

Vol. V, No. 10. Washington, D. C. April 25, 1885.**30.—THE RED SNAPPER GROUNDS IN THE GULF OF MEXICO.*****By Capt. J. W. COLLINS.**

[From a letter to Prof. S. F. Baird.]

It may interest you to learn that on our way from Tampa to Tortugas we found red snappers much more generally distributed and seemingly far more abundant than they are on the fishing grounds farther to the northwest, where the fishery is now carried on. These grounds, lying between Tampa and the Tortugas, outside of a depth of 20 fathoms, have never been resorted to by the fishermen, so far as I have been able to learn, and their investigation I have deemed a matter of the highest importance to the fishing industries of the South. In a word, I think there is no doubt that we have discovered new grounds that are unusually rich in fish life, and particularly in the undisturbed abundance of red snappers. So far as our investigations extended, fish were found most plentiful in 25 to 27 fathoms of water, but seldom outside of the greater depth. In one instance, yesterday morning, a little after sunrise, we struck a school where we caught snappers "pair and pair," and so very plentiful were the fish that they actually came up to the surface near enough for us to see them over the ship's side. We caught only a few, since we had enough for the ship's use, and it would have been purposeless cruelty to catch fish that were not wanted. I believe, however, that a smack might have taken a full fare in this locality.

I am glad that the Lookout is on the Florida coast investigating the spawning fish. Should she stay late enough, I hope something may be learned of the breeding habits of the red snapper, the number of eggs it has, &c. This seems important, and a matter well deserving the attention of the United States Fish Commission, since it is probable, at least, that this species is being more or less rapidly depleted, and the day may not be far distant when the services of the Commission will be needed to keep up the supply, if not to prevent the practical destruction of the important fishery now prosecuted for the red snapper.

It is a matter of some regret to me that there has been no good opportunity to test the gill-nets and trawl-lines. It would have been interesting to have made trials with these under favorable conditions, so

* The steamer Albatross left Washington January 3, 1885, and returned April 6. The vessel made two separate trips from Pensacola to the Red Snapper Grounds. This is the first Governmental effort to examine the off-shore fishing-grounds of the Gulf of Mexico, and the success obtained justifies the claim that, by means of such a vessel, new fishing-grounds might undoubtedly be discovered which would add materially to the resources of the country.—EDITOR.

that definite ideas could have been formed of what might be accomplished by using them. I am satisfied, however, that, so far as the prosperity of the fisheries is concerned, little could have been gained of practical value. The fact that red snappers are gregarious in a marked degree, congregating in schools of limited extent on small patches of bottom, and the additional fact that they bite a hook with the utmost eagerness, makes it possible to capture them more readily and easily with hand-lines than in any other way. And when we consider how trifling is the expense of fitting with hand-lines compared with other forms of apparatus, it will be seen that there is little probability of the old methods being superseded, particularly when enough are caught now to make a serious drain on the resources of the fishing grounds.

KEY WEST, FLA., *March 20, 1885.*

31.—OPINIONS CONCERNING THE DESIRABILITY OF A HATCHERY FOR SALT-WATER FISH IN NORWAY.*

By H. RASCH, A. LANDMARK, and G. O. SARS.

OPINION OF PROF. H. RASCH.

The cause of the steady decrease of fish on the coast of Arendal, which has been noticed during the last few years, is undoubtedly excessive fishing. It will appear improbable to most persons that fisheries such as have been carried on in the Arendal district should have had an injurious influence on so fertile a fish as the cod, each healthy female of which contains several millions of eggs; but since the investigations of Professor Sars have taught us the conditions necessary for impregnating the roe of the cod, we can easily understand that if there are not a large number of male fish on the spot when the female fish eject the roe, the greater portion will not become impregnated.

The best remedy for this lack of spawning fish is, as far as I can see, artificial impregnation, by which all the roe becomes impregnated, whilst at the same time one can transfer the roe to localities where it and the newly hatched fish are protected against their enemies.

There is no doubt that in this way young fish can be produced by the million; but this is not sufficient. The growing fish must not be caught before they become fit for food. I therefore entirely approve of the measures proposed by Captain Dannevig for the Arendal district.

CHRISTIANIA, *October 31, 1882.*

OPINION OF MR. A. LANDMARK.

Owing to the steady decrease which has been generally noticed of the common salt-water fish in many places on our coasts, and especially

* From a pamphlet entitled *Indbydelse til Tegning af Bidrag til en Udvlækningsanstalt af Saltvandsfisk efter amerikansk Mønster, samt Erklæringer i Anledning af samme.* Arendal, 1884. Translated from the Danish by HERMAN JACOBSON.