

as the basis of operations during the next season, and that operations may be carried on in this river on a sufficient scale to warrant its being occupied. No doubt in ordinary seasons ripe shad will be taken on this river early in March, and with a floating hatchery, such as the Fish Hawk or the Lookout, equipped with gill-nets such as are now used in the Saint Mary's River, and one or two haul seines, a large number of young fish can be produced before the season commences in the waters in the immediate vicinity of Washington.

The facilities for transporting the young fish to other rivers of the South are ample, as the station may be located on the river within reach of the crossing of the Jacksonville division of the Savannah, Florida, and Western Railroad, and by the roads intersecting with the Fernandina and Jacksonville Railroad.

An experimental station should be established on the Saint Mary's River during the coming season, and it should be ready for operations by the 1st of March. I would recommend, in addition, if Saint Mary's is selected as the river for our future operations at the South, that large numbers of young shad and herring be transported from the stations near Washington and deposited in the Saint Mary's, in order to more quickly increase the supply of shad in this river, and enable us to secure the adult fish in larger numbers in the future.

WASHINGTON, D. C., *June 15, 1883.*

134.—NOTE ON THE DESTRUCTION OF MACKEREL BY DOGFISH.

By Capt. J. W. COLLINS.

Capt. Joseph Smith, of Gloucester, Mass., tells me that while off Wood Island, Maine, in August, 1880, he observed what he supposed to be at first a moderate-sized school of mackerel at the surface of the water. On closer inspection, however, he found that only a small number were mackerel, probably not exceeding more than half or three-fourths of a barrel, and these were completely surrounded by an immense school of dog-fish. The body of dogfish was formed in such a manner as to inclose the mackerel on all sides and underneath, completely preventing their escape. Captain Smith had an opportunity of observing the mackerel closely, and says that many of them, he noticed, were bitten by the dogfish, some being deprived of their tails, and others having wounds on their sides. He is of the opinion that every one of the mackerel was ultimately eaten by the dogfish. It is probable, he thinks, that at first a much larger body of mackerel was surrounded. The school of dogfish he estimated to contain at least enough for one hundred barrels. Another school of dogfish surrounding a small body of mackerel was seen on the same day.

WASHINGTON, D. C., *July 7, 1884.*