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NEW ZEALAND.

REPORT ON EXPERIMENTAL TRAWLING

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Presented to both Houses of the General Assembly by Command of His Excellency.

SIR,—

Wellington, New Zealand, 23rd July, 1900.

I have the honour to present the following report on the trawling expedition undertaken on behalf of the Government during the autumn and early winter months of the present year.

The object of the expedition was to make an experimental survey of the coasts of the colony, especially in the neighbourhood of the more thickly populated centres, to ascertain what extent of trawling-grounds existed, what varieties of marketable fish were obtainable in the different localities, to prove whether the conditions necessary for carrying on successful trawling existed in certain localities within workable distance of the best markets; and, if so, to place the information on record for the guidance of those interested in the trawling industry; and generally to acquire information on the distribution of food-fishes, &c., in the sea surrounding these Islands.

Mr. A. Hamilton, Registrar of the Otago University, joined me at Lyttelton on the 10th March, and accompanied the expedition during the whole of the work in Pegasus Bay and off Banks Peninsula. On the 7th April Professor Benham, Messrs. Hamilton and G. M. Thomson accompanied the vessel while areas about ten miles east of Cape Saunders were being worked in depths up to 50 fathoms. Mr. G. M. Thomson, F.L.S., also joined me at Wellington on the 14th May, and remained on board until the 23rd; during that time Cloudy Bay and the greater part of Tasman Bight were worked. Owing to the short time available it has been impossible for these gentlemen to work up the material collected and present a complete scientific report for publication with this report; but in the meantime they have supplied interim reports, which are appended hereto. When completed their full reports will be forwarded for publication as soon as I receive them.

To carry out the experimental trawling operations the Government chartered the steam-trawler "Doto," owned by B. A. Petersen and Co., of Napier. The "Doto" was originally built for a steam-yacht, but was subsequently bought by Captain Nielsen, for Messrs. Petersen and Co., in Sydney and taken over to Napier, where she was fitted out and used as a trawler. She is a composite vessel of 28 tons gross register, 66 ft. in length, 12 ft. beam, draught 6 ft. 6 in., and fifteen horse power nominal. The vessel was fitted with the otter-trawl, which while quite as effective can be much more easily and quickly put down and picked up than the beam trawl, and is therefore altogether better suited for the short tows required for experimental work.

Extra gear and fittings were carried in the shape of spare otter-boards, warps, and four nets of the following sizes, viz.:—

- No. 1. Head-line, 70 ft.; spread, 50 ft.; length, 110 ft.; mesh, 4½ in. body, 3 in. at cod-end.
- No. 2. Head-line, 65 ft.; spread, 55 ft.; length, 90 ft.; mesh, 4 in. body, 3 in. at cod-end.
- No. 3. Head-line, 50 ft.; spread, 35 ft.; length, 70 ft.; mesh, 5 in. body, 3½ in. at cod-end.
- No. 4. Head-line, 80 ft.; spread, 60 ft.; length, 120 ft.; mesh, 4½ in. body, 3 in. at cod-end.

There were, besides, a 1 in. mesh surface-net of 50 ft. spread, and two dredges for taking up samples of the bottom.

Captain Nielsen, who was in charge of the "Doto," has had a life-long experience in the North Sea fisheries. He was employed by the New South Wales Government as trawling-master for the experimental trawling expedition undertaken on the coast of that colony in 1898, and the skill and energy displayed by him throughout our expedition proved that the Government were fortunate in securing his services to carry out the work.

The "Doto" proved to be an excellent boat for inshore-work, but a larger and more powerful vessel will be required when areas are explored in the open ocean.

GENERAL ACCOUNT OF THE CRUISE.

The term of the charter of the "Doto" commenced on the 6th March. On that date I inspected and took over the vessel at Napier for the Government, and, as it was decided to begin work off Lyttelton Heads, she sailed for that port the following morning, arriving there on the 9th.