

the Counties of Napa, Monterey, Los Angeles, Fresno, Tulare, Santa Cruz, Shasta, Solano, Alameda, San Diego, Yolo, Santa Barbara, and Siskiyou. These, should they thrive and increase as they have in Sacramento, will furnish an abundance of valuable food in the warm waters of the lakes and sloughs of the interior, and replace the bony and worthless chubs and suckers that now inhabit these places. It may be proper to call attention to the fact that these fish have become so numerous in the lakes near Sacramento that they can now be obtained in any quantity for stocking other appropriate waters in any part of the State.

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No. 35.

Dr. HECTOR to Professor BAIRD.

DEAR PROFESSOR BAIRD,—

Wellington, 27th April, 1878.

I have been away for the last two months, and find that you have not been informed of the result of the "whitefish" shipment of January last, which arrived in Auckland on the 15th February.

I enclose a copy of my report to Government of 5th March, which you should have received by last mail. You will see that the experiment has been so far successful as to prove that these fish *can* be introduced, with proper care, into the most distant part of the colony.

The partial failure must be attributed to some error during the transit. If due to over packing with moss, as suggested by some, I don't see how any could have survived. On looking through the papers, I find that Mr. Creighton states as follows :—

"The entire shipment of whitefish ova for California and Nevada, from Northville, Michigan, packed precisely as those for New Zealand by Mr. Clark, and coming in the same car, were spoiled in transit. On being opened by Mr. Woodbury and myself, they stank and were putrid. They had been placed near the stove by the express agent to prevent them freezing. Ours had been less considerably treated, and arrived (in Frisco) sound and lively, as I had proof, every box having been opened and examined by Mr. Woodbury in my presence. We then ascertained their temperature, and *gave them a drenching with water at a similar heat*, screwed them up, reversed their position, and placed them upon and under ice in the Pacific Mail Company's icehouse."

It is evident, therefore, that the ova were all right so far, whether the treatment I have underlined was judicious, you will be able to judge.

My own impression is, that the mischief commenced towards this end of the journey. Don't you think it would be better to pack them in tin boxes inside the wood, The wood boxes were quite sodden and rotting, and four of them had the lids loose.

The holes top and bottom seem also a mistake, as they promote drainage of the melting ice water through the ova, and may cause them to hatch. Holes in side and bottom would be better. Also I would suggest that each piece of scrim carrying ova, should be stitched on a light frame resting on corner pieces, so as to take the weight off the bottom layers and to prevent sagging in the central part.

But I hope to get authority to ask you to repeat the experiment, when I will write all my suggestions at length.

I have, &c.,  
JAMES HECTOR.

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No. 36.

Mr. R. J. CREIGHTON to the Hon. the COLONIAL SECRETARY.

SIR,—

San Francisco, California, 15th April, 1878.

I have received the enclosed letter from Mr. Clark, and in reply explained that the Government of New Zealand had not put me in funds to meet the payment of 500dols., but that I had forwarded his claim and a reply could not possibly be expected before the incoming mail arrived. I trust this matter will have been attended to. I regret to learn through the newspapers that the last shipment of whitefish failed. I think it was unfortunate that an attempt was not made to hatch them out in Auckland. In all probability sufficient would have been saved to stock the lakes. All experts here declare that the eggs should be hatched out where the ship first touches. The young fish can be fed on blood and taken anywhere over the country. It is a mistake to suppose that whitefish will not thrive in Taupo or Waikare. They are thriving in Lake Tulare, Southern California, the water of which is at least of as high a temperature as either of the Auckland lakes; and they thrive at San Leandro, Alameda County, which is quite as warm as the central heat of the North Island. There should be no local jealousy or feeling in a great national enterprise like acclimatising food fish, and I cannot divest myself of the idea that the order of the Government for the distribution of eggs after such a perilous journey was given with the view of conciliating local opinions. Doubtless it would be very agreeable for gentlemen in every important section of the country to have an opportunity of hatching out these fish, and watching over them until their waters had been fairly stocked, but the risk of failure is too great. The acclimatisation of whitefish is still a difficult problem. Their acclimatisation in New Zealand would be a feat, apart from its economic results, of which the country might well be proud.

Should the Government resolve upon testing the experiment next year, I will take precautions against failure such as the fish-packing establishments of the Union suggest.

I have, &c.,  
ROBT. J. CREIGHTON.

The Hon. the Colonial Secretary,  
Wellington, N.Z.