## XXVII.—THE GOLD ORFE, (CYPRINUS ORFUS.)\*

## A—ON THE RAISING OF THE "GOLD ORFE," (CYPRINUS ORFUS.)

By M. KIRSCH, Director of Fisheries at Wiesbaden.

The "Orfe," Cyprinus orfus Linn., "Porfe" in French, and bearing a variety of names in German, such as "Nerfling," "Gold nerfling," "Erfel," "Elft," "Urs," "Urf," "Rötlling," and "Ladies' Fish," is distinguished by its beautiful orange-colored back, and its belly-scales, which glitter like silver. Taking into account its slender, trout-like shape, it may well be called the most beautiful fish of our country.

Having been for many years occupied in raising the "Gold-orfe," in addition to my raising large quantities of trout, pike, and carp, I desire to state briefly the reasons why the Nassen Fishing Society has devoted so much attention to this fish, and has spared no pains in raising it.

We think that it is not only the duty of all larger piscicultural establishments to prevent the entire disappearance of a species of fish so near extinction, but have also found after careful examination of everything that has been said concerning this fish in old works, and of all we had gleaned from our own experience, that the raising of the *Cyprinus orfus* is of incalculable value to the practical pisciculturist.

There is scarcely a fish which as an ornamental fish so satisfactorily meets all the demands made of it, as the *Cyprinus orfus*, which, in summer and winter, is constantly seen near the surface of the water. It does not sleep in winter like the carp and tench, and never makes the water muddy. Ever restless, the *Cyprinus orfus* constantly swims near the surface to seek its food, and even when ice thickly covers the ponds, red spots indicate that this active fish is alive.

Gold-fish, gold tench, and carp only occasionally rise to the surface of the water, while they seek their food at the bottom, and thus make the water continually muddy.

The raising of the Cyprinus orfus as an ornamental fish has a peculiar advantage over that of the gold-fish, which in early youth is black, and only assumes its golden color during the second year, while the numerous young of the Cyprinus orfus, floating about in large schools, even when leaving the eggs present a remarkably beautiful appearance.

<sup>\*</sup>From "Circular No. 4," published by the Deutsche Fischerei-Verein, Berlin, March, 1872.

Having a thickness of about two lines, and a length of one-half to one centimeter, their color being a bright red with a black head, the easily frightened shoal swim with lightning-like rapidity from one place to the other. Among the many hundreds which we have raised, there was not a single one which had even a black spot or any change of color, thus proving that the red "orfe" is no variety of the black "orfe," which, with us, spawn more than a month later. It is certain that a fish which immediately on leaving the egg answers its purpose as an ornamental fish so completely, is preferable to the gold-fish, which does not, till the second year, assume a brilliant color.

In the year 1558, Gessner wrote, in his "Natural History," p. 1268, that the "orfe" enjoyed a high reputation as an article of food, especially when fried, particularly in the months of April and May (a season when with us trout can scarcely be recommended). Permission to sell the "orfe" was only given when it had reached a certain size, as they were considered an excellent food for the sick, and consequently it was desirable not to let the species die out. This fish was also considered a wholesome and strengthening food for women in confinement.

Dr. Bloch, in "Our Fishes," Parts 1, II, III, published in 1782, pp. 138 and 139, acknowledges the excellence of the "orfe" as an article of food, even giving the best mode of preparing them in the most palatable manner, which this naturalist certainly would not have done if he had not considered it his duty to awaken a more general interest in behalf of this fish.

Jockisch, in his "Manual of Fisheries," 1802, p. 39, says: "The flesh of the orfe has an excellent flavor, is very digestible," &c.

Bose, in his "Dictionary of Fisheries," 1811, p. 103, likewise says that the "orfe" has a most delicious flavor.

La Cépéde, in his "Histoire naturelle des poissons," 1796, states that the "orfe" excels other fish, through its fine flavor.

Oken, the famous naturalist, says in his great "Natural History," vol. vi, p. 303, that the "orfe" is distinguished by its beautiful color, and the wholesomeness and excellent flavor of its flesh.

I therefore think that I am not too bold if, relying on the words of these authorities, I recommend the raising of the "orfe" as a wholesome, palatable article of food, for I am convinced that people in 1558, 1782, 1796, 1802, 1811, and 1836 knew just as well as we whether a fish had a good flavor or not; and it is evident that such authorities would only recommend as good what was generally acknowledged to be so.

Besides the excellence of the *Cyprinus orfus* as an ornamental fish and as an article of food, it possesses a still greater importance for the ichthyologist, because it is very hardy and can be more easily transported to far distances than most other fish.

Our reports regarding the result of sending the Cyprinus orfus to Cologne, Berlin, Lübbinchen, Dresden, Hanover, Cassel, Freiburg,

and to still more distant places, the fish being on the road two days and longer without being accompanied by a fish-breeder to pump in fresh air or change the water, &c., will with pleasure be submitted for examination to any one who desires to see them; and it will be found that even when several hundred were sent together, not a single one was lost. The reader will know that none of the other superior kinds of fish could stand such long journeys.

All the fish belonging to the family of salmonoids require for their well-being cool and deep or pure and running water, and whether their flesh, which is mostly very fat, can be considered a wholesome, digestible food, such as the "orfe" makes, I will leave to the physicians to decide.

It is, at any rate, certain that there are a large number of stagnant waters in which no salmonoids can be raised, because these waters contain such large quantities of noxious substances that not even tench, carp, or pike can live in them; in such waters I advise the reader to place Cyprinus orfus. As was mentioned above, they live near the surface, making use of the purest portion of the water, do not touch the noxious substances accumulating at the bottom, and seek their food near the surface.

But if any one should distrust my experience of many years, I refer to the above mentioned authorities, who tell us in every place that the Cyprinus orfus has in former times been raised in the muddy, stagnant water of the moats of the ancient cities of Nuremberg and Augsburg.

Let every unemployed and unproductive pool of stagnant water be a reproach to German pisciculturists, and an incentive to free themselves from their old unpractical methods, and to raise not only fish which fashion momentarily favors, but such fish as are suitable for the existing sheets of water.

Our guide for the future of pisciculture is not only the little knowledge of our times, but let us examine what has been done in the dim past, and let us gratefully adopt that which is really useful and profitable.

## B—CORRESPONDENCE RELATING TO THE GOLDE-ORFE.\*

By PROF. C. TH. E. V. SIEBOLD.

In a letter which the bureau of the German Piscicultural Society at Berlin has addressed to the president of the Fishing Society at Münich, dated December 5, 1871, the question is asked whether this society possesses any information regarding the breeding and the value of the gold-orfe (Cyprinus orfus), which at present is raised at Weisbaden in large quantities, which would justify its introduction into other regions, especially North Germany? If such were the case, the German Piscicul-

<sup>\*</sup> From "Circular No. 1," published by the Deutsche Fischerei-Verein, Berlin, 1872.

tural Society would gladly lend a helping hand in furthering any experiments in raising it.

As far as the undersigned knows, the gold-orfe has so far only been raised in South Germany, by Mr. Scheuermann, at Dinkelsbühl, Bavaria, chiefly with a view of providing the aquaria with an ornamental fish. If people in Wiesbaden have succeeded in raising this fish as a palatable article of food, the cause of this may be found in the circumstance that the neighborhood of Wiesbaden must be entirely destitute of better-flavored fish, for, otherwise, the gold-orfe would certainly not have been used as an article of food. Judging of the experience of our well-supplied Münich fish-market, it appears that this fish does not at all find a ready market among the fish-loving Münich public, since scarcely any of this fish and its variety (the Leuciscus orfus) are sold as articles of food, their flesh being very insipid and full of bones.

Young "gold-orfe" are only sought after by keepers of aquaria, as, on account of their beauty, they form a very good and cheap substitute for the Chinese gold-fish. The larger fish of this kind are mostly used for ornamenting lakes in parks and the basins of fountains. The undersigned very much doubts whether even the most expert cook could so heighten the flavor of the "gold orfe" as to compete successfully with the salmon.

MUNICH, December 15, 1871.