

**THE DISAPPEARANCE OF SARDINES FROM THE VENDEAN COAST,
AND ITS CAUSES.****By GEORGE GIFFORD.**

[From Dispatch No. 66 to Department of State. Transmitted to the United States Fish Commission by J. C. Bancroft Davis, Assistant Secretary.]

The sardine having long been the principal item of export to the United States from this part of France, its disappearance is a matter of considerable commercial importance. For the fishermen themselves it is an overwhelming calamity, as the phylloxera is for the vintners on the Charente.

The sardine has generally appeared on the Vendean coast about the 1st of May, and, following the shores of the Bay of Biscay northward, has furnished occupation to some 15,000 Vendean and Bretons, and 3,000 boats. Formerly the annual catch was worth at least \$3,000,000. But in 1879 the sardine suddenly disappeared for the most part, and the two following years having given most unsatisfactory results, it is with a heavy heart that the discouraged fishermen are now fitting out their boats for the season, which begins next month. The commercial houses engaged in the preparation of the fish for the market have in a measure escaped loss by advancing their prices, but charity alone keeps the fishermen from absolute destitution.

This disappearance of the sardine has been coincident with an extraordinary change of climate, which has attracted the attention of meteorologists and other scientific observers, who have endeavored to establish some relation between the phenomena. The winter on the Breton coast is generally characterized by a low barometer and very frequent rains. During the four months from November, 1878, to February, 1879, for example, it rained at Nantes the extraordinary number of 79 days, and at Lorient 86 days, while the average rainfall in Western France during that time was about 15 inches. During the corresponding months of the season which has just passed it did not rain at all on this coast, and the high barometric pressure has been almost incessant. The storms, the arrival of which has ordinarily been predicted with so much accuracy from New York, have passed to the north, and the southwest wind, laden with moisture and bringing frequent rains, has given place to a dry wind from the northeast. And this in a somewhat less degree was also the meteorological history of 1880-'81, and of the preceding year.

The effect of this high pressure and change of wind on the temperature has been by no means constant. The average winter temperature in Western France is not far from 45° Fahr. But the winter of 1879-'80, with its cloudless sky, was one of extreme rigor, during which the Loire was for several weeks frozen over. During the winter just past, the sky being often concealed by a thick fog, there has been neither snow nor

ice on the Lower Loire. But the constant features of the three past winters have been the relatively small rainfall, the high barometer, and, for the first two years, the absence of the sardine on the coast during the following summer.

Mr. Blavier, president of the Main-et-Loire Industrial Society, has recently read a paper before the Academy of Sciences, in which he accounts for these facts by the alleged displacement of the Gulf Stream, one branch of which ordinarily leaves the coast of the Bay of Biscay, rendering the climate very much warmer than that of corresponding latitudes in North America. The sardine always follows this warm current, and has now accompanied it in the new path which it has made for itself in the ocean. According to Mr. Blavier, the fishermen have no reason to anticipate a good catch until the breaking up of those great ice masses in Baffin's Bay which, it is believed, have for several years obstructed the flow of that cold arctic current by contact with which off the Banks of Newfoundland the Gulf Stream has hitherto been deflected toward Europe.

If this view be correct, the coming season will be as unproductive as those which have preceded. In that case the misfortune of the Vendean and Breton fishermen, however regrettable in itself, cannot fail to encourage the "sardine" industry which has already acquired so considerable a development in the United States.

UNITED STATES COMMERCIAL AGENCY,
Nantes, April 3, 1882.

**GROWTH OF GERMAN CARP SENT TO SAVOY, TEXAS, BY THE
UNITED STATES FISH COMMISSION.**

By SAMUEL JOHNSON.

(Letter to Prof. S. F. Baird.)

My carp which you sent me the 10th day of January last are doing well. Some of them are eight inches long. The shorest one that I received was one and a half inches long then and is four inches long to-day. They grow like China pigs, when fed with plenty of butter-milk. I feed them on the scraps from the table. They love good biscuit the best. They eat meat, bread, salad, or worms, and everything I give them. They are perfectly gentle and come at the rattle of a sheep's bell to be fed. I feed them as I would chickens, and intend to feed them every day. I have plenty of water for thousands of them. I would not take one hundred dollars for what you sent me. I can make them weigh five or six pounds this summer by feeding them well.

SAVOY, TEX., April 24, 1882.