

their powers are limited or augmented according to the depth of water they spring from; in shallow water they have little power of ascension, in deep they have the most considerable. They rise very rapidly from the very bottom to the surface of the water by means of rowing and sculling as it were, with their fins and tail, and this powerful impetus bears them upwards in the air, on the same principle that a few tugs of the oar make a boat shoot onwards after one has ceased to row." However this may be, we know that salmon use almost incredible efforts to ascend their native rivers. Modes have recently been adopted in France, in England, Scotland and Ireland, by which they can do so with ease, and which can be much more cheaply applied to Mill-dams in Canada, than in any of the countries above mentioned. This is simply by constructing below each mill-dam a congeries of wooden boxes proportioned to the height of the dam—which could be done, in any weirs I have seen requiring them, for a sum not exceeding twenty dollars. We will suppose that the mill-dam to be passed over is fifteen feet high from the surface of the water, and that the salmon can surmount the height of five feet at a single bound, then it would be only necessary to erect two boxes, each five feet high, one over the other (as in the illustration) to enable the salmon, in three leaps, to reach the waters which nature prompts him to seek for the propagation of his species. In many Canadian rivers—such as Metis, Matane, Rimouski, Trois Saumons, etc.—this simple apparatus might be put in operation for one half the sum I have mentioned, and I trust it has only to be suggested to the gentlemen residing on their banks to arouse their patriotism and excite them to activity in the matter. There can be no doubt that were the mill-dams removed, or boxes constructed adjacent to them, and protection afforded to the spawning fish, many of the rivers in *Upper Canada* would again abound with Salmon. I have myself, within a few years, taken the true *Salmo Salar* in Lake Ontario, near Kingston, and many persons in Toronto know that they are taken annually at the mouths of the Credit, the Humber and at Bond Head, in the months of May and June, which is earlier than they are generally killed below Quebec. Whether these fish come up the St. Lawrence in the early spring, under the pavement of ice which then rests upon its surface, or whether they have spent the winter in Lake Ontario, is a question which I must leave to naturalists; merely mentioning that there is some foundation for believing that salmon will not only live, but breed, in fresh water, without visiting the sea. Mr. Lloyd, in his interesting work on the field sports of the North of Europe, says,