

**164.—NOTES UPON FISH AND THE FISHERIES.****Compiled by CHAS. W. SMILEY.**

[Mainly derived from the official correspondence.]

**BLACK BASS IN GERMANY.**—Max von dem Borne, writing to Mr. Fred Mather from Berneuchen, August 18, 1885, says :

“Perhaps you will recollect that you recommended to me the introduction of black bass into Germany. In 1882 I received some of these fish, when Mr. Eckardt returned from America. I am pleased to say that the fish multiplied abundantly. I had 1,200 in the fall of 1884, and have caught more than 22,000 fry this season.”

**ZIZANIA AQUATICA FOR GERMANY.**—A request having been received from Max von dem Borne, of Berneuchen, Germany, for some seeds of the freshwater rice (*Zizania aquatica*), a package was forwarded by Howe's Express, April 1, 1885, in behalf of the United States Fish Commission.

**RAISING BLACK BASS, SILVER BASS, AND CROPPIES TOGETHER.**—Mr. William L. Leonard, of Winterset, Iowa, writes, August 28, 1885, that he is highly delighted with his success in cultivating black bass, silver bass, and croppies all in the same pond. The black bass hatched a fine lot of young, and the silver bass which were put in late in the season hatched a few young. He proposes to put blue catfish into his carp pond.

**WORK OF THE MAINE COMMISSION.**—Mr. E. M. Stanley writes from Bangor, Me., January 20, 1885, as follows:

“The Penobscot should have at least 1,000,000 salmon planted in it every year. The only proper system to do justice to our work, to the cause, and to ourselves, is never to plant less than half a million for several successive years in any river to be restocked. But legislators make demands upon us, and as we must have votes, we dare not always refuse to scatter the plants. Our only hatchery capable of carrying a million of eggs is at Enfield. The one at Norway we hire, as also at Weld. At Norway we hatch the eggs for the Saco River. At Weld we hatch 200,000 for the Kennebec and the Androscoggin, as also 50,000 landlocked salmon eggs for Webb's Pond, in Weld. At Rangeley we hatch 50,000 landlocked salmon eggs for Rangeley Lakes. At Moosehead Lake we hatch 100,000 landlocked salmon eggs for that lake. At Enfield I reserve only some 20,000 landlocked salmon eggs for two or three small waters where we dare not refuse.”

**BIG-EYED HERRING TAKEN IN THE POTOMAC.**—On the 28th of August, 1885, Mr. R. A. Golden exhibited at the National Museum a big-eyed herring (*Blops saurus*) which had been taken near the mouth of the Potomac River. It weighed  $3\frac{1}{2}$  pounds. Being the first that he had seen from these waters, he was unable to name it without assistance.

**THE ALBATROSS WORK HELPFUL TO FISHERMEN.**—Captain Collins writes from Gloucester, August 24, 1885, to say that the researches made by the Albatross on its late cruise to the eastern fishing-grounds are much appreciated by the New England fishermen. Capt. Thomas Thompson, who is engaged in the fresh-halibut fishery, desiring to find Hope Bank, was greatly aided by information obtained as to its locality and the knowledge that there were about 2,000 fathoms of water where Hope Bank had been located. But for this he would probably have wasted three or four weeks in looking for it.

**THE WHALE FISHERY.**—Mr. James Temple Brown, who has been collecting information at New Bedford during the past few weeks, states, under date of August 27, that the present arctic season opened favorably, many of the vessels being in Behring Strait before the whales made their appearance. One vessel had killed 9, another 8, others 7 whales each. The tender of the arctic fleet arrived at San Francisco August 24, with 110,000 pounds of whalebone, valued at \$2.75 per pound.

**THE AMERICAN REPRESENTATION AT THE NAPLES ZOOLOGICAL STATION.**—The representative from this country is Dr. Charles S. Dolley, who left the United States October 23, 1884, for the purpose of entering upon his work at Naples January 1, 1885. He was sent by the University of Pennsylvania, and is the only American at present studying at Naples, Williams College having relinquished the table formerly occupied by Professor Clarke.

**CALIFORNIA SALMON SUCCESSFUL IN AUSTRALIA.**—The Forest and Stream, of January 8, 1885, says that owing to the persistent energy of Sir Samuel Wilson, who has continued his efforts at introducing salmon for a number of years, it is now believed that the introduction is successful, a number of fish having lately been caught in the river Yarra-Yarra near Melbourne, which are believed to be California salmon.

**OYSTER CULTURE IN A WOODEN TANK.**—Mr. Fred Mather, writing from Cold Spring Harbor, August 31, 1885, says: "I have made a success of oyster culture in a wooden tank, 12 by 6 feet, with water pumped from the harbor. I have sets on shells and gravel four weeks old that are one-eighth of an inch long. The experiments were made under the direction of the New York oyster commissioner, Mr. E. G. Blackford."

**HATCHING TOMCOD.**—Mr. Mather writes, January 11, 1885: "Our tomcod are hatching splendidly; the water is clear and free from sediment; density, 1.021 to 1.022. We have stopped the springs from leaking into the pipes and bringing in sediment and 'bog-ore,' which left a ferruginous deposit on everything last year."

**TERRAPIN CULTURE IN NORTH CAROLINA.**—The commissioner of agriculture of North Carolina, Mr. Montford McGehee, writes from Raleigh, August 20, 1885, that several citizens along the coast purpose breeding terrapins for the market.

**NOTE ON TROUT CULTURE.**—March 20, 1885, Mr. M. T. Peebles was furnished with 50 California trout from the Wytheville hatchery. Under date of June 10 he states that the fish have made wonderful growth during the two months past, having more than doubled in size. He has an ample volume of clear cold spring water which will sustain 500 trout with very little feeding.

**BREEDING GOLDFISH.**—Mr. Henry W. Elliott, writing from "Rockport Cottage," Cleveland, Ohio, September 14, 1885, says that his 25 goldfish, which he put into his pond last April and which were then only 3 inches long, have grown to 8 inches in length, and produced thousands of young, so that the pond is fairly alive with them. Some of the young fish are nearly 6 inches long already.

**BREEDING JAPANESE GOLDFISH.**—From two pairs of Japanese goldfish received from the United States Fish Commission last winter, Mr. J. D. Yerkes has from 500 to 1,000 little fan-tails hatched this summer. [Letter of Frank N. Clark, September 21, 1885.]

**THE ARRIVAL OF CATFISH IN BELGIUM.**—Under date of Ghent, January 2, 1885, Hon. Alfred Lefebvre, United States vice-consul, wrote that of the 100 catfish forwarded November 15, 1884 (see page 84), 93 were still doing well, only 2 having been lost since they were placed in the aquarium. He says: "Hopes are entertained for the complete success of the scheme thus inaugurated by Mr. Wilson."

**AN OPINION OF THE SOLE.**—Referring to the recent effort of the U. S. Fish Commission to introduce the sole from Europe, Mr. William Stowe, the president of the Gloucester Net and Twine Company, of Boston, says: "I regard it as being worth to us as a nation all the money the Government has spent on it. In England I had sole for every breakfast. It is the best tasted fish that swims."

**CAPTURE OF A YOUNG BLACKFISH.**—December 30, 1884, Mr. J. G. Fisher, keeper of the life-saving station at Provincetown, Mass., captured and forwarded a young blackfish.

**SALMON AND TROUT IN SCOTLAND.**—Mr. John Anderson, writing from Glasgow, December 6, 1884, says: In the River Tay last week, while capturing salmon for our hatchery, we caught a large fish weighing no less than 80 pounds, the finest and largest salmon ever caught in Scotland. It was a clean-run fish from the sea. Six years ago the largest salmon caught in the Tay weighed 40 pounds; three years later the highest weight was 60 pounds; next year, 65; and last year, 76 pounds.

The Loch Lomond Angling Association is trying to restock this queen of the Scottish lakes with the best finny tribes worth an angler's attention, and to keep every stream free from pollution.

**SHELL-FISH WANTED FOR UTAH.**—Mr. B. S. Yaeger has a salt-water lake at Goshen, Utah, in which he proposes to try oysters, shrimps, crabs, &c., from the Atlantic Ocean. The lake is half a mile wide and a mile long. The water being as salt as that of the ocean, he thinks there is good probability of success.

**COREGONUS ALBULA EGGS FROM GERMANY.**—By direction of Herr von Behr 50,000 eggs of *C. albula* were started on the 11th of January, 1885, from Berneuchen, Germany, for the U. S. Fish Commission. The eggs were packed by Max von dem Borne and addressed to the care of E. G. Blackford, New York City.

The eggs arrived in New York by the steamer Werra, on Saturday, January 24, and upon being opened at Cold Spring Harbor by Mr. Fred Mather, were found to be in good order. Mr. Mather was instructed on January 31st to repack and forward the eggs to Mr. Charles G. Atkins. February 3d Mr. Atkins reported their safe arrival at Bucksport, Me.; but on the 6th he added:

"Mr. Buck reports 1,417 of the whitefish eggs (*C. albula*) dead on unpacking, and some others apparently in bad condition. Evidently, as a whole, the invoice is not in as good condition as I supposed when I first opened it."

Mr. Atkins was instructed to hatch the eggs, and plant the fish under the directions of Hon. Eugene Hale. July 10th he reported the results as follows:

1885.		
Feb. 3.	Received eggs of <i>Coregonus albula</i> in fair condition.....	50,000
	Dead on unpacking.....	300
	Subsequent losses.....	9,700
April —.	Liberated in Heart Pond, Hancock County, Maine.....	15,000
	24. Liberated in Lake Hebron, Monson, Piscataquis County, Maine.....	25,000
		<u>50,000</u>

**DISTINGUISHING THE SEX OF CARP.\***—There are two methods for distinguishing the sex of carp which I have tried, and in which I place considerable reliance. They are:

(1) By their heads. The head of the male carp is a little shorter,

\* See F. C. Bulletin, 1885, p. 37.

narrower, and more pointed than that of the female, while the female is a little more dish-faced.

(2) By "stripping" or squeezing the genital parts. The male fish always has more or less milt in the duct leading to the genital opening, and a slight pressure with the thumb and forefinger will bring some milt to the surface at any season of the year. If the fish is a female no effect will be produced, as the eggs will not be emitted unless ripe and detached, or partly so, from the bulk of the spawn. I think that this "stripping" will do no injury, unless it is so violent as to bruise the fish.

I have never tried to distinguish the sex of carp less than one year old, and do not think that it can be done. Nor have I experimented in determining the sex of other varieties of living fish. [Kemp Gaines, Springfield, Ohio, January 27, 1885.]

**165.—REPORT OF HATCHING OPERATIONS AT COLD SPRING HARBOR, N. Y., DURING THE SEASON OF 1884-'85, AND THE DISTRIBUTION IN THE SPRING OF 1885.**

**By FRED MATHER.**

(a) SALMON (*Salmo salar*).—Two lots of eggs, each containing 250,000, were received on January 15 and January 22, 1885, in good condition, from the station at Bucksport, Me. There were 2,310 dead eggs on unpacking, and 5,204 died before hatching. Of the fry there was a loss of 68,124 before planting. The disposition of the remaining 425,000 will be found in the appended table. One hundred and fifty yearling salmon, from 4 to 6 inches long, were planted in Clendon Brook, Warren County, New York, near Glen's Falls, where a plant of fry was also made in 1884. Mr. A. N. Cheney, of Glen's Falls, writes that the fishermen report this brook as being "alive" with young salmon; and he has promised to send specimens.

(b) LANDLOCKED or SCHOODIC SALMON.—Received from Mr. Charles G. Atkins, in charge of the station at Grand Lake Stream, Maine, 60,000 eggs on March 19, 1885, in excellent order; 45 dead on unpacking. The total loss of eggs in hatching to April 4, 15 days, was 142. Up to April 20 the fry did well, the loss being 7,484, but with increasing temperature the sac was absorbed rapidly, and the fish should have been planted at that time. It was the intention to place them in Woodhull or Bisby Lake, Herkimer County, New York, but my letters remained unanswered because of the absence of the gentleman interested in these waters. We kept the fish until May 13, and the death-rate increased; and I finally decided to plant them on Long Island, after loosing over 38,000 fry. The table annexed will show how the fry were distributed.

(c) BROOK TROUT (*Salvelinus fontinalis*).—We received 7,000 eggs from the station at Northville, Mich., on January 31, 1885. The moss was