No. 24. Mr. R. J. CREIGHTON to the Hon. the COLONIAL SECRETARY.

San Francisco, January 20th, 1878.

SIR,-I have the honor to state, in reference to my previous letter, that I have had a conversation with the members of the State Fish Commission, and learned several facts of great practical value in reference to the propagation of whitefish, which I have embodied in a letter to Mr. Firth, of Auckland, in the belief that the Auckland Acclimatisation Society will have the task of hatching out the bulk, if not all, the whitefish eggs. I am unable to copy the letter in time for this mail. Should the suggestions given therein be acted upon, I have no doubt of the success of the experiment.

I have further to request that you will cause the request in Mr. Clark's letter to be attended to. As Mr. Clark did not send any statement of account, I infer that the 1 dol. per 1000 mentioned by Professor Baird, covers cost of package. It may not be the case, however. If so, 500 dols. is due the Fish Commission at Northville, and should be remitted. I have sent two tons of ice, not three, as I originally intended. I think two tons will be ample. I may mention that I received very great assistance from Mr. Woodbury, who came a long distance twice in very inclement weather, to examine and repack, after drenching the eggs with water at proper temperature. I should be pleased if the Government would authorise me to thank him for his gratuitous help.

The accompanying telegrams and correspondence give the history of the transaction. It will be observed from my reply to Mr. Clark that the New Zealand shipment was fortunate in not sharing the same fate as those consigned to the State Fish Commissioners of California at Nevada, which perished by the way.

I have, &c.,

ROBT. J. CREIGHTON.

No. 25.

Mr. J. C. FIRTH to the UNDER-SECRETARY.

[TELEGRAM.] Auckland, February 15th, 1878. MAIL steamer arrived last night at 7 o'clock. I shipped on board Hawea eight boxes containing your hundred thousand whitefish ova-packed ice in two insulating chests with hundred weight ice in reserve. Hawea cleared wharf at half-past eight. Owing to having no information of dimensions of ova boxes, I could not pack the remaining two boxes containing one hundred thousand ova. These I forward per Rotorua. Creighton sends full instructions, which I will wire you to-day for information of Southern Society. Creighton's exertions well deserve the thanks of the Government. J. C. FIRTH.

G. S. Cooper, Esq., Under-Secretary.

The Hon. the Colonial Secretary,

Wellington, N.Z.

## No. 26.

Mr. J. C. FIRTH to the UNDER-SECRETARY.

SIR,---I have this day forwarded one box whitefish ova said to contain 50,000 ova, properly packed in ice in insulating box, and one box containing ice in reserve. I enclose Mr. Creighton's instructions. Having fully acquainted you of all matters relating to this shipment of whitefish ova, it is not necessary for me to enter into any recapitulations. My account for cost incurred will be forwarded to you shortly.

G. S. Cooper, Esq., Under-Secretary,

Wellington.

(Note.-This box was forwarded from Wellington to A. M. Johnson, Christchurch, on 22nd April). J.H.

## Enclosure to 26.

Mr. CREIGHTON to Mr. J. C. FIRTH.

## My Dear Sir,-

San Francisco, 20th January, 1878.

Since I wrote to you re whitefish, as per enclosure, I have learned some facts which are of interest relative to the artificial hatching of them, from the State Fish Commissioner (Mr. Redding), and the foreman (Mr. Woodbury), which you should know.

1st. Mr. Redding declares that it is almost essential that they should be hatched out at the first point of landing, owing to their delicacy. They will thrive anywhere if the water is deep enough, their food being small crustacea adhering to rocks in fresh water lakes, having a current running through them. They should have a sandy and gravelly bottom.

2nd. They are much more difficult to manage than salmon, and, until recently, little was known of They lose their sacks in ten days at a temperature of 35°, and earlier, at a higher temperatheir habits. It will be necessary to feed them three days afterward, or perhaps earlier, if they are to be transture. ported any distance. The Fish Commissioners of Wisconsin discovered this year, that whitefish could be fed with blood for an indefinite period, and in the San Leandro hatching establishment, and at Lake Chabot in this State, the same experiment has been tried with success. Mr. Woodbury, therefore, suggests that you keep twenty of the fish in the hatching trough and feed them with blood, which can be squirted into the water with a syringe and thoroughly mixed. This would serve a double purpose. It would establish, as a fact, what is now experiment, that whitefish may be fed upon coagulated blood, and also give you a permanent stock for purposes of spawning, by which your society might derive no little profit. The Fish Commissioners here, are very auxious in regard to this matter, and I would be glad if you could give it a fair trial and report the result. As fish culture is now becoming a leading industry, the economic side of the question will readily suggest itself to your mind.

J. C. FIRTH.

Auckland, April 19th, 1878.

I have, &c.,