by this one gale, as I, with the assistant, were continually picking out dead ova for the four following days; but it could not have been less than 7,000.

The one little fry, which up to this time had been so lively, died, being twenty-three days old.

April 5th.—The weather for the last few days has been much finer. 11 p.m.—Three fry newly hatched, and looking well. Deaths of ova for the last five days, about 2,500.

12*th.*—From the 5th to the 12th instant, three to six fry have been hatched per day. At the same time, numbers died whilst hatching. Have been obliged to make use of ice, the temperature having risen four degrees in five days. It is now 54° in the apparatus.

Should have commenced using ice five or six days earlier; but, seeing the sailing qualities of the ship, feared to begin with it before it was absolutely necessary. Could calculate, at this time, on a very long passage.

17*th.*—Loss of ova for the past week, about 3,000. Since the 12th instant, the young fry have all died. The last of them lived ten days.

During the last two days have been engaged in cleaning out the whole of the ova beds,—a work which ought never to be done if it could possibly be avoided; but, from the number of decayed ova that were under the gravel, it was necessary, as wherever any dead ova were allowed to remain in the gravel, those immediately above them were sure to perish.

May 7.—From the 17th April to this day, nothing of importance has occurred. Weather fine, but hot, causing much trouble to keep down the temperature of the water.

The ice cannot last much longer, at the rate necessary to use it.

The average loss of ova from the date of cleansing the trays does not exceed twenty per day.

8*th.* 9 p.m.—To-night, as usual, went into the ice chamber. The ice having got very low, discovered a little box of ova which had been bedded in it by order of J. A. Youl, Esq., before leaving London. On taking up the box, found that the lid was broken off, but the ova were well covered with moss.

Had no expectation of finding living ova (even had the box been perfect); but, on lifting up a portion of the moss in which the ova were bedded, had the satisfaction to perceive that, amongst the many dead, there were still some living.

Having procured a large vessel and submerged therein the whole (moss, dead and living ova), carefully took out the moss, and poured off the greater portion of the water. Having done this, emptied the contents of the vessel into one of the trays with all the care and speed possible, keeping it apart from the other ova; then picked out the dead ova, about 250 in number, and had nineteen living, to all appearance in good health.

This little experiment will no doubt prove of much future value, as indicating a new and successful method of transporting salmon ova to distant countries.

9*th.*—During last night and to-day have lost five of the ova taken from the box; but no doubt the cause is from injuries received when cleaning away the moss and placing them in the tray.

11*th.*—The ship pitching and rolling, causing the apparatus to swing so violently as to strike the beam to which it is suspended.

15th.—In Latitude 21° 36′ S., Longitude 20° 8′ W.; wind East, calm. Ice nearly finished. With no better breeze than at present, the ova must of necessity die.

16*th.*—No change in weather. Have taken from the chamber the last three blocks of ice, which cannot last many hours,—10 p.m.

17*th.*—Latitude 22° 19′ S., Longitude 25° 55′ W. Have been allowing the temperature of the water to rise a little by degrees; but all to no purpose. Ice all melted about 12·30 a.m., and the whole of the ova died at 1 a.m., at a temperature of 59°, with the exception of those that had been taken from the moss, which lived eight hours longer, at a temperature of 65° (9 a.m.); being seventy-four days from London, and eighty-eight days from the time of their being taken from the parent fish.

I can only add, on looking over the Journal, my extreme astonishment at the ova surviving so long under such tremendous disadvantages.

It is useless to mention the Gimbal apparatus, which was a failure from the beginning.

On the other hand, the value of the suspended apparatus, in which my only hope was placed, was rendered nugatory by the utterly unsuitable character of the ship.

The gale that prevailed on the 26th March (when the bilge-water washed up to the deck) caused the death of 7,000 ova placed on the surface of the gravel, as also of a great number of those deposited under it which could not then be removed, and which, by their subsequent decomposition, proved the destruction of many others.

Under all these disadvantages, it is only surprising that any of the ova survived for so long a period as seventy-four days from the date of their embarkation, and eighty-eight days from the time of their being taken from the parent fish.

The above facts show conclusively, in my opinion, that if the late experiment had been made in a roomy and fast ship, with properly constructed tanks, many thousands of the ova would have reached their destination in safety.

WM. RAMSBOTTOM.

APPENDIX No. 2.

Statement of Expenditure.	£	*s.*	*d.*	£	*s.*	*d.*
To constructing Salmon Ponds at River Plenty	727	4	11			
Fencing ground round ponds	60	13	0			
Salary to Mr. Ramsbottom, and accounts paid in Hobart Town ...	111	6	6			
				899	4	5
Amount reported by Mr. Youl to have been paid by him in England ...				1,420	0	0
				£2,319	4	5