

THE OTTAWA NATURALIST.

VOL. X.

OTTAWA, JULY, 1896.

No. 4.

HOW WHALES BREATHE.

By PROFESSOR EDWARD E. PRINCE,

Dominion Commissioner of Fisheries, Ottawa.

No sight is more common, on a sea-voyage, than the spectacle of a whale "blowing." Many people imagine that the creature spouts forth a column of water, and most artists so depict it, forgetful of the fact that the blow-hole or spiracle, being really the nostril, is used for respiration, and that all cetaceans or whales are air-breathing creatures. It is true that fishes, which are cold-blooded, inhale water, for they breathe by means of gills; but whales have warm blood and have no gills, and indeed, are not fishes at all. Like ourselves they have a pair of lungs, and are compelled to rise to the surface of the water in order to breathe. If detained under water too long they are drowned like any other air-breathing animal. Some of the largest species remain submerged for thirty or forty minutes and on rising to the surface spout eight or nine times and then descend again. The sperm-whale spouts sixty or seventy times at brief intervals of three to ten seconds and then dives below. Whale hunters say that, when hunted, a whale will remain below for an hour. The white column thrown up at each "spout" of the whale, is really the hot damp breath mingled with a little mucus and water. In the cold atmospheric stratum just above the waves the breath is condensed and falls like a shower of fine