

Under no conditions could it be supposed that the ova or fry would survive 160 days at sea, nor could it be expected that a vessel of the dimensions of the "Beautiful Star," and rigged as she was, could perform the voyage much under that period.

The suspended apparatus appears to have been skilfully contrived, and in a suitable vessel, and under other proper conditions, would in all probability have brought their charge in safety to their destination.

But the small dimensions of the vessel did not afford space to permit it to swing freely, and the constant and excessive rolling kept the gravel in which the ova were deposited continually shifting, causing their death by mere attrition; and, from the same cause, the apparatus could not safely be approached for many days in succession.

Mr. Ramsbottom has, however, pointed out some changes in the construction of the suspensory apparatus which would, in the opinion of the Commissioners, considerably improve it, and render it as near as possible perfect for a future experiment.

The second apparatus, constructed on the Gimbal principle, was a failure from the first, and, by its excessive motion, soon caused the death of all the ova which had been placed in it.

But if the ova had not nearly all perished from the cause referred to, the failure of the ice, seventy-four days after the sailing of the vessel, must necessarily have led to the same disastrous result; although on board a fast vessel its duration for that period might have been sufficient.

Mr. Ramsbottom calculates that at least two-thirds of the ice embarked, amounting to twenty-five tons, were lost by melting. The Commissioners are, however, of opinion that a great part of this excessive waste was due to the faulty construction of the ice-house, and the mode in which the stream of water was made to pass through it from the tanks to the trays. They believe that such improvements could be made as would certainly guard against this source of failure, and secure the preservation of the ice for a period much beyond that occupied in an ordinary voyage from England to this Colony.

At an early period of the voyage, Mr. Ramsbottom discovered another source of disaster, which, if he had not been able to remove it, by the detention of the vessel at Scilly, would alone have caused the destruction of the ova. It was found that the water contained in the iron tanks brought with it to the trays, and deposited on the ova, so considerable a quantity of that metal, in the form of a fine powder, as to cause the death of great numbers of them before a remedy could be applied. The remedy consisted in causing the water to pass through a filter before it reached the trays. The use of wooden tanks, lined with block tin or slate, would effectually prevent future disaster from a similar cause.

The Commissioners have learned that some of the ova were several weeks old when first placed on the trays. They notice this fact more with reference to any future experiment that may be undertaken than to that which has just terminated. They are of opinion that every precaution ought to be taken to retard the hatching of the fry during the voyage, and that, as one important means of obtaining this end, the ova, when embarked, should not be more than a few days old.

Mr. Ramsbottom appears to the Commissioners to be thoroughly acquainted with the duty he undertook to perform, and to have discharged it with much diligence and zeal. They believe that if another effort of the same nature should be made, it could not be confided to a more efficient agent, or one more likely to ensure a successful result.

The chief practical work that the Commissioners have had to perform has consisted in the necessary preparations for the reception of the salmon ova, if they should happily reach the Colony in safety, and the construction of a breeding pond. At their first meeting, the Commissioners unanimously decided that their attention should at first be confined to the stocking of the Derwent; and that the breeding ponds should be constructed on the bank of one of its tributaries. After a careful personal inspection of the locality, a spot on the east bank of the River Plenty, about two miles from its junction with the Derwent, was selected as the site of the pond. The Commissioners were led to this selection by the generally ample volume, low temperature, and gravelly bed of this stream; while its proximity to the head of the navigable portion of the Derwent, above New Norfolk, affords facilities for the safe transport of the ova from the vessel importing them to the ponds. Several other important advantages were secured by this selection; among which were the much smaller cost at which the pond could be constructed on the bank of the Plenty than on the main stream, the more complete security from the danger of floods, and the easier capture of the fish on their return from the sea, for the purpose of further propagation.

The land on the east bank of the Plenty is the property of Robert Read, Esq., of Redlands, and the thanks of the Commissioners are due to that gentleman for the liberal spirit displayed by him in offering, without restriction, the use of any portion of his ground that the Commissioners might deem most suitable for the object they had in view.

After due exploration, a piece of ground, about three acres in extent, half a mile above Mr. Read's residence, was chosen as the site of the ponds. The ground thus selected offered every necessary facility for the cheap and expeditious accomplishment of the undertaking, and was at the same time sufficiently elevated to protect it from the reach of the highest known floods. By Mr. Read's further liberality, permission was obtained to procure the necessary supply of water from his main irrigation channel, by which the labour and heavy expense of a long cutting to the river itself was saved to the public. It was Mr. Read's desire that the use of his land should be gratuitous; but the Commissioners deemed it desirable that a small rent should be paid under a regular and formal lease. A lease for fourteen years, at a yearly rental of £15, was accordingly prepared, and on its due execution the Commissioners lost no time in commencing the necessary operations. The pond has long since been completed; and the Commissioners believe that in no part of the world has a more perfect work of this character ever been constructed.

Although deeply disappointed by the failure of the late attempt to introduce the salmon into the Colony, the Commissioners entertain a confident hope that, at no distant period, the work thus constructed under their direction will be put to the test of actual experiment; and they desire to express their earnest trust that the Government and Legislature will not abandon an enterprise, which is calculated to confer on this Colony a material benefit at once so extensive and so enduring, until