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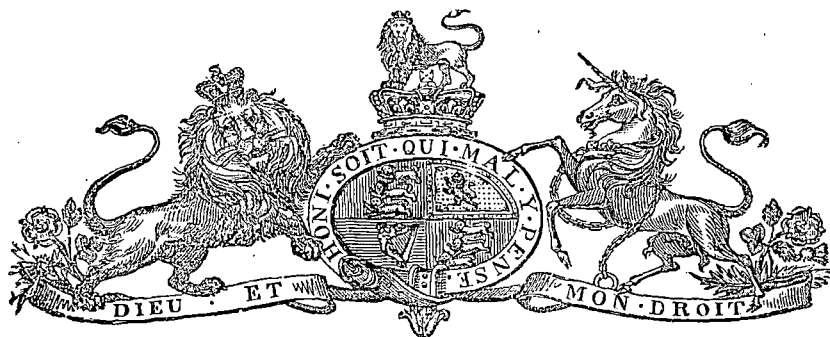
1866.

T A S M A N I A.

IMPORTATION OF SALMON.

REPORT OF THE COMMISSIONERS.

Laid upon the Table by the Colonial Treasurer, and ordered by the House to be printed, 31 July, 1866.



REPORT of the TASMANIAN SALMON COMMISSIONERS.

To His Excellency Colonel THOMAS GORE BROWNE, C.B., Captain-General and Governor-in-Chief of the Colony of Tasmania and its Dependencies.

MAY IT PLEASE YOUR EXCELLENCY.

In their Report addressed to Your Excellency in the year 1864, the Commissioners expressed their unanimous opinion that, notwithstanding the considerable amount of success that had attended their recent attempt to introduce the Salmon and Trout into the Colony, resulting in the hatching of several thousands of the former and five hundred of the latter, they should be authorised to procure another importation of Ova, which they considered still necessary for ensuring the ultimate success of the undertaking, which they could not regard as complete until crowned by the return of some of the Salmon from the sea; and with the view of accelerating the full stocking of our numerous fine Rivers with these invaluable fish.

To this proposition the Government and Parliament promptly and liberally assented; and the sum of £800 having been placed at their disposal, the Commissioners lost no time in taking measures for the performance of the task assigned to them.

They made immediate application to Mr. James Youl, who had so zealously and successfully conducted the previous shipment of Ova, and whose co-operation they regarded as almost indispensable to success, soliciting him again to afford them his valuable assistance, and not doubting his ready compliance.

In this expectation, however, the Commissioners were disappointed: Mr. Youl declined to engage again in a work which had already cost him much personal labour and anxiety; and as his reply was not received until it was too late to make other arrangements for carrying out their object during that year, the season was thus lost to them.

Under this difficulty and disappointment, the Commissioners, in concert with the Council of the Acclimatisation Society of Victoria, who had always cordially co-operated with them in this important work, determined to seek the aid of Mr. Edward Wilson, then resident in England, who had always taken a warm and practical interest in our previous attempts to introduce the Salmon into the Rivers of Australia.

Although then labouring under an almost total loss of sight, since happily in a great measure restored, Mr. Wilson did not decline the task which he was solicited to undertake.

The Commissioners had no desire that Mr. Wilson should, and no expectation that he could, do more than appoint fitting agents to perform the work required; but even this was a labour which must have proved difficult and embarrassing to one suffering under such a privation. Happily, however, he was relieved from all embarrassment by the spontaneous offer of Mr. Youl again to undertake, on behalf of his friend, the whole management of another shipment of Ova.

The Commissioners need not assure Your Excellency that they received the intelligence that Mr. Youl had thus again devoted himself to the work with much satisfaction.

They felt assured that the skill and energy that had contributed so much to the success of the former enterprise would not be wanting to the renewed undertaking; but aided by the experience

acquired on that occasion, and during the interval of two years that had since passed away, would ensure a higher success than had attended any of their previous efforts.

In this expectation the Commissioners have not been disappointed.

Mr. Youl's first work was to secure proper accommodation, paying the usual rate for freight, on board the fine clipper ship *Lincolnshire*, the property of Messrs. Money Wigram and Sons, whose vessel, the *Norfolk*, brought out the Ova in 1864, which was advertised to sail for Melbourne at a date suitable for his purpose.

In the hold of this vessel an Ice-house was constructed, on the same general plan as that used in the *Norfolk*, but of rather larger dimensions, and with some improvements which experience led Mr. Youl to adopt.

The Salmon and Salmon Trout Ova were obtained from various Rivers in Great Britain, through the agency of Messrs. Ramsbottom, Johnson, and Allies, who exerted themselves most zealously to fulfil their task, rendered peculiarly arduous by the stormy weather that prevailed while they were engaged in their work, and greatly impeded the capture of the parent fish.

Mr. Youl draws the special attention of the Commissioners to the merits and exertions of Mr. Thomas Johnson, by whom a very large proportion of the Ova were obtained and brought to London, without which the number required for shipment would have been greatly deficient.

The Ice-house was fitted for the reception of 150,000 Ova, which it was Mr. Youl's desire and intention to have placed in it; but, from the cause above mentioned, he was unable, in spite of the utmost efforts of himself and his assistants, to procure more than 104,000, consisting of about 93,000 Salmon, 10,000 Salmon Trout, and 500 Brown Trout Ova.

These having been carefully packed in moss, and placed in small wooden boxes, of the same character and dimensions as those used on a former occasion, were then deposited in the Ice-house, covered by and distributed through a mass of 35 tons of ice obtained from the vaults of the Wenham Lake Ice Company.

The door of the Ice-house was then closed, not to be opened until the *Lincolnshire* reached her destination at the Antipodes.

The ship took her departure on the 20th January, the same day of the same month on which the *Norfolk* had sailed with her former shipment in 1864, with every prospect, from her well-known sailing qualities, of making a speedy voyage.

Unfortunately, in passing through the Downs, she came into collision with another vessel, and suffered so much damage as to be compelled to return to port for repairs, thus greatly retarding her passage to Victoria.

This unfortunate accident caused Mr. Youl much anxiety, nor was it less a source of regret and alarm to the Commissioners when they were apprised of the disaster. Both were fully aware that the Ova could not be detained in their ice prison, as it then appeared certain they would be, for more than 100 days, without danger and loss.

The repairs of the ship having been completed, she again started on her long voyage, and safely reached Melbourne on the 1st May, after a favourable passage of average duration, but extending to 100 days from the date of her first setting sail.

On the arrival of the *Lincolnshire* in Hobson's Bay, Mr. Ramsbottom, the Superintendent of our Breeding Establishment at the Plenty, whom the Commissioners had despatched to Melbourne some time before, for the purpose of superintending the transshipment of the Ova into the *Victoria* steamship, which the Government of Victoria had with the utmost liberality again placed at the service of the Commissioners, immediately proceeded on board, accompanied by the President and other Members of the Council of the Victorian Acclimatisation Society.

Two of the small packages of Salmon Ova having been anxiously inspected by these gentlemen, they were gratified by discovering that a large proportion of them appeared to be in a sound and healthy condition, notwithstanding the long and disastrous voyage to which they had been exposed.

The most energetic measures were immediately adopted for the removal of the Ova to the *Victoria*, in effecting which Mr. Ramsbottom was cordially assisted by the Council of the Acclimatisation Society and their Secretary, Mr. Sprigg, as well as by Captain Norman, who had afforded every facility and aid within his power for making the necessary preparations for the conveyance of the Ova to Tasmania in the vessel under his command.

The small boxes containing the Ova were packed as before in large cases, but of only half the size of those used on the former occasion, which had been found too ponderous to be conveniently or easily carried from New Norfolk to the Plenty.

Although the Council of the Victorian Acclimatisation Society had borne a considerable share of the expense of the enterprise, they liberally, and the Commissioners consider wisely, refrained from detaining any of the Salmon or Salmon Trout Ova to be hatched under their own care, preferring that they should have the advantage of the more complete and matured appliances at our command, with the skill and experience of our Superintendent.

The small box containing the Brown Trout Ova was alone left in their charge, and these, when examined, were unfortunately found to have all perished.

The cases containing the Salmon and Salmon Trout Ova having been all securely placed in the hold of the *Victoria*, and covered over with the remnant of the Ice from the *Lincolnshire*, still amounting to about 15 tons, within 24 hours after they reached Melbourne Captain Norman got up steam and proceeded on his voyage across the Straits; but, in order to obviate the danger to be apprehended from the vibration caused by the machinery, using only half steam power.

This precaution must have necessarily prolonged the passage to a considerable extent; but it was unfortunately still further protracted by a dense fog that prevailed in the Straits compelling Captain Norman, for the safety of his ship and all she had on board, to proceed with the utmost caution, and even to cast anchor under Goose Island for the greater part of one night. The passage from Hobson's Bay to the Derwent thus occupied three days instead of 40 hours, in which it is usually performed by the Steamers trading between these two ports.

From Hobart Town the Ova were promptly conveyed, together with about 10 tons of Ice that still remained undissolved, to their future home at the Plenty, by means almost precisely the same as those employed in 1864, and which it is therefore unnecessary again to describe in detail.

Within 30 hours from the arrival of the *Victoria* at Hobart Town, the whole of the Ova had been safely deposited in the hatching boxes at the Ponds.

As soon as the first boxes reached their destination, the process of unpacking was commenced by Mr. Ramsbottom, assisted by or in presence of several of the Commissioners and many other anxious spectators.

The first two packages opened presented a very discouraging aspect. In these nearly all the Ova had perished.

As the work proceeded, however, better indications appeared, and when all the boxes had been unpacked the general conclusion was that nearly half, and certainly not less than 40 per cent., of the Ova were to all appearance alive.

Although these results were highly encouraging, and gave promise of a large degree of success, the Commissioners and their Superintendent were fully aware that the number of fish might fall far short of the number of Ova that reached their hands in an apparently sound condition.

The appearance of the Ova that had perished indicated that by far the largest portion of the mortality had taken place within a very recent period, and led to the conclusion that they had been dying in large and daily increasing numbers for a week or two before their arrival at the Ponds.

Nor was it to be expected that this mortality would be immediately stayed by the removal of the still living Ova from their late unnatural home to the waters of the Pond. It was scarcely to be doubted that in many the process of decay had already begun, although not to be detected by the eye. The Commissioners were further aware, from their own experience as well from that of all Pisciculturists in Europe, that a considerable deduction has always to be made on account of imperfect fecundation, against which no care or skill can fully provide.

Among the Ova imported by the Commissioners in 1864, it was found that 16,000 were thus barren, and out of our recent importation 10,000 at least have been ultimately found to be in the same condition.

The number of Ova, therefore, received at the Ponds capable, under any circumstances, of producing living fish was reduced to 30,000.

From these 30,000 Ova that had travelled over half the circumference of the Globe before they reached our Ponds, and had been unnaturally immersed in their little wooden prisons for 104 days, we have obtained about 7000 healthy young fish, consisting of 6000 Salmon and 1000 sea Trout,—a

number not only large in itself, but representing a per-centage not very far short of that attained at Huningue, the best conducted Fish-breeding Establishment in the world, where the Ova are received without having passed through any of the perils and disasters to which these had been exposed.

It will have been observed that, while only about 3000 fish were produced from the importation of Ova in 1864, more than double that number have been hatched from about the same number of Ova received on the last occasion, although Fourteen days longer on ship-board.

This discrepancy in the results of the two undertakings, and the greater success of the last, are probably in a great measure due to the lighter packing of the moss in which the Ova were embedded, and to some improvements in the Ice-house; to both of which Mr. Youl was led by his previous experience.

A portion of this higher success is also to be attributed to some alterations in the hatching boxes at the Ponds, consisting chiefly of the substitution of a finer for a coarser gravel, by which the Ova were prevented from ever sinking out of view, enabling Mr. Ramsbottom at once to remove all that died, and became a source of danger to the living during the process of hatching.

The temperature of the water also, which was several degrees lower in the month of May last than during the same season in 1864, had no doubt a favourable influence on the result.

The young Salmon and Salmon Trout have already in a great measure been freed from their umbilical appendages, and have become vigorous and active fish. The mortality since the process of hatching was completed has been of the most trivial amount.

The Commissioners regard the Salmon Trout as an acquisition especially valuable. These fish nearly approach the true Salmon in the size to which they attain, as well as in their qualities as an article of food; and it is now a well-ascertained fact that they will thrive and multiply their numbers in fresh water without visiting the Sea.

The Commissioners, therefore, entertain no doubt that they will be as successful in acclimatising this valuable fish as they have already been in the case of the Brown Trout. The number of these last, hatched from the Ova imported in 1864, was for some time estimated not to exceed 150, but was afterwards found to approach to double that number.

Of these, about 40 were set at large in the Plenty in April, 1865, and the rest retained in the Pond as a breeding stock, where they have thriven without interruption, and have attained a size and weight exceeding the standard which the Trout usually reaches at the same age in the rivers of Great Britain.

For several months past it has been anticipated that some of those fish would spawn during the present winter season.

This expectation has now been fulfilled, and the Commissioners have the pleasure of reporting that a considerable number of Ova have already been secured from a few of the Trout, and that others are on the point of spawning.

The Commissioners cannot say with any certainty what will be the number of Ova which the present season may yield, but from so small a body of fish in the first year of their spawning the produce will necessarily be limited.

They hope, however, to be enabled to furnish an immediate supply to the Council of the Victorian Acclimatisation Society, and to the Association lately formed at Launceston for procuring the early stocking of the rivers on the northern division of the Colony, who have given a guarantee that suitable preparation shall be made for the safety and due hatching of the Ova that may be entrusted to them.

The Provinces of Canterbury and Southland in New Zealand, from both of which pecuniary contributions have been received in aid of the undertaking, as stated in their last Report, have a just claim to share in the benefit of our success, which the Commissioners gladly acknowledge, and which it will be their anxious desire to satisfy at the earliest possible opportunity.

At Christchurch a Pond and hatching boxes have long since been constructed under the superintendence of Mr. Johnson, Secretary to the Acclimatisation Society of that place. This gentleman has further offered to come in person to this Colony for the purpose of receiving and conveying to Christchurch such supply of Ova as the Commissioners may be able to furnish, and which it will afford them much gratification to provide during the present season, if the numbers of Ova at their disposal shall prove sufficient.

The claims of other localities will be attended to as rapidly as possible according to the means which may be at the command of the Commissioners.

In another year a much increased number of Ova may be expected from the same fish ; and in the meantime other centres of supply will have been established, from which Ova or Fry may be distributed in all directions.

It may be expected, according to the preponderance of authority on that long disputed question,—the duration of the stay of the Salmon in the sea,—that the fish produced from the hatching of 1864 will return to the neighbourhood of their birthplace towards the end of the present year, when their arrival will be anxiously looked for as the happy consummation of this great enterprise.

The English Trout may be now regarded as established in our rivers beyond all risk of failure ; and the Commissioners entertain a confident belief that the young Salmon already set at large in the Derwent, with the still larger number which they have lately succeeded in hatching and are now thriving in the Ponds, would suffice for the ultimate stocking of our waters with this still more valuable fish.

At the same time, their opinion that this great work should never be regarded as fully accomplished until the fish have returned from the sea, and provided the means of further propagation, remains unchanged. They therefore very earnestly recommend that they should be authorised and enabled to procure at least one more importation of Ova from England, which would not only give a further guarantee against ultimate failure, but would greatly accelerate the full stocking of the rivers of the Colony, and the early realisation of the vast benefits that cannot fail to flow from the accomplishment of this great work.

When the almost incalculable value of the Salmon and Trout—as articles of human food, as a means of extending our commerce, increasing our population, and affording employment to our labouring classes—are considered, besides the direct pecuniary returns to the Treasury of the Colony, the expense incurred in their establishment in our rivers sinks into insignificance.

In their last Report the Commissioners estimated the cost of each future importation of Ova at £800, and that estimate has proved strictly correct.

The Commissioners have been informed by the Council of the Victorian Acclimatisation Society that, although entirely concurring in the opinion that another shipment of Ova should be procured, they are unable, in consequence of having no funds at their command, to bear any share in its cost. The Commissioners are, however, persuaded that the Government of that prosperous Colony, which has always shown a deep interest in the enterprise, and given it a generous support, would not, if applied to, refuse their further aid ; nor can they doubt that the other adjoining Colonies, and more especially the various provinces of New Zealand, whose rivers are so well suited to become the home of the Salmon and the Trout, would be found ready to assist us.

But, without waiting to learn whether any or all of these Colonies will agree or decline to contribute to the expense of a further prosecution of this great enterprise, the Commissioners earnestly hope that Your Excellency's Government will not hesitate to recommend, and that the Parliament will sanction, the appropriation of such a sum as will enable the Commissioners without loss of time to take measures for proceeding with their task.

Since the date of the last Report, various improvements have been made in the ponds at the Plenty ; the chief of which has been the construction of two winding rivulets several hundred yards in length, one being connected with the small circular pond in which the Trout are confined, and the other attached to the large pond devoted to the use of the Salmon. To these rivulets both kinds of fish have freely resorted, with undoubted advantage to their health and progress.

The addition of the Salmon Trout to the family under their charge, and the spawning of the Brown Trout, have necessitated the formation of a small additional pond, which is now in progress and will soon be completed.

The Commissioners have also found it advisable to provide for the complete draining off of the water in the large pond when required, by laying down a few iron pipes fitted with a secure valve, which shall effectually prevent the escape of any of the young fish with which it will be again soon peopled.

The expense involved in these various improvements will be of only trifling amount.

In accordance with the recommendation of the Commissioners contained in their Report of 1864, the Government sanctioned the erection of a cottage for the use of the Superintendent, for which the necessary funds were granted by Parliament.

This building was completed in a very satisfactory manner in the course of last year, and has since been occupied by Mr. Ramsbottom.

The addition of a small room for the use of the Superintendent's assistant, who has lived for several years in a mere tent, has been approved by the Government, and contracted for at a small cost.

The grounds attached to the Ponds having been found of insufficient extent to admit of the increased accommodation which the well-being of their charge demanded, an additional acre has been obtained on lease from the proprietor for the same period, and on the same terms as those on which the original area is held.

The Commissioners have much pleasure in again bearing testimony to the zeal and intelligence with which their Superintendent, Mr. Ramsbottom, has continued to discharge the important duties of his office.

The Act passed during the last Session of Parliament for the protection of the Salmon, and the several Proclamations issued by Your Excellency under its authority, have been found to operate in a very beneficial manner.

The Commissioners believe that few attempts have been made to infringe the provisions of the Law. In some of the bays bordering on the Municipality of Glenorchy some unlawful fishing with the seine is supposed to have taken place; but this violation of the Law has been promptly and energetically suppressed by the Warden and Councillors of the District, aided by their very efficient police, and the active and zealous water bailiff, Mr. Young.

Efficient, however, as the Salmon Act has proved to be, experience has shown to the Commissioners, as was to be anticipated, that it admits of some amendments which it will be their duty to suggest to the Government at an early date, in order that they may be considered, and if approved, enacted during the approaching Session of Parliament.

In conclusion, the Commissioners desire to express their acknowledgment of the constant support which they have on all occasions received from Your Excellency's Government in the performance of the arduous duty entrusted to them.

R. OFFICER, *Chairman of Commissioners.*