

125.—MOVEMENTS OF MACKEREL.

By Capt. Z. L. TANNER.

[From a letter to Prof. S. F. Baird.]

I have just read Captain Martin's letter of September 1. We saw mackerel ten days later NE $\frac{1}{2}$ E, 129 miles from where Captain Plummer saw them, and in practically the same temperature, 69°, on the verge of the Gulf Stream. It is my impression that we saw the same school, as a movement of 13 miles per day would have placed them in our locality. We passed over the region referred to between the 2d and 5th inst., and on the latter date were at the spot where the mackerel were reported to have been on August 23.

STEAMER ALBATROSS, WOOD'S HOLL, MASS.,

September 7, 1883.

126.—SUCCESS IN PROPAGATING CALIFORNIA MOUNTAIN TROUT FROM EGGS BROUGHT TO MICHIGAN BY THE UNITED STATES FISH COMMISSION.

By MARTIN METCALF.

[From letters to Prof. S. F. Baird.]

I am now taking the eggs of the California mountain trout from fish reared from the ova furnished by the United States Commission three years ago the present month. I have individual fish of this species, reared from the eggs aforesaid, that will weigh hard on to 3½ pounds. Shall endeavor to-morrow to fertilize a few eggs with the milt of the Michigan grayling.

BATTLE CREEK, MICH., March 3, 1883.

I should take exception to the proposed expunging of the words "more vigorous"* as applied to the rainbow trout in comparison to what is called brook trout proper.

After an experience of four years with this variety, kept under like conditions, I can say that, *with me*, they are so much "more vigorous," hardy, voracious, and desirable every way for our Michigan streams, now denuded of forests, that the brook trout is not to be thought of in comparison.

During spawning time—that time of trial to all the salmonoids kept in comparative confinement—the California mountain trout thrive and

* The reference is to remarks of Livingston Stone, on pp. 11-12 of F. C. Bulletin, 1882, Vol. II, where he proposed "more hardy" as a better phrase than "more vigorous" when comparing California trout with brook trout.—C. W. S.

manifest a freedom from disease, such as "fungus" and kindred ailments, that is marvelous.

Added to this, they are far more rapid growers, attaining *four times* the size of brook trout in the same time and with equal feed; and can be kept in temperatures many degrees higher than any of the salmon family with which I have had to do.

BATTLE CREEK, MICH., *September 29, 1883.*

127.—EXCHANGE OF LIVE MARINE SPECIMENS WITH FRANCE.

By FRED MATHER.

[From a letter to Prof. S. F. Baird.]

I have to-day received four living specimens of the loach, *Cabitis fossilis*, from Captain Briand, of the steamship *Normandie*. He brought these from Paris on the last trip. I understand that they were bred in France by the late M. Charbonnier, from parents brought from Russia. Madam Charbonnier, who seems to share the tastes of her late husband, wishes some of our small sunfish and pond turtles, which I will send her by Captain Briand.

COLD SPRING HARBOR, N. Y., *October 2, 1883.*

128.—THE SCOTCH HERRING FISHERIES.

[From the London Daily Telegraph, August 30, 1883.]

In the instructive paper prepared for the fisheries conferences by the Duke of Edinburgh, the money value of the fish taken off the coasts of these islands is estimated by his Royal Highness at £7,380,000 (\$36,900,000). The Scotch herring fisheries alone cured, in 1880, nearly a million and a half barrels of herring, and exported nearly a million. Now, a barrel is calculated to contain 800 or 900 fish, and will sell on an average for 25 shillings. According to this estimate the value of the herring cured in Scotland that year was about £1,842,000. Some 20 per cent. of the Scotch herring, however, are sold fresh, and at prices at least equal to that of the cured fish; so that the sum total realized by one year's herring fishing in the lochs and on the coasts of Scotland would fall little short of £2,250,000. As good a tale could be told, no doubt, for Yarmouth and the other great English fisheries; nor must we lose sight of the fact that while the herring, in its adult state, is the cheapest and one of the most wholesome luxuries of the poor, that which is supposed to be its tender fry, known as whitebait, is an esteemed delicacy of the rich, and is devoured in quantities that would seem wasteful were it not for the proofs which are from time to time forthcoming of the inexhaustible character of our herring supply.