a Christmas and New Year's hunt. It is certainly interesting and will give some idea to my northern friends of what sport can be had here. "You will be sorry to have ignored me when I tell you my luck. We hunted eight days, killed fourteen deer, caught four foxes, and killed a lot of ducks, woodcock and partridges. How is that for high? The best of it is, out of the fourteen deer I killed seven myself; stood on an old cawway, and seven deer ran up to within 35yds, and stopped; I tore loose both barrels with my old No. 10, rammed in two more cartridges and blazed away again, at which time four out of the seven bit the dust then and there. We jumped twelve in that small drive and killed six, besides three others that I killed at different times previous to this. I never expect to have such luck again. Only regret that you were not there to help me do some of the tall old tiding that I had to do." The above is the quotation from my friend's letter. The sport he had certainly is good, but, I can assure you, I consider him the best all-round sportsman I have ever met. We want some of your pilgrims, who are seeking a genial climate and are lovers of the dog and gun to wend their way to our "City by the Sea," where a warm welcome and a good time awaits them.—MILBANK.

BULLETS.—St. Louis, Mo.—*Editor Forest and Stream:* In reply to Mr. Theodore Roosevelt's query in a recent issue of your valuable journal regarding the Keene bullet, I use with great success in my .45-90 Winchester a bullet similar to that described by your correspondent R. H. W., in FOREST AND STREAM, Dec. 13, the only difference being that I fill the cross-cut with tallow, which I think increases the accuracy of the projectile, but does not interfere in the least with its action. I also make the cut slightly wider at the point than at the base, thereby insuring the splitting of the bullet. I have brought a grizzly bear to friendly terms with a single bullet of this kind, and a grizzly is never friendly unless he is stone dead. I inclose a rough sketch of the bullet as used by me, which you are at liberty to make use of if suitable.—EX-COWBOY.



FOREST AND STREAM, Box 2,833, N. Y. city, has descriptive illustrated circulars of W. B. Leffin's book, "Wild Fowl shooting," which will be mailed free on request. The book is pronounced by "Nanit," "Gloan," "Dick Swiveller," "Sybillene" and other competent authorities to be the best treatise on the subject extant.

NEW YORK, Aug. 9, 1888.—U. S. Cartridge Co., Lowell, Mass.—Gentlemen: Your new primers gave me the best of satisfaction. I have averaged nearly 80 per cent. of kills both on live birds and targets ever since I began to use them. Yours truly, (Signed) M. M. F. LINDSEY, Supt. American Wood Powder Co., West Hoboken, N. J.—Ad.

Camp-Fire Flickerings.

"That reminds me."

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THERE were out hunting rabbits a few days ago, Jim Shipman and George. They came to a pile of brush and Geo. ascended the brush heap while Mr. Shipman stood guard with his six-shot Winchester in hand; and soon the rabbits commenced coming out about as fast as Shipman could work the pump-gun; and when the smoke cleared away there lay on the ground five rabbits out of six shots. The hunters passed on down the road and soon saw a rabbit sitting in the hedge; and Shipman says, "Here, George, take the gun and see if you can kill it." "But," exclaims George, "what will I do after I hit it with the first load? I do not want to tear it all to pieces, and the gun will keep right on shooting." "Well," says Shipman, "Just hold her up in the air and let her go." "No," says he, "Take it; I won't shoot it, or I will throw the gun down," and so he did and walked off. W. N. J.

ANCHOR, III.

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Hurrah! shrieked the cyclone, as it raged through the Dakota town and killed or destroyed everybody and everything—all but one man who escaped in time by getting down a well. But the cyclone whirled off to one side and back again with the church steeple which it most effectually rammed down after him. Moral: Where there's a will there's a way. E. E. T.

Sea and River Fishing.

FISH AND FISHING IN ALASKA.—I.

THE writer has been occupied for several years in the preparation of a report upon the fishes and fishing grounds of Alaska, as a continuation and conclusion of various preliminary papers published in the Proceedings U. S. National Museum, Volume IV.; Bulletin 27, National Museum, and The Fishery Industries of the U. S., Sections III. and V.

The illustrations of all the species known in the Territory have cost a large outlay of time and money, but this work of the U. S. Fish Commission is now almost completed.

One cause of delay has been the entire lack, until last summer, of deep-water exploration in Alaska. So far as we are informed, the beam trawl was never used in those waters until the Albatross began her investigation of the fishing grounds, and the only deep-sea species recorded in the Alaskan catalogues are the two lance-tongues, or wolf fish, *Alepidosaurus asculaptus* and *borealis*. It has been admitted that a report based upon the shore fishes, which are the only ones we know at present, would need extensive revision as soon as proper apparatus should be employed in the search for new forms of deep-sea animals. Now that the Gulf of Alaska has been explored to some extent and the collections will soon be available for study, we will be able to add materially to our list of fishes, and determine the elements of a fauna hitherto inaccessible to the student.

At the present time we are acquainted with 135 species of Alaskan fishes, 108 of which live in the sea and 27 permanently or temporarily in the fresh waters. Although this may seem a small number when we consider that a greater list of species can be obtained at various points on our east coast during the period of migration in a single year, it should be noted that the proportion of large and valuable food species is very great, and the individuals of a species in most cases are excessively numerous. The number of kinds of food and bait fishes, omitting several that form an important part of the native supply but are not usually classed with the edible fishes, is 62. Of these 15 are permanent residents of the fresh waters, 8 ascend from the sea to their spawning grounds in streams and lakes, and the rest are marine.

Among the fresh-water fishes Alaska has, in common with the temperate regions of the United States, the burbot, the pike, the lake trout and the long-nosed sucker. These are all abundant and grow to a luxuriant size. The burbot is said by reliable observers to reach a length of 5ft. and a weight of 60lbs. The pike develops great size and fine colors, and has a wide range. Dr. Dawson had one measuring 39in. The lake trout is darker and more shapely than the same species from the Great Lakes, its coloration not being exactly matched in the eastern region. The long-nosed sucker is larger in Alaska than in the United States, and is a well marked race distinguished by the length of its snout and some other characters.

In the sea we recognize old acquaintances in the halibut, the cod and polar cod, the capelin, the spined dog-fish and the sleeper shark. Unlike the fishing grounds of the Atlantic, which have receded further and further away from the shore and into depths at which the fishery has become extremely laborious and hazardous, the haunts of the cod and halibut are close to the land in moderate depths, and their young swarm about the shores. Eleven additional sea fishes are common to Alaska and the Atlantic coast.

The fishery resources of Alaska are undeveloped and under-estimated. The salmon canneries, driven to seek new supplies by the depletion of the great rivers of California and Washington Territory, have pushed their way around the Gulf of Alaska, into Cook's Inlet and northward, until they will soon occupy the outposts of salmon migration; but the treasures of the sea are as little appreciated as were the resources of George's Bank a half century ago. The writer has frequently attempted by personal interviews and printed statements to convey a truthful idea of the liberality of nature in providing for the fisherman in Alaska, affording him a superabundance of fish, conveniently located with reference to good harbors, where ample supplies of fuel, water and game may be obtained; spreading out for his occupation tens of thousands of square miles of soundings, inhabited by valuable fish and the food that attracts them. Only recently, when the continued scarcity of halibut and mackerel threatened to ruin the fortunes and starve the families of many of our New England fishermen, did it become possible to draw attention to the fish wealth of Alaska and precipitate a movement of vessels, whose reluctant lead will soon be followed by fleet upon fleet until the Shumagins and Marmot Island, Semimovsky and Unalaska will be as familiar names as LeHave, George's and Grand Banks. Then we will begin to realize the value of our outlying province and the possibilities of its future.

For the sake of students who may wish to know the present constituents of the Alaskan fish fauna, it will perhaps be sufficient to state that the Preliminary Catalogue, published in Proceedings National Museum, 1881, page 239, is to be amended by removing numbers 7, 24, 29, 110 and 114, and adding the species discovered since the date of the catalogue, which are as follows:

- Psettichthys melanostictus.*
- Porophrys ischyros.*
- Polygostoides exilis.*
- Delolepis virgatus.*
- Lumpenus fabricei.*
- Marenzelleria ruberrimus.*
- Xiphister mucosus.*
- Chrotophus polyacteocephalus.*
- Aspidophoroides olridi.*
- Brachyopsis dodecaedrus.*
- Cottus acastrensis.*
- Cottus acillaris.*
- Cottus quadrifilis.*
- Cottus quadricornis.*
- Potamocottus gulosus.*
- Sebastichthys nigrocinetus.*
- Sebastes melanostictus.*
- Micrometrus aggregatus.*
- Coregonus nelsoni.*
- Stenodus nackerzili.*
- Sabletinus umaycush.*
- Rata stellulata.*
- Somniosus microcephalus.*
- Galeorhinus zyopterus.*

The red rockbass, No. 67, is to be replaced by *Sebastichthys brevispinis*. The sticklebacks are represented by three species, and, notwithstanding their pigmy size and stout spines, form a considerable addition to the food supply of the natives and their dogs. All parts of the coast are inhabited by one or more species, and the ten-spined form occurs in streams and fresh-water lakes.

The flounder family is distributed around the entire coast and includes eleven species, or about as many as occur in corresponding latitudes on the Atlantic shores. All of the flounders and flat fishes of Alaska are suitable

for food, most of them being really excellent, and some reaching a great size. There is one, the starry or stellate flounder, which deserves special mention, because it ranges from the southern portion of California to Mackenzie River, and is, consequently, in latitude at least, the most widely distributed member of the family. The species diminish in size and number north of Unalaska, but the proportion of individuals is rather increased. In the high north the stellate flounder and the little polar flat fish are the prevailing species, and they add materially to the resources of the larder. The latter is universally found in the skin boats of traveling parties on the sea coast, and makes up in abundance what it lacks in size. The halibut is one of the commonest fishes of the Gulf of Alaska and Behring Sea; it is not different from ours specifically, but is a plumper fish, and dwells in shallow water about the wharves as well as in moderate depths. The species reaches a weight of 300lbs., and is abundant "in spots," according to recent testimony of Gloucester fishermen who have transferred their industry to the Pacific coast. Our own investigations convinced us that the fish is common except in localities in which the fur seal and other destructive enemies destroy the young and drive the adults from the spawning grounds. One very singular deep-water flounder, occurring in the Gulf of Alaska and southward to San Francisco Bay, has been called the arrow-toothed flounder, on account of the barbed teeth in its jaws.

The cod family has five species in the sea and one in fresh waters. The Gulf of Alaska and Behring Sea have the largest species and the most important commercially, but the Arctic forms are quite as valuable where they occur as any other kinds of fish food. Besides the true cod, which is just like ours, there are pollock, polar cod, tomcod, wachna and burbot. The cod grows as large as in the Atlantic and extends all around the territory almost to the northern extremity of Behring Sea; it is destined to become the object of a very important industry at no distant day. The pollock is a very different fish from ours, smaller in size, slenderer in shape, and with streaks or bands on the sides; it is one of the best baits for cod, and occurs in large numbers on the fishing banks. The polar cod is said to be a delicious fish, and, although of small size, it is taken in excessive numbers and with the greatest ease; this is a species of the far north and a prime favorite for winter fishing. The wachna is scarcely less important to the natives than the polar cod, and it is taken in large quantities. In Cook's Inlet we obtained our largest specimens, about twelve inches long. The burbot is the species sometimes styled eelpout in Eastern waters; in Alaska it luxuriates and grows to the enormous length of five feet, and is said to weigh as much as sixty pounds.

The marine eelpouts (*Gymnelis* and *Lycodes*) include three species which have no economic value; one of them occurs rarely at the Shumagin Islands.

The blenny-like fishes are somewhat numerous, comprising a wry mouth, which is banded and has scales, a crested blenny, a tufted blenny, three kinds of rock eels, three sword-bearers, two eel-blennies, and a spotted blenny, which is an inhabitant also of Greenland seas and the north Atlantic coast. None of these have any present value as food or bait, but they are eaten by larger and more important fishes.

There is one wolf fish, or sea catfish, in Alaska, limited apparently to Norton Sound, and not abundant.

The so-called cusk of Alaskan waters is not at all like the New England cusk, and it is not eaten except by fishes, notably by the cod, for which it is one of the most attractive baits. The species is *Bathymaster signatus*, and occurs abundantly where the cod is found.

The hair tooth is a singular little species which buries itself in the sand near the edge of the tide, leaving only its mouth free, ready for business, and its eyes on the alert for unsuspecting sand fleas, which seek friendly shelter within the fringes surrounding the lips of the concealed angler, whose food comes to him with no further exertion than that of closing his mouth when it becomes agreeably full.

The little spiny lumpfish is common in Behring Sea and northward; it forms a favorite food of the lancelet mouth. At Unalaska we secured about twenty lumpfish from one stomach of this formidable species. The spiny lumpfish occurs on our own northern coast, coming south to the deep portions of Massachusetts Bay.

The sea snails or sucking fishes include four species, none of them very large, and all of them unimportant commercially.

The alligator fishes are represented by five species, one of which is known also from Atlantic waters. The species are all marine. One of them is considered a great curiosity because of its resemblance to a little sturgeon.

The sculpins constitute nearly one-fifth of the entire known fish fauna of the Territory, and Alaska probably deserves the palm for sculpins of enormous size. I have seen specimens over 2ft. long—it would not be safe to say how much over—but they were a revelation to me. Two of the species inhabit fresh waters; the rest are marine, but the four-horned sculpin sometimes ascends streams. Some of the species wear bony coats of mail and two have well developed scales and are savory food fishes. One of the forms is so aberrant that a new family is suggested for it, and still another rivals the sea raven for grotesqueness of shape. Some of the species in the breeding season have the belly fins greatly elongated and the rays armed with stiff, spiny bristles.

TARLETON H. BEAN.

[TO BE CONTINUED.]

ENGLISH AND WELSH FISHERY STATISTICS.—R. Giffen, of the Commercial Department, Board of Trade, reports the quantity and value of the fish returned as landed on the English and Welsh coasts during the month of December, 1888, compared with the corresponding month of 1887 as follows: All fish except shell fish, 1888, 48,275,000lbs., valued at £287,146; 1887, 54,566,200lbs., valued at £323,718. Shell fish, 1888, £19,404; 1887, £30,475. Total value of fish December, 1888, £306,550; 1887, £354,193.

SEA FISHING IN ENGLAND.—H. S. Harland communicates to *Land and Water* information about cod fishing in the vicinity of Scarborough. Good fishing has recently been enjoyed off the Promenade Pier, on the north shore, and very good sport with cod off the "White Nab" rocks, about two miles south of Scarborough. The fish ran up to more than 20lbs. and were in exceptionally fine condition.

PUTTING OUT QUAIL.

THE Passaic County Fish and Game Protective Association, of Paterson, N. J., has resolved to abolish the collection of monthly fees from each member and to entitle all to membership who shall have or may in the future pay the sum of \$1 for admission. This step is taken in the hope of inducing a large number of farmers to join and giving them the power to enforce the game laws, it being believed that a stricter enforcement of the laws could be obtained in this way than by the collection of fees with which to carry on prosecutions. Resolutions were also passed at the meeting providing for the stocking of the woods of Passaic county with quail and rabbits. The severe storm of March 12 last did a great deal of damage to game of all kinds, and steps will have to be taken for the purpose of preventing a total extermination of game.

CHAS. A. SHRINER, Secretary.

Editor Forest and Stream:

Local sportsmen complain about the scarcity of quail during the past season, accounted for in most cases by the blizzard of March 1888, which in the district over which I generally hunt, almost exterminated them. I and some brother sportsmen made up a fund to purchase a few dozen of live quail, which we ordered and received, and they were put out about a week ago, and I received word a day or two ago that they were getting along nicely. Now, my idea in writing this is to suggest that the sportsmen in parts of the country where the birds are now very scarce, and I think this is the case in the track of the blizzard, club together and purchase a few dozen birds for re-stocking. Objection will be made that these sportsmen stand the expense and others who contribute nothing share the benefits. This is unavoidable, but the principal point is the enforcement of the game laws, and these sportsmen, having a moneyed interest in the birds and being anxious to have them thrive, will keep a more or less sharp lookout after them, and in protecting the birds they have distributed will of necessity be compelled to guard all kinds of game in their neighborhoods, and in this way insure better game protection than given by the constables. These birds can be purchased in any moderate quantity, and should not cost above \$4 per dozen. This has been a good winter so far for game, and myself and friends expect to make up in 1889 for the poor shooting of 1888; and it will go hard with any who try to convert our birds into meat before the opening of the season of 1889.

WM. A. B.

NEW YORK.

GAME IN TOWN.

Editor Forest and Stream:

Let me add a few lines to the matter of game in town by relating a little story told to me by Sergeant Oliver Tims of Captain Thomas Reilly's Nineteenth Precinct in New York city. In August, 1881, Thomas Dempsey, doorman of the station house, which is on Thirtieth street between Sixth and Seventh avenues, shot a woodcock which came flying over the buildings at the rear of the station. Dempsey was sitting on the bridge which connects the prison with the office part of the building. He was cleaning his 14-gauge Westley Richards, and had in his gun-rag box two or three cartridges. While rubbing the exterior of the barrels he saw a bird in the air a great way off. He thought it was a swallow at first, but upon the bird coming nearer saw that it was a woodcock. Hastily inserting one of the cartridges he waited until the cock flew in range of the great windowless wall of the adjacent brick building and then took quick aim and pulled. The cock was badly hit, for instead of falling plump it kept its wings spread and, whirling round and round in its descent, fell lightly on the steps leading to the tramps' room. Hurrying to the spot where it fell Dempsey found it with both wings spread, its great eyes wide open, its head bobbing up and down, and its long bill gently tapping on the iron step. It was soon put out of its misery and Sergeant Tims ate it for dinner the next day. It was a male bird, very fat, and of fine plumage. Considering the locality, Dempsey says he made a great shot. Had he not waited until the cock flew in range of the big brick wall of the building, and had he not pulled before it flew past the wall, he could not have at all, owing to the great number of buildings with windows in sight on all sides. This is an illustration of not only game, but good sportsmanship in town as well.

CHAS. BARKER BRADFORD.

NEW YORK, Jan. 23.

PRESIDENT-ELECT HARRISON'S DUCKING.—Washington, D. C.—Editor Forest and Stream: In a recent issue an account was given of President-elect Harrison's hunting trip last fall, and the statement was made, in substance, that nothing more was known as to his love for or experience in that sport. Allow me to supplement it by briefly recounting all that seems to be known of his indulgence in that line in this vicinity during the six years he was Senator and resided here. One December he went, in company with Commander Evans, down to a ducking resort on Chesapeake Bay, and was gone two or three days. According to his own account of the trip, he suffered somewhat from exposure to cold while lying in a blind, but was moderately successful in bagging the wild-fowl. After his return, an attack of rheumatism kept him in bed a day or two, and perhaps warned him to expose himself less next time. There is no reason to doubt, judging from accounts of his acquaintances, that he is a moderate lover of both hunting and fishing, but has found or taken comparatively little time for either pastime.—POTOMAC.

KENTUCKY QUAIL.—Glasgow, Ky.—We have very few ducks in this locality, but abundance of quail, and to each covey of birds at least two pot-hunters. One of these vandals agreed to furnish a game dealer not less than thirty birds per day for a term of two weeks, and before that time expired brought in over 500 birds. He is a dead shot, and with others of his ilk has not left twenty-five birds within a circuit of ten miles. Something must be done to stop this slaughter. "Missouri" says, "The time is coming when the law will stop it." God speed the day.—MAC.

ITACA, N. Y., Feb. 1.—An enormous wildcat, with a ferocious inclination to pounce upon surrounding objects a lurid vermilion, was recently killed a few miles north of here. Two dogs were fearfully cut up by the pugilistic feline before a well-directed bullet ended its career.—M. CHILL.

YELLOWSTONE PARK GAME IN MONTANA.—The Governor of Montana has sent to his council this very sensible recommendation: "My attention has been called to the statute law as found in Section 270, fourth division, Chapter 13 of the compiled statutes of Montana, page 550, with reference to the killing of buffalo or bison within certain counties in said Territory. I am advised that there are in the Yellowstone National Park considerable numbers of this species of animal, and with the view to prevent and save them from extermination, the Congress of the United States heretofore made provision for their protection while on the soil of that Park, and the statute of Montana referred to has been a supporting help to the law of the United States, and to those entrusted with its execution. It will be seen that the act of Montana will expire Feb. 21, 1889. The migratory character of the animal is such that at certain seasons in the year they stray abroad from their usual home grounds and hence may be found without the pale of the United States' guardian care. I recommend that the legislative assembly re enact said provisions and prohibitions so as to apply to the entire Territory of Montana."

NARCOOSSEE, Fla.—A good many deer have been shot around here lately, and on account of the unusually heavy rains they have been forced to leave the swamps and seek dryer quarters on the oak ridges, consequently making it much easier to get at them than is generally the case, much to the delight of the market hunters. Why cannot Florida have a close season for game? Quail have not been as numerous as last season, the coveys being neither so large or as strong. I hear from report that snipe are as plentiful as ever this winter, but not having been out yet I cannot vouch for it.—GENERAL.

TOMS RIVER, New Jersey.—The outlook for quail shooting next fall seems to be very good in this section. Sportsmen report large coveys of old birds quite numerous. The winter has been very favorable for them thus far.—H. W. S.

NEW YORK LEGISLATURE.

[Special Correspondence Forest and Stream.]

ALBANY, N. Y.—Assemblyman Cronin has introduced a bill for the protection of fish in June Bay. It provides that it shall not be lawful by day or night to pull, drag, or in any manner use any purse net, pound, weir, or other device except hook and line for the capture of menhaden or other fish in Jamaica Bay, nor in any arm, bay, river, haven, creek or basin thereof.

Senator Sloan has introduced an amendment to the Forestry Commission act of last year, including Oneida county in the forest preserve. The county was omitted by mistake.

Assemblyman McAdam has introduced a bill prohibiting the selling of partridge and woodcock, killed in Oneida county, outside the limits of that county.

Senator Coggeshall has introduced his bill of last year amending the provisions relating to fishing in private ponds. This is to make such fishing more difficult.

A bill by Assemblyman Maynard, of Madison, amends the law of 1888 allowing a fishway to be placed in Chittenango Creek. As the law read, the fishway would have been placed in Madison county. The amendment allows it to be placed in Onondaga county. The Assembly has passed the bill.

Assemblyman Sayre has introduced a bill reappropriating \$3,000 appropriated in 1886 to construct fishways in the State dams across the Oswego and Seneca rivers.

Lake Ontario comes in for its share of attention thus early in the session. Assemblyman Lane, of Jefferson, wishes to repeal that clause of the law of 1883 relating to the waters of Lake Ontario in the town of Ellburgh, in his county. The law noted above prohibits fishing with net and Mr. Lane wishes to repeal it so far as Ellburgh is concerned.

A bill, by Savery, relating to Lake Ontario, amends the bill of last year (not signed) to protect fish within one mile of the shore of Lake Ontario and islands thereof in Cayuga county. The protection provided that fish shall be caught only by hook and line. But a judge in the town of Ellburgh, in his county, that while a fish and game protector, or constable, could confiscate nets, yet he could not destroy them. Therefore this bill of Mr. Savery's has been altered from the bill of last year to conform to this judge's decision. If it becomes a law confiscation will not follow the seizure of the nets.

Senator Coggeshall has introduced his bird bill which did not succeed last winter. Briefly it provides for shorter seasons for woodcock and partridge. The bill came from the Utica Fish and Game Protective Association. The board of supervisors of that county (Oneida) have passed the same law as to woodcock and partridge for the county and have also adopted a recommendation for a similar general law for the State which is likely to come in later. It is understood that supervisors of other counties have taken similar actions. Allowing to show that there is a wide sentiment through the State to shorten the season for those birds. It is said that the action of the Oneida county supervisors has been backed by one of the greatest market hunters of the State, and that when such a man as he becomes alarmed at the scarcity of woodcock and partridges every one may well be assured of the necessity of the Coggeshall law, or even of shorter seasons for the protection of this game. It is declared by the Coggeshall bill that the lawful season for killing woodcock, black and gray squirrels, shall be only during September, October and November. They may be possessed or sold for fifteen days after the close of said season. In the law as it stands the open season for woodcock is September to January in the counties of Oneida, and Delaware, and in other parts of the State to August 1st in January. The open season for squirrel is during August and February. If it is passed the Coggeshall bill that no person shall kill ruffed grouse or pin-tailed grouse except during September, October and November. They may be possessed and sold for fifteen days after the close of the season. According to the present law the open season is between September and January.

The bill provides that in any action to recover penalty for selling, or offering for sale, any said birds in violation of this section, proof that after a careful examination thereof, such bird did not show any bloody and contused shot marks or injuries, indicating that such shot marks, or injuries, had been inflicted and followed by natural bleeding during life of such bird, shall be received as prima facie evidence to establish the fact of its being snared or trapped. There is a provision excepting the nests of night hawks from the section forbidding the willful destruction of nests; and it is further provided that no person shall set any trap, snare or net, or bird lime or other adhesive substance, or place bird food saturated with alcohol or any deleterious or stupefying drug or substance for the purpose of capturing any game bird, nor shall any person expose for sale, or have in possession the eggs of any wild bird, except those in this section above excepted. The final provision of the bill is that no person shall kill, or expose for sale, or have in possession after the same has been killed, any wild duck, goose or brant between the first day of February and the first day of September in each year. The present law reads May instead of February.

Senator Coggeshall has introduced a bill of great interest to those who care for fish and game matters. They may be briefly described as follows:

First—The amendment to the salmon law was necessitated by the fact that hundreds of small salmon less than six, long were taken last summer in the Adirondacks with rod and line. This was reported to the State Fish Commission by the gentleman known by the U. S. Government to make a report on the river as a salmon stream. He found at the headwaters of the Hudson they were used as a pau fish in place of trout. There is no necessity for this, as there is plenty of other fish there for table use, and if allowed to continue it will not be possible to give the people of the State a fish that has before been unknown to its waters.

Second—The amendment to the shad-net law simply requires that Westchester county shall not be exempt from its provisions, which is, that all nets should be out of the river over Sunday. All the people along the river should be treated alike in their fishing rights. As the law is now it is a dead letter, for it permits nets to be used Sunday only south of Westchester, which makes a barrier across the river near its mouth, and so spoils the good

purpose of the law, which was to give shad and other fish one day in the week clear sailing to get up to their spawning grounds.

Third—The bill providing for fishways in future dams that may be built on public waters is no more than just to the people's interest in the food fish of a stream. The State gives private owners valuable franchises free of charge, and they should at least put in fishways at their own expense in any new dam, as much as a bridge company is required to have a draw where the stream is navigable. The States of Maine and Illinois are more advanced in these matters, having laws that leave it discretionary with the State Fish Commission to order fishways in dams already built as well as those that may be built in the future. The expense of all the construction is paid by the owner of the dam. This law was recently tested in the Court of Appeals of the State of Illinois and pronounced constitutional.

Fourth—The bill for fishways at Mechanicville and Northumberland is one that is earnestly asked for by the people along the upper Hudson. The Hudson is a large and important river for food fish, supplying not only this but adjoining States, and many varieties of fish require to get above tidewater to spawn or they are soon exterminated. A start has been made in this direction by one built in the Troy dam last summer, and when the two above mentioned dams are provided with fishways the fish can then ascend to Port Edward, which will be sufficient distance to show the value of the fishways. The four bills above mentioned are approved and recommended by the Fish Commission of this State.

Assemblyman Little, of Niagara, has introduced a bill forbidding the shooting of quail and partridge in Niagara county. The original bill prohibited this for three years, and as the time is about up now the new bill simply extends the period for another three years.

Sea and River Fishing.

"Sam Lovel's Camps." By R. E. Robinson. Now ready.

FISH AND FISHING IN ALASKA.—II.

[Continued from page 27.]

THE sea raven is occasionally seen in Alaska, and Dr. Steindachner records it from the coast of Asia. It is true that the Alaskan sea raven has been described in Proceedings Phila. Acad., 1880, page 333; but I have seen the type of the supposed new species and do not consider it different from the common Atlantic form.

There is on the New England coast, in moderately deep water, a handsome fish called the redfish, Norway haddock, broom, rosefish, red perch, etc. The family to which this belongs is represented by seven species of a closely allied genus, *Sebastesichthys*. One of them is brilliantly red in color; a second is marked and mottled with yellow, brown and orange, and its spines are high and strong; another is bright orange red, and its sides show five broad, black, vertical bands, making it one of the handsomest fishes in the Territory. All of these species are excellent for food and take the baited hook freely. They are locally known as rock bass, and one of them, *melanops*, really resembles the black bass in its general appearance. The smallest species reaches about 1ft. in length and the largest nearly 2ft. They seem to be limited to the Gulf of Alaska and the vicinity of the Aleutian Islands, and are extremely plentiful.

The family of *Chiridae* is one that we do not find represented on the east coast of the United States, but in Alaska it has many members, constituting some of the best known and most highly esteemed food fishes. Most of the species belong to the genus *Hexagrammus*, and are known to anglers and fishermen as rock cods. These are found in nearly all parts of the Alaskan seas, one of them occurring as far north as Port Clarence and on the coast of Kamtchatka. The most brilliantly colored one ranges throughout the Aleutian chain to Attu and southward to Monterey Bay. The male is much the more beautiful in coloration, and is further distinguished by the green color of its flesh and intestines, due no doubt to the nature of its food. Another species, which is very common at Unalaska, is called "green fish," because of the green color of its meat; the female of this fish has smoky brown eggs. These fishes have always reminded me of the tautog in their variable colors and their general appearance. The color of the flesh does not destroy its excellence, for it disappears in cooking. None of the species are very large, the largest one scarcely exceeding 18in. In one species the sexes are so differently marked that some authors have supposed them to be distinct, and so described them. One of the most important fishes of the family is the kelp fish, Atka fish, yellow fish, striped fish or Atka mackerel (*Pleuragrammus monoptyerygius*). One of the most striking peculiarities of this fish is its taste after salting, which closely resembles that of the mackerel. Its scales are small and the skin is tender and thin. In the fresh state it has a different taste from the mackerel, but when preserved in brine the similarity to salt mackerel is very great. Its favorite haunts are about the Aleutian Islands even to the extremity of the chain, the Shumagins and Kodiak. It is found in great schools at certain seasons, and might be taken in purse seines. Its movements are sometimes capricious, and it may disappear from a locality for months or even years at a time. As a bait for the cod there is nothing better. The species seldom exceeds 18in. in length. The largest fish of the *Chiridae* is the cultus cod, *Ophiodon elongatus*, which is found all along the coast from Santa Barbara to southern Alaska. This is a bold, hard biter, and a fine food fish. In length it reaches 3ft. or more, and specimens weighing nearly 40lbs. have been taken. The last of the series is the beshowe of the Indians, *Anoplopoma fimbria*, sometimes incorrectly styled the black cod. Our friends on the West Coast seem to have determined to perpetuate the name of cod, and, to that end, they have applied it right and left among fishes which have no more relation to a cod than a black bass has to a salmon. The beshowe is considered a very poor fish in San Francisco, where only small or moderate sized individuals are common in the markets; but large fish taken in deep water off Puget Sound and northward are highly prized. The color of these fish is very dark brown, while the young are grayish silvery. As a salt fish the beshowe is much liked, and especially for smoking in the manner followed with the halibut. Shipments have been made to Gloucester and Boston for trial by this method, and the fish has gained an enviable reputation. I have recently learned that the Albatross took this species much further south in California than it was known to occur. In Alaska we have it only from the southern part of the Territory, where it is sometimes mistaken for the common mackerel. The viviparous perches send a single representative into southeastern Alaska, the *Micrometrus aggregatus*, a small fish with very little value as food. Capt. H. E. Nichols found it for the first time at Port Wrangel in 1833.

The sand lance, or lant, are very numerous and widespread, one species extending above the Arctic Circle in summer. These little fishes constitute a large part of the food of cod, salmon and other valuable species; they are in great demand also for bait.

The pike (*Esox lucius*) is a very common inhabitant of the Alaskan lakes, and grows to a large size. An example measuring 39 in. was taken in July, 1887. We have it from the Bristol Bay region, the Yukon basin, and north to the Kowak, a tributary of Hotham Inlet. It is regarded as a very good food fish, although in northern Alaska it is fed principally to dogs. Curiously enough Mr. Fisher has found the pike on Kodiak Island, where it must have been resident before Shellikoff Strait formed a separation from the mainland and set up a barrier to the movements of the fresh-water fishes.

The singular little blackfish forms a family of its own, the *Dallidae*. It exists in countless multitudes in the fresh water lagoons, and is one of the most valuable fishes to the natives. We have specimens from the Bristol Bay region and the vicinity of St. Michaels. Nordenskjöld found it at Port Clarence and also in Siberia. Hundreds of tons of this palatable fish are eaten annually.

The smelts are well distributed and very abundant, the true smelts (*Osmerus*) occurring only in Behring Sea and northward. They are eaten both fresh and dried, and constitute an important part of the food supply. The surf smelt (*Hypomesus pretiosus*) so called because of its habit of spawning in the surf, appears to be limited to the Gulf of Alaska, from whence it extends southward to San Francisco Bay. A smaller species of the same genus has the peculiarity of spawning in fresh-water ponds and is more northerly in its distribution, reaching Kotzebue Sound on the American shores and Kamtchatka on the west. The capelin is identical with ours and is quite as abundant and valuable; it finds its way around the shores everywhere, the young swarming in Plover Bay and on the east side of Behring Strait in summer; we took it at Cape Lisburne in August. In Cook's Inlet, early in July, the salmon were feeding greedily on capelin, and near Kodiak we found the cod gorged with the same delicate food. The eulachon or candle fish, so named because the dried fish will burn like a torch, is one of the best known fishes of Alaska, but it seems not to occur at all in Behring Sea. Southward it extends to the Columbia River. This fish is about equal to the smelt in size and resembles it in general appearance. Ascending the streams in dense masses, it is caught in immense quantities and utilized fresh or dried. As a pan fish it is said to be delicious. On the west shore of Shellikoff Strait, at Katmai, something is done in the way of salting eulachon and the product is sold at Kodiak, where it is greatly esteemed. Eulachon fat is used instead of butter by the Indians, and as a substitute for cod liver oil by some of the druggists of the West Coast.

The whitefishes abound in Alaska and enter very largely into the food supply of the natives. One small species, the round whitefish, occurs on Kodiak Island, the southern limit, I believe, of *Coregonus* in the Territory. The largest of the species has some resemblance to the common whitefish of the Great Lakes, but has a much smaller head and longer body; this one ranges northward to Point Barrow, and rivals our commercial whitefish in size and flavor. The smallest seldom exceeds one pound in weight, and is little used by white people, but extensively by natives and their dogs; it is somewhat unusual to meet a traveling party along the shore that has not several bunches of this bony species. Nelson's humpback whitefish is larger than the last, but scarcely more valuable except for dog food; it appears to be most common from the Yukon northward. The round whitefish, notwithstanding its small size, is a very valuable addition to the food resources of the country; it extends entirely across the northern part of America, reaching New England and Kodiak on the south; some authors state that it enters the Arctic Ocean. The Lauretta whitefish is another small species, not often exceeding 8 lbs. in weight; it is the prevailing whitefish in the far north, being common at Point Barrow. Related to the whitefishes is the great *inconnu* of the voyageurs—one of the largest and finest of the food species of Alaska—known to reach a length of 4 ft. and a weight of 50 lbs. It may be known by its enormous size, strongly projecting lower jaw and its elegant silvery body. Frequenting the large rivers most of the year, from the Kuskoquim to the Kowak, it is most abundant and in its finest condition in midsummer; at the close of the spawning season in January it disappears.

The grayling is one of the handsomest fishes in the fresh waters, and in the spring, which is the season of its greatest abundance, it is much valued as food. Dall mentions it as the only fish in northern Alaska that will take the hook, meaning, of course, in fresh waters; we should fully expect, however, to take the pike and trout in that way. We can trace the grayling now as far as Kowak and eastward to the Mackenzie.

Alaska is famous for its big trout, and they are plentiful enough to satisfy the most exacting. Three black spotted species occur, one of them, the rainbow, once taken near Sitka. Clark's trout, or the red-throated, is abundant and grows very large. We cannot define its northern limit with accuracy, but there is no evidence yet of its occurrence far beyond Unalaska. Gaidner's trout, the ah-shut of the Sitkans, certainly ranges further northward, McKay having found it in the Bristol Bay region. We found ripe females of this species at Sitka in June, and were struck at the time by their similarity to the Kennebec salmon—a resemblance which some dealers are turning to their pecuniary advantage at the present date. The Dolly Varden becomes so large and is so numerous that it forms a staple article of commerce in the sea-run condition under the name of salmon trout. At Kodiak and elsewhere it is extensively packed in brine for shipment to California. This trout is one of the great travelers, and is known to occur in the Colville, the Mackenzie and eastward to the Saskatchewan; southward it dwells in the McCloud. In northern Alaska the natives prepare the skin of this charr to be made into waterproof clothing. The same species is taken plentifully in Plover Bay, Siberia, and also in Kamtchatka. The lake trout, *namaycush*, abounds in the headwaters of the Yukon, principally in the lakes, and in the sources of the Kowak; specimens measuring thirty inches in length have recently been caught. The color of Alaskan individuals is darker than the average specimen from Eastern waters, but there are no important differences to

separate them. This trout seems to be unlike all others in America and the Old World. Its teeth and its excessively large number of appendages near the end of the stomach cause it to stand out alone from its relatives and give it a unique character. Its range is very wide, both in latitude and longitude, covering as it does the whole northern portion of America, and extending south to Idaho and New York.

TARLETON H. BEAN.

[TO BE CONTINUED.]

A MYSTERIOUS MILLPOND MONSTER.

Editor *Forest and Stream*:

Early in September last there was taken from a small sawmill pond of only three or four acres, in the town of Shirley, Mass., a fish which weighed 16 lbs. "What is it?" inquired every one who saw it, but none could give a satisfactory answer. No one had ever seen anything like it. Calvin N. Farnsworth, the owner of the sawmill and pond, himself an expert fisherman, in fact, most of the people who saw the fish, presumed it to be a black bass (*Micropterus dolomieu*) or common sucker (*Catostomus*). But no one had ever heard of a black bass weighing over 7 or 8 lbs., and 3 lbs. would be a large sucker to be caught anywhere in eastern New England. Hearing the "fish story" I became interested and determined to ascertain the facts. The pond was visited and such items of interest as could be gleaned from the captor and his neighbors were obtained.

The owner of the pond, some eight years ago, caught in a small pond, the outlet to Fort pond, in Lancaster, an adjoining town, some shiners for pickerel fishing through the ice. Among the minnows so caught were a good many of what he called black suckers. Possibly, as he was not familiar with black bass, and since they had been planted in that neighborhood, the little odd looking fish may have been of that species. However, he took them all along together, and when he had finished fishing, in the following spring, a goodly number of the bait were left on hand, which, for safe keeping, he turned into his millpond. Some years afterward he observed an odd fish wandering about his pond. The fish grew, as did also his curiosity. Years passed rapidly by, and the monster fish—for such it had come to be—attracted the attention of others. The news spread from town to town, and numbers of people from Lowell and other places came to see it. The pond was so small that the fish could be seen on almost any day. No one of the visitors had, however, attempted to identify it as belonging to any group of fishes known to them. Curiosity ran so high that the owner had reason to believe that an attempt would be made to seize and carry off the prize. All attempts to catch it with hook and line had failed, even when the most tempting baits were offered. One day, as the monster was lying in shoal water near his mill, the owner took his rifle and shot a ball through the fish near the base of the pectoral fin. The huge thing was secured and shown to some of the neighbors, who were surprised that so large a fish should grow in so small a pond, and the question still was "What is it?"

Mr. Farnsworth and others thought it must be the outcome of the shiners deposited in the pond eight years before. The shape of the mouth, the decurved nose, the absence of teeth, its refusal to take bait, all pointed to the sucker family. The depth of body, large scales and spinous dorsal fin would seem to place it with the bass family. But then, bass have sharp teeth in both jaws. The specimen before them had none. The sucker has an elongated body and soft rays. The present example had a very broad body somewhat like a croppie or sheep-head, and in the absence of a little scientific knowledge, much wrangling ensued. At length, the fish was cut up, distributed, cooked and eaten. A cross section was sent to Edwin L. White, a very reliable and intelligent man, though not well up in piscatory matters. He did not attempt to classify the fish, but the enormous size of the section, 28 in. in circumference, provoked a desire to know more of the monster. He at once set about the investigation with the following result: Lateral line, body lying on a board, 26 in.; dorsal line, end of nose to end of tail, 31 in.; depth of body, 10 in.; width, 5 in.; girth 28 in.; caudal fin extended, 11 in.; scales, 2 in. long. He had the good fortune to rescue from the frying pan some portions of the skeleton, which were carefully preserved and kindly lent to the writer for identification. The fragments were submitted to Professor Putnam of the Peabody Institute, and also a member of the Board of Fish Commissioners for Massachusetts, and to Curator Samuel Garman of the Agassiz Museum, Harvard College. They both on seeing the pharyngeal bones with teeth attached, identified it as belonging to one of the carp family. To quote from Pope:

"The thing we know is neither rich nor rare,
But wonder how the devil it got there."

Mr. Garman became very much interested and determined to find out where the carp came from. Carp had been planted in Plymouth, N. H., and in other waters tributary to the Merrimack, but how could one of these small fry stray away so far and get up over a twelve-foot dam? He was, however, untiring in his efforts and had the satisfaction of seeing his labors crowned with probable success. He discovered that a gentleman residing in Lunenburg, the next town above Shirley, had stocked a little pond on his premises with carp (*Cyprinus carpio*). There was a great fever about that time for importing this species from Europe. Great effort was made to cultivate them in this country, we think much beyond their merit gastronomically speaking. While it attains an immense size, possibly to nearly a hundred pounds, yet the edible quality is very low. In central Europe where fish are scarce, carp are eaten by the lower classes to some extent, but we do not remember anywhere on the continent having seen carp served in a first-class hotel. Suckers are sometimes eaten in this country, but are not, we believe, regarded by any class as a luxury. Those who partook of the monster above referred to did not, we understand, pronounce it as possessing fine flavor. But the little pond, which is on one of the affluents of Mulpus Brook, the stream that supplies the pond which was the habitat of our hero, was stocked with twenty of the carp some eight years ago. The next season was a dry one and the pond nearly disappeared. The owner, to save his carp, attempted to remove them to a larger pond, but to his surprise could find but four remaining. The others had probably died or gone down the little stream. It is

now believed that the monster above described was one of the escaped convicts from the Lunenburg prison.

BOSTON, Jan. 23.

W. HAPGOOD.

[Mr. Hapgood deserves credit for having solved the question of the fish's identity. While we do not consider the carp one of the best fish in the United States, we are by no means willing to admit that it is suitable for and relished by none but the lower classes. Some very nice people in Germany, the United States and some other countries rear the carp and profess to enjoy eating it. We have in mind a very successful carp grower near Covington, Ky., who has ample supplies of bass, wall-eyed pike, crappie and other game fishes in his ponds, and yet he eats carp frequently and says they are good; but he never takes them out of muddy water and hurries them at once to be cleaned for the table; they are always kept a few days in pure cool water before they are killed. We have eaten carp taken from a river and really liked them. Much of the blame attached to this fish really belongs to its surroundings.]

WHAT A GOOD TIME JIM HAD.

WE had just finished our dinner when Jim came paddling across the lake in an old dugout that I knew had been condemned twenty years before, using a piece of board for a paddle. The craft was half full of water, and every now and then, as she drew nearer, we could see Jim trying to shovel some of it out with his extemporized paddle. When he came within speaking distance some one hailed him: "Well, Jim, what kind of a time have you had?"

"Just splendid."

"Get anything?"

"Two beauties and some little ones."

Jim came ashore and showed his string of fish, two of about a pound and a half each and five or six of about half a pound.

"I tell you, fellows, I have had great sport. Wouldn't have missed it for anything."

"You look as if you had got wet."

"Well, you know that big boulder down in the second rapid? I was just trying to wade out to it, and I stepped on one of those round, slippery stones and down I went. Swashed me away into the pool, the current did. I think I must have rolled over a dozen times. Held on to my rod, though."

The magenta of Jim's necktie had evidently parted with a good share of its coloring matter in favor of his white flannel tennis suit.

"Where's your hat?"

"I lost it in the rapids."

"How did you get your trousers so torn?"

"Got my flies caught in a tree and had to shin up to get 'em loose. Coming down I slipped and tore my trousers and scratched my leg. I say; have any of you fellows got any sticking plaster?"

"How did you manage to break both your tips?"

"Broke one when I fell in the rapids. Broke the other just before I came away. Hooked a big fellow in strong water and struck him too hard. Smashed my tip and lost my flies."

"Whose rod is it, anyway?"

"Belongs to my brother Jack. He lent it to me. That is, he said I might take it if I would promise to be careful of it. Jack'll be mad as a hatter, sure."

"Lose all your flies?"

"Every blamed one."

"About time you came away, wasn't it?"

"I'd have stayed longer if I hadn't broken my rod and if I'd had some more flies. I say, Cook, is there any soup left? Dick, old man, lend me a pair of trousers, will you? And a shirt. And some kind of a hat. How much sticking plaster? Oh, about six inches long and two inches wide. Blistered my hands, too, padding that confounded water-logged old dugout. Scarlet fever in my nose? Well, it was rather hot in the sun after I lost my hat. Broke my bottle of fly fluid and cut my fingers with a bit of the glass. Expect I'll look to-morrow as if I were just getting over the smallpox. Never mind, it's my last chance this season. Cook, come now, hurry up that soup, will you? Bean? Yes, lots of 'em and plenty of pork. Fry a couple of trout? No, can't wait. Haven't you got some cold ones left over? Only three? Well, bring 'em along. Holy smoke! I never had so good a time in my life. I say, Tom, lend me your rod this afternoon, will you? I know there must be another big fellow just where I hooked that last one. I'd like to take him home to-morrow, only to show the boys what fun there is up here."

So Jim, with the appetite accumulated from 4 A. M. to 1 P. M., ate up all the cooked provisions in the camp, borrowed dry clothes and a rod (for nobody ever refused to lend Jim anything) and went out just before sunset and caught the big trout and went home to show the other fellows what a good time he had had. If he forgot to say that he had tumbled into the rapids, lost his hat, scraped six square inches of skin off his leg, broken a borrowed rod, lost all his flies, been eaten up by mosquitoes, got his face burned to a crisp, his fingers cut and his hands blistered, it was because such trifling mishaps detract so little from the pleasures of an outing among trout streams.

G. DE MONTAUBAN.

QUEBEC.

MICHIGAN FISH LAW.—The Michigan Fish Commissioners have prepared a bill, submitted to the Legislature, which prohibits catching speckled trout or landlocked salmon from Sept. 1 to May 1, and the catching of grayling or California trout from Nov. 1 to June 1. But the State Board of Fish Commissioners may give written permits to any person to fish for a limited time. The fine for violations of this section is from twenty-five dollars to one hundred dollars, or imprisonment up to thirty days or both. The bill further makes it unlawful to kill or attempt to kill fish with dynamite or Indian crockle, or any means employed to stupefy fish. It prohibits spearing or catching with nets during March, April, May, June, September and October, except in the Great Lakes and the rivers connecting them, and forbids the killing of speckled trout, landlocked salmon, California trout or grayling, except with hook and line. The hook and line provisions cover the S. Clair River and flats also. Nets may be used to catch minnows for bait. Fish stocked in lakes by the Commission may not be taken until three years after such planting, and hook fish in streams cannot be taken if less than six inches long.