44.—FISH KILLED BY COLD ALONG THE GULF OF MEXICO AND COAST OF FLORIDA.

By JOSEPH WILLCOX.

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

While in Florida, during and after the severely cold weather last winter, I had ample opportunity to witness the great destruction caused among the fish along the coast from Cedar Keys to Punta Rassa. At Cedar Keys a great loss was reported; but I did not have an opportunity to see many dead specimens there.

In the fresh water of the Homosassa River many thousand catfish were killed by the cold, but they appeared to be the only species that suffered there; while in the salt-water tributaries of the same river many sheepshead and sea-trout (*Cynoscion maculatum*) were killed.

While proceeding farther south, the great mortality among the fish became more noticeable. On the shores of Manatee River the dead fish were seen in great abundance, and from Tampa Bay to Punta Rassa they were washed ashore in the bays, especially in Little Sarasota Bay, in such quantities as to make the air foul from their decomposition.

The greatest loss of life appeared to be among the cavally (*Caranx hippos*). Next were the skipjacks or bonyfish (*Elops saurus*), though many redfish, sea-trout, and sheepshead were also killed. Even the large tarpum (*Megalops thrissoides*) did not escape destruction; many of which were killed in Charlotte Harbor, Manatee County, and in the Caloosahatchee River.

The mortality of the fish enumerated above appeared to be confined to the shallow waters of the bays and rivers, as I saw very few of them on the shore of the Gulf of Mexico, except near the inlets, where the tidewater probably carried them out from the bays. On the shore of the Gulf of Mexico, however, two species of fish killed by the cold weather were seen in great abundance, namely, the cow-fish (Ostracion quadricornis) and the balloon-fish (Diodon maculato-striatus). A few of the seahorse (Hippocampus hudsonius) were also killed.

Buzzards, eagles, and alligators feasted upon the decomposing fish; but I did not observe any effort made by farmers to use them as a fertilizer for their land, though in many places a cart could have been loaded with them in a short time.

Along the coast of Florida many oysters are exposed above water at low tide, especially when a north wind is blowing. Such oysters were killed in vast numbers by the cold weather in January.

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