

hatched, sets them out in the most suitable places. This steamer also goes out to sea and hatches millions and millions of the finest salt-water fish.

With all our piscicultural efforts we must confess that we felt very small when viewing this grand American exhibit; and the magnificent results obtained in America are a sufficient guarantee that this is no "American humbug." For the present we can certainly do no better than to strain every nerve and imitate the example set us by the Americans.

PEAT-BOGS AS FISH-PONDS.*

[From "Oesterreichisch-Ungarische Fischerei-Zeitung," volume IV, No. 1, Vienna, January 1, 1881.]

The proprietor of the establishment *Fischhof* near *Stettin* has shown how easily and with what little expense fish-ponds can be made, and how well it pays to stock them with young fish; for his pond, with an area of one-fourth acre, not only supplies his large family with food, but also yields him a very fair revenue. Nine years ago he commenced to dig peat from a very barren piece of ground. The peat was found to rest on a layer of lime, which he likewise utilized. When the spring-water began to overflow the ground, he got a peat-raising machine, with which he took out all the lime and peat. The very first year, this thoroughly exhausted peat-bog and lime-pit was stocked with one-year old pike, perch (*Perca fluviatilis*), bleak, tench, and bastard carps (*Cyprinus carassius*). During the first five years these fish were well protected; and four years ago he commenced to catch fish which were fully matured and particularly fat. Thus he has, among other fish, caught with a spear a very fat pike weighing $9\frac{1}{2}$ pounds, which certainly must have been one of the fish with which the pond was stocked in the beginning, which shows that it had increased about one pound in weight per year. The pond in question has now an area of one-fourth acre and an average depth of 12 feet. The banks are very steep down to the bottom, and the water is spring-water, which, through subterranean channels, comes from the neighboring pine forest of *Leba*. The water flows off through a draining ditch; but fish cannot escape in that way, as the outflowing water has not sufficient depth. The pond seems to contain an abundance of fish-food. The water rests on the characteristic lake-bottom; the steep banks, going from bottom to top, show first a layer of marshy peat about 6 inches thick and utterly worthless; on this rests the marsh-line—a mass of sweet-water shells—3 feet thick; next comes a layer of very valuable peat, 7 feet thick, and on the top of this a layer of drift sand, 2 feet thick, overgrown with grass. The sides of the pond therefore contain lime, peat, and sand. From these sides, perhaps also from the supply of forest water entering the pond through subterranean channels, the fish obtain their food; for they are

*Torfgruben als Fishteiche.—Translated by HERMAN JACOBSON.

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 *Conferva* 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.