

leven, but, at such a prospect, anglers have taken alarm, fearful lest the newcomers, when they have attained their full size, may devour the "finest trout in the world"—*Salmo levenis*—a fish which has been compared with the *Fario lemanus* of the Lake of Geneva; and in consequence of this opposition of the anglers, the Coregoni will probably find a home in Duddingston Loch, near Edinburgh, which, however, is much too small for such a large number of fish. Why not place the Russians in some of the lakes of Scotland, which already contain similar fish, in the town loch of Lochmaben, for instance, the home of the *Vendace*, or in Lochlomond, where may be seen the *Powan*? Or some hundreds of them might be sent to Loch Neagh in Ireland, which contains the *Pollan*. Hoping that a suitable home may be found for these finny treasures, it will be interesting to note their future growth, to ascertain when they breed, how long it is till the spawn comes to life, and at what age the fish become reproductive.

The Edinburgh Exhibition is undoubtedly indebted to Sir James Gibson Maitland for a good show of young fish; "live Salmonidæ artificially reared," at his extensive fishery of Howietoun near Stirling, where there is accommodation for the hatching of many millions of fish eggs. Sir James has directed his attention chiefly to the breeding of the trout of Lochleven, in which he has been exceedingly successful, also salmon, and the common trout of the country, as well as the *Salmo Fontanalis* of America. Howietoun is a commercial fishery, from which supplies of fertilised eggs and "eyed ova" of the fishes named may be procured at a given price. The proprietor has an exhibit in the Waverley Hall (No. 168 in Catalogue) of hatching and other apparatus incidental to the piscicultural operations carried on at his fishery. It has been found in the course of the routine work at Howietoun, that it is possible to transport eyed-ova with perfect safety to any part of the United Kingdom, and apparatus are shown suitable for the transport of large trout, providing for the automatic aëration of the water by means of a wedge of perforated zinc in the lid; there is also shown a "packing-case for transport of ova for long distances, with air chamber, ice tray, and ventilation of ova." It may interest persons interested in Pisciculture to know that the chief food supplied to the young fishes at Howietoun is horseflesh, three or four horses being used every week; the Lochleven trout are fed on clams procured from the Firth of Forth, and Sir James Maitland, we believe, is also growing snails for the purpose of feeding the young fish.

It may, we think, be taken for granted that the piscatorial feat which we have recorded, the transport of the fry from St. Petersburg to Edinburgh will give such a decided fillip to piscatorial operations of all kinds as may prove beneficial; there are many barren sheets of water which might be advantageously populated with some one or other of the many species of the finny tribe, whilst proprietors of lakes or rivers which are tending to barrenness cannot do better than restock them with fry of the far-famed Lochleven trout, or of the *S. fontanalis* of America, the latter for running streams, the former for sheets of water of some magnitude.

THE EDINBURGH CHAIR OF NATURAL HISTORY

PROF. RAY LANKESTER, who has resigned the Edinburgh Chair of Natural History, which he accepted a fortnight ago, has requested us to publish the following statement:—

I have elsewhere stated the reasons which have led me, with very great regret and after anxious consideration, to withdraw from the honourable position of Regius Professor in the Edinburgh University, before actually entering upon the duties of the office. They, briefly stated, amount to this—that I had formed a mistaken

estimate as to the extent to which the Professor's time would be occupied, the appliances at his disposal, and the security of his emoluments. For this mistake I am anxious to state that I accept the painful responsibility. At the same time I desire to say to those to whose support and interest in the matter I have been and remain so deeply indebted, that the warmth of the contest, which has occasioned no small expenditure of time and trouble to them—expenditure which I must ever remember with gratitude, and unfortunately also with deep regret—explains and, I hope, may be considered as excusing the tardiness of my arrival at a correct estimate of the desirability of exchanging my position in London for that in Edinburgh.

I have also to explain that it was solely a desire to give the least inconvenience possible to the authorities, which led me to communicate my resignation, and the reasons for it, to those whom it affected, *without any delay*. It has been pointed out to me, that my action may have appeared abrupt, and wanting in consideration for others. I should wish, on the other hand, to say that the reflection that my resignation must cause considerable disappointment, and even annoyance, to those whom I had most reason to spare such feeling, led me to hesitate in taking action, until the necessity for making arrangements both in Edinburgh and in London, was so pressing, as to make the immediate statement of my intentions, to all persons concerned, imperative.

Lastly, I should wish to state that I should find my regret for the present occurrence greatly increased, were it supposed that I do not recognise the dignity and importance of the University of Edinburgh, and the high position of its professors. I can only say, that I am sincerely sorry that circumstances should render it, in my opinion, desirable to forego the honour of entering upon that association with the University which was contemplated, and of working with colleagues for whom I, in common with all men of science, have the greatest respect and esteem, and amongst whom I am proud to reckon personal friends.

E. RAY LANKESTER

ON THE RELATIVE RESISTANCES OF LAND AND WATER TO WIND CURRENTS

IN 1878 I received a grant from the Government Research Fund for the purpose of ascertaining the law of variation of wind velocities at different heights: and I found that the curves traced out by the velocities in relation to the heights were most nearly represented

by the formula $V = v \sqrt{\frac{H+72}{h+72}}$, where H and h represent respectively the heights in feet of the high and low level stations above the ground, and V and v the respective velocities at those levels.

I have since then been making observations with the view of ascertaining the relative resistance of land and water to the aërial currents. These observations are very far from being complete, but I give the following results in the meantime, as they may be interesting.

	Sand.	Water.	
6" waves ...	12'8	13'8	miles per hour = 1 : 1'08
6" " ...	13'65	14'375	" " = 1 : 1'06
3" " ...	7'96	9'19	" " = 1 : 1'155
	Grass.	Water.	
9" " ...	8'4	10'7	" " = 1 : 1'274
3" " ...	10'13	14'75	" " = 1 : 1'456

The velocities given are the means of observations taken every five minutes for about an hour.

From this it will be seen that the resistance is least for water, somewhat greater for smooth sand, and greater still for grass. Further observations are not only required on this subject, but also on the velocity of the wind over the water in relation to the height of the waves.

Edinburgh, April 18

THOMAS STEVENSON