

shining white front edge. The caudal fin, which is cut off straight, is of a brown-red color. During the spawning season these colors become brighter, and at that season the brook trout compares favorably with some of the most beautiful of the finny tribe. In Zurich very successful experiments have been made with the *Salmo fontinalis*. Four of these fish, which were raised in the fish-cultural establishment of Dachsen, produced last autumn about 200 eggs, and from these there have now been hatched about 60 or 70 lively and healthy young fish.

We take occasion to express once more our hearty thanks to the German Fishery Association for its valuable present. Let us hope that there is a great future in store for this new citizen of Switzerland, which has come to us from far-off America.

ZURICH, SWITZERLAND, 1886.

68.—HABITS OF WHITING OR FROST-FISH (*MERLUCIUS BILINE-
ARIS*, Mitch.).

By WILLARD NYE, Jr.

These fish appear in our shallow waters during October or November,* according as the season is early or late. They come in to feed from sunset to sunrise, and are then seen, often where the water is not over two inches deep. During the daytime they are never seen alive near the shore, nor have I ever seen any at or near the surface in deep water.

They feed on the silver-sides or friar, which abounds here at this season, and which, being chilled, is easily caught. The frost-fish do not come in schools proper, but scattered along shore—from a few to many feet apart, and headed in all directions, moving slowly along—generally near the bottom, and now and then rising to seize a friar, which they do by shooting ahead two or three feet quite rapidly; if successful, they then sink to the bottom and slowly swallow the small fish.

Many frost-fish are speared by men and boys wading along shore with lanterns. Quantities are caught in the fish-traps, and if the night happens to be very frosty hundreds are left by the falling tide, this last more frequently happening on the outer beaches, where there is a little swash along shore. In size they vary generally from two or three ounces to one pound; those on the outside beaches are the largest, while inside the mouths of rivers they are small. When seen in the water at night they appear of a dull reddish color. Early in October, while fishing for codfish in five or six fathoms, I have caught frost-fish that would weigh two or three pounds; and in the trawl on the Albattross I have seen specimens that would weigh as much as eight pounds.

NEW BEDFORD, MASS., August 20, 1886.

* For a brief note on their appearance, see F. C. Bulletin for 1886, p. 137.