

XXIX.—ON THE CARP PONDS OF NETHER LUSATIA.*

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Nether Lusatia, though not adorned with great landscape beauty nor blessed by nature with a rich and fertile soil, still presents many remarkable and attractive features. There, on the upper and middle course of the river Spree, only a few miles from the capital city of the German Empire, a strange people has preserved its nationality. Even today the nimble Wendin passes us with foreign salutation in fantastic attire. Our ponds and canals show many an idyllic picture, and the proud high trees are ornaments to our parks such as are rarely found in artificial gardens.

The industry of Nether Lusatia, too, has been more and more developed every year. Our ponds not only enliven and beautify the landscape but their object is essentially practical. Carp-breeding here has obtained great results. In Hamburg, to mention one instance, the carp of the "Spreewald" has outrivalled the Bohemian carp.

Cottbus is the place of meeting for the so-called "Carp Exchange." Every year, on the first Monday of the Cottbus fall market, a busy life develops in the Hotel Ansorte there. The fish-dealers from Halle, Leipsic, Dresden, Magdeburg, Posen—who name all the places and call all the names?—among them representatives of such firms as Kaumann, Berlin, F. J. Meyers, Hamburg, the carp-king Fritsche, &c., have arrived from all parts of the compass to wait for the *carp-barons*. With this name the first-class breeders are designated, as Meude-Dobrilugk, who undisputedly raises the largest carps; von Löwenstein and Faber, with a product of 6–800 hundred-weight each; Berger-Peitz, with at least 2,000 hundred-weight, &c. These gentlemen meet in a separate room as *Fischereiverein*, with the expert Mr. von Treskow as their president, to discuss the questions of the day and to determine approximately the price to be asked for the carps. After this business is finished the sale-contracts proper are made.

The weight of the carps from Upper and Nether Lusatia, represented in Cottbus by their breeders, amounts to 8–10,000 hundred-weight; the number of fishes to 2–300,000.

This simple fact alone might occasion a comparison with the results of the artificial fish-breeding, for which so much interest is shown. It is known that since the publications of Professor Coste, of the College

* Die Gartenlaube, 1877, No. 45. An den Karpenteichen der Niederlausitz. Dr. Edm. Veckenstedt.

de France, fish-culture has received much attention, and though the splendid success—promising to populate rivers, lakes, and ponds with fishes—has only to a small degree been attained for France, yet the *Hünigen Muster Anstalt*, established by the French Government, diligently continues its labors under the direction of German officers and the *Deutsche Fischerei-Verein*, endeavors to develop in all circles of our population a greater interest in the progress of fish-culture.

Whether the successes will correspond to the expectations, time only can show. So far the artificial breeding of noble fishes (*Edel fische*) only can be considered successful; but it seems that the *Salmonidæ* alone, though quite a desirable enrichment of our rivers, will scarcely ever constitute a cheap food for the people. The *Fischerei-Verein* will have to direct its attention especially to the reform of the laws; for in the fish trade a good many things still depend on the option of the individual. So, for instance, many eels are at present confiscated in Berlin for the lack of lawful size, while in Pomerania, whence 90 per cent. of all the eels in the Berlin market come, the same size of fish is not only considered marketable, but iron eel-traps are rented to anybody for a few cents for catching the fish under the ice, where of course no discrimination can be made as to size.

We will now return to Nether Lusatia and rejoice at the results of the natural fish-breeding, which, quietly and without noise, like everything truly good, in its own way has reached its present height. How many prejudices had to be removed, how many notions to be contended with, how many experiences to be collected before Lusatia could succeed in securing for its *cultur-Fisch*, the carp, the market over all Germany.

Let us now go to these ponds and take a glance at the breeding and capturing. The ponds, about seventy in number, have a surface of about 5,000 Morgen (3,500 acres), and yield at present 2,000 hundred weight per year.

Now we will look at one of the small ponds, a so-called *Streichteich*. In this a definite number of *milts* and *roes* (males and females) deposit their spawn. Here especial care is required in the management of the pond-bottom, which, by antecedent cultivation, is fertilized and has its acids neutralized. It is desirable to have the pond sheltered against the noxious influence of the wind; then it must be kept absolutely free from pikes, and it is of advantage that its water in great part is derived directly from the heavens, for the *Himmelsteiche* are usually the best *Streichteiche*. If now the bottom was not too poor, and if wind and weather were not unfavorable, next spring the strong fry will be transferred into the *Streckteich*, for in fall time this movement is rather dangerous, as young carps will never endure the dangers of winter when in their transfer their scales are injured. This *Streckteich* must be rich in nourishment, so that the fish grow rapidly to be fit for the *Abwachsteich*.

In many cases, however, the fishes have to be placed into a *Streckteich* of the second order because their growth was insufficient. The

Abwachsteich contains all the ponds the greatest water-surface, and only 25-40 carps per Morgen (two-thirds of an acre) are admitted, to which one-twentieth of other fishes are added. In this pond the pike plays its principal part. It is, as is generally known, the *factotum* of the carp-pond. Even if it is legendary that the pike forces the lazy carps to locomotion, so as to give them better appetite, yet it is indispensable for the destruction of wild fishes, &c.

As nearly all creatures have to endure the severest diseases in their youth, so also the carp has to overcome its greatest dangers up to the day it is admitted to the *Abwachsteich*. Here external enemies are rarely dangerous, though otter and sea-eagle claim their victims; yet fishes of prey do not injure it, and swan, ice-bird, ducks and divers, frogs and toads are only dangerous to the spawn and fry.

Diseases, too, occur mostly with young carps only; polypes render the fish unfit for its full development; tape-worms constrict its intestines, make it lean, and finally kill it; lice torment it, and produce dropsy. But the water itself may become noxious; its inlet and outlet must be accurately regulated; a ditch carrying bad water to the pond, its sudden rising after a thunder-storm, a lightning-stroke, &c., have often done considerable damage to the breed.

Yet now the autumn day has come on which the capture of the marketable carp begins, and we go to the *Teufelsteich* near Peitz, the largest of the estate. Three weeks before this day the outflow from this pond commenced. All the time the greatest quiet has to reign at the places deepened for the catching, because otherwise the carps, sensitive to sound and timid, would not descend the deep ditches leading to the places of capture, which would render the operation slow and more difficult.

On the day of the fishing itself the drivers begin to wade along the ditches with loud noise, until the fishes are collected at the place of capture, which has an extent of about one *Morgen*. Then the ditches are closed with (stell) nets and the catching begins. Two *Watnetze*, handled by three fishermen, yield about 100 hundred-weight at every *draw*. The fishes are carried to the scale and spread upon platforms. Pikes, *Karauschen*, *Schleien*, are picked out, and the small *Barsche* (perches?) used for manuring fields and meadows.

Four practiced hands throw the carps from the platforms upon the scale, and when it indicates one hundred-weight the fishes are rapidly transferred to a hogshead standing upon a wagon; three filled hogsheads make a load. In sharpest trot the horses hasten to the *Hammergraben* (hammer-ditch), where the fishes are loaded into *Dröbel*. *Dröbel* are perforated covered boats, the surface of which is even with that of the water; they contain, on an average, 25 hundred-weight, and are shipped by hardy sailors to the *Schwielocksee*. There the fishes are transferred into larger *Dröbels*, containing about 100 hundred-weight; in tow of freight-boats they reach Berlin in about one week; Hamburg,

Magdeburg, &c., however, not before four or five weeks. All this time the greatest attention is necessary. The journey to and through Berlin is dangerous on account of the water being either too low or too high, and, besides, every evening the whole transport has to be carefully examined and every single sick or dead fish to be removed; and it occasionally happens that some *Dröbel* go to pieces.

These astonishing results of the natural fish-breeding are the more to be appreciated the more laboriously they are obtained (the manager of the Peitz pond, for instance, spends about 100,000 marks), yet Lusatia shows still better results from the ponds devoted to the raising of goldfish. Most interesting are those obtained by Mr. Eckart in Lübinchen, the well-known breeder of the great *Madüe-maräne*. His splendidly watered ponds, at present celebrated for the lacustrine pile-dwellings found there, contain in all their brilliancy the goldfish and *Orfe*, the trout and *Elritze*, the leather-carp and *Maräne*; and when now the Americans are enabled to breed the most valuable of all *Maränes*, the *Maräne* of the *Madüe* Lake, it is the merit of Mr. Eckart, who was the first to send embryonized *Maräne* eggs across the Atlantic Ocean. Constant study and continued experiments were necessary for his eminent success, and if we want to stock our rivers, lakes, ponds, or aquaria with numerous and different species of fish we will have to work incessantly, for the conditions most favorable to the several species have in great part yet to be found out.