

not fed, and it is scarcely probable that the excrement of geese, which during summer wander about the banks and swim on the pond, and consequently feed altogether on grass, furnishes any food for the fish. Some water also flows into the pond above ground; along the edges grow *Glyceria fluitans* and *Juncus*, and *Conferæ* rest upon the water. Fishing in this pond is carried on by means of bow-nets, a seine, and spears. Large pike and perch do their share to prevent the overcrowding of the pond. This pond furnishes another proof that every exhausted peat-bog may be used as a fish-pond, if it contains water. Such bogs, however, must admit of fishing; no edges of peat should therefore be left, and the refuse should not be thrown into the pond, but carried away and used as manure. Such ponds, which have formerly been peat-bogs, are found in many places, and are absolutely useless as long as not stocked with fish. Every farm might have fish-ponds, if people would take more interest in this matter, and would display more energy in transforming these exhausted peat-bogs, overgrown with poisonous weeds and full of parasites, into fish-ponds, yielding a revenue.

CASTRATING FISH.*

By HERR WEDDIGE.

[From "Deutsche Fischerei-Zeitung," volume iv, No. 1, Stettin, January 4, 1881.]

The writer of these lines has years ago spoken to fishermen and advised them to make experiments regarding the possibility and probable success of the castrating of fish by removing the roe or the milt. This matter has also been spoken of in the "Deutsche Fischerei-Zeitung," p. 483, but, as far as known to the writer, no such experiments have been made. It is probably not very difficult to remove the roe or milt from live fish, but of course it will be necessary to exercise great caution in doing it. The belly would have to be ripped open with a very sharp knife, the roe or milt would have to be loosened very carefully without injuring any other organs, and the cut would finally have to be sewed up with the greatest care. It is probable that the wound of a fish treated in this manner will heal very soon. The nutritious matter which would otherwise have served for forming roe or milt will certainly cause a more rapid increase of flesh and fat, and therefore an equally rapid increase in the weight of the fish. For such experiments young, but full-grown, fish should be selected (perhaps two or three year old trout) whose generative matter has not yet been fully developed (the time for trout would therefore be April and May). None should engage in such experiments but those who possess the necessary leisure and knowledge. If such experiments should prove successful, the castrating of a large number of fish will possibly prove an advantage to

* "Kastrirung von Fischen."—Translated by HERMAN JACOBSON.

the owners of closed fish-ponds. It is of course impossible to say in advance whether such advantage would be commensurate to the trouble and probable loss of fish by unsuccessful operations. Only the more valuable fish, *e. g.*, trout, and perhaps carp, would be fit subjects for such experiments.

NOTE.—We have received the following letter on the same subject:

“Referring to the question whether it is possible to castrate fish, in Nos. 52 and 53 of the ‘*Deutsche Fischerei-Zeitung*,’ I would observe that the idea is not a recent one. Thus the author of ‘*Wohlbewährte Fischgeheimnisse oder deutlicher Unterricht von der grossen Nutzbarkeit der Fischerei, wie auch von der Fische Natur und Eigenschaft; nebst einer Anweisung, wie sie bequem zu fangen, und zu welcher Zeit man solche am Besten halte*’ (Well preserved fish-secrets or plain instructions regarding the great usefulness of fisheries, also regarding the nature and quality of fish; accompanied by hints how to catch fish in the easiest manner, and during what season they can best be kept); 2d and improved edition, Nuremberg, by George Bauer, 1758, in the chapter entitled ‘On the Castrating of Fish’ (*von der Verschneidung der Fische*), gives the following extract from ‘*Histoire de l’Academie des Sciences 1742, Observations de physique V*’: ‘Mr. Sloane, the former President of the Royal Society of London, has written to Mr. Geoffroy, towards the end of December last, that an unknown person had revealed to him the secret how to castrate fish and make them grow fat thereby. This person, who originally was nothing but a net-maker, and had formerly lived 5 or 6 miles from Mr. Sloane’s country place, had built up a considerable trade in fish by his skill in managing them. This strange communication excited the curiosity of the naturalist, and the fish merchant-offered to show him the experiment. He took eight bastard carps (*Cyprinus carassius*), a species of small carp which had recently been brought to England from Hamburg, and placed them into two large vessels filled with water, which was renewed once or twice during the experiment. He began by opening one of these eight carps with a knife, and showing Mr. Sloane the ovarium which opens into that part which is called ‘the cloaca.’ He thereupon cut open another carp, laid bare the ovarium, and closed the wound with a piece of a black hat. The carp which had been cut were placed with the other six, but did not seem able to swim as well as the rest. They were finally all thrown into a small pond in Mr. Sloane’s garden, which is supplied with water from a neighboring river, and where, he thinks, they were still living at the time when he wrote to Mr. Geoffroy. Further information is not given. This man, whose name is Samuel Tull, promised Mr. Sloane, that in spring he would invite him to a dish of cut fish, which were said to excel other fish in flavor as much as a capon a common rooster, and as a cut ox an uncut one. As there is much similarity between land animals and fish, it is probable that castrating has the

same effect upon the latter, and Mr. Sloane thinks that this discovery should be further investigated, and that it may serve to give a finer flavor to fish, and to prevent their too rapid increase in fish-ponds, where their number is too large as it is.”

WEDDIGE.

OSNABRÜCK, *December 15, 1880.*

THE INTRODUCTION OF STRIPED BASS INTO CALIFORNIA.

By S. R. THROCKMORTON.

SAN FRANCISCO, *November 12, 1880.*

HON. SPENCER F. BAIRD,

U. S. Commissioner Fish and Fisheries

Smithsonian Institution, Washington, D. C.,

DEAR SIR: I have from unavoidable causes been compelled until now to defer addressing you upon the subject of the transporting to, and acclimatizing in, our waters the striped bass of your coast.

I have long had the impression, that the great bay of San Francisco, together with the bays of San Pablo and Suisun connecting with it, and the number of creeks running into them, affording a variety of qualities and conditions regarding temperature and saline properties, together with feeding material, would be well adapted to the propagation and growth of the striped bass.

Having this in view, I last year opened a correspondence with Mr. Livingston Stone upon the subject of attempting the transfer of some small fish at the time of the bringing on of the lobsters. Many difficulties presented themselves in the matter of obtaining the small fry of the striped bass, which resulted in my suggesting to Mr. Stone the probability of obtaining them in the extreme headwaters of the Navesink or Shrewsbury River, in New Jersey. Mr. Stone succeeded in obtaining a small number at the place designated by me, and, with his usual skill, brought them safely to this coast and deposited them at the head of the straits of Carquinez, the turning point of the fresh and salt water.

Some six or seven months after the time of placing in the water I heard that one of 8 inches in length had been taken in the bay of Monterey, which is about one hundred miles south of this, and is an open roadstead on the Pacific Ocean. All of the circumstances were of so doubtful a character that I gave the rumor but little attention, until about the 1st of July, eleven months after the planting of the young fry, at the time about 1½ inches in length, in the straits of Carquinez, there was brought to me a very handsome striped bass taken in this harbor, measuring 12½ inches in length and weighing one pound. The fish was in the highest condition, the milt full and ripe, and the flavor fully up to the best specimens of the fish at the East. The exceedingly