

MORTALITY OF M'CLOUD RIVER SALMON IN 1881.**By LIVINGSTON STONE.**

[Extracted from letters dated July 10 and 12, 1881.]

The McCloud River salmon are dying in vast quantities from some unknown cause. The affected fish have this peculiarity, namely, that they appear on the exterior to be perfectly healthy fish. There are no parasites in the gills, no fungus on the bodies, no emaciation or any mark whatever on the outside to distinguish them from perfectly healthy fish. I secured and dissected one a day or two ago. The inside of the mouth and the gills seemed perfectly healthy and normal; the heart and liver seemed nearly as usual, but the alimentary canal and stomach were very much congested with extremely dark blood. You remember, without doubt, the small organ, of a deep red color, that lies at the lower extremity of the pyloric appendages. In the fish that I examined this organ was of an abnormal size, being three times as large, perhaps four times as large, as in a healthy fish, and of a dark, unwholesome color. I should say that this extraordinary enlargement of the spleen (as we call the organ here) was a sufficient cause for death. I will examine more as soon as I can get some.

THE FISH-EATING COWS OF PROVINCETOWN, MASSACHUSETTS.**By ISAAC HINCKLEY.**

[Extract from a letter dated July 20, 1881.]

Captain Atwood has kindly given me facts in respect to fish-eating cows. Prior to the passage of the Massachusetts statute forbidding owners of cows to allow them to roam at will (which statute was enacted to protect directly the beach-grass which checked the drifting of sand), the cows flocked to the shore while the fishermen were cleaning their catch. These cows sought with avidity the entrails and swallowed them. They seemed willing to eat the heads also, but lacked the ability to reduce their bulk sufficiently to allow of this. A species of ling or blenny, weighing three pounds or more, and discarded by the fishermen, was freely eaten also by the cows. Cows when first arriving at Provincetown from the rural districts refused fish; but their owners, by adding minced fish to their cows' rations, soon taught the cows to imitate their neighbors in respect to eating entrails.

At this time the thirty-three cows, constituting the whole of Provincetown's stock, being "kept up," have forgotten or never learned the fish-eating practice.