

No. 8.

Dr. KILGOUR to the Hon. the COLONIAL SECRETARY.

SIR,—

Thames, 12th September, 1879.

I have the honor to acknowledge the receipt of Mr. Cooper's letter of 4th instant, covering a communication from the Agent-General on the mineral waters of New Zealand, and requesting me to furnish him with such information on the subject as I think may be useful; also asking me to forward to his address in London a case of Puriri water just as it comes from the spring, and one also of the aerated water; and, in reply, to say that I shall be happy to comply with your wishes in that respect as soon as an opportunity for shipping them occurs, which I will notify to you in due course.

I have, &c.,

The Hon. Colonel Whitmore.

JAMES KILGOUR.

No. 9.

The ASSISTANT GEOLOGIST to the UNDER SECRETARY.

SIR,—

Colonial Museum, 6th September, 1879.

I have the honor, in Dr. Hector's absence, to forward results of analyses which have been made in the Colonial Laboratory of various samples of mineral waters forwarded for examination from time to time, but have to point out that these waters require special examination at the springs in order to determine the amount of carbonic acid or other gases which are evolved, and also that, were certain other examinations made at the springs, very possibly slightly different results would be obtained from those mentioned in the analyses. Enough has, however, been done to show that, in some cases at least, the mineral waters of New Zealand compare very favourably with those obtained from various Continental watering-places; and, if a thorough examination of these were undertaken, there is little doubt that we should find the colony as well supplied in this particular as any other place, most known varieties of mineral waters being represented.

I have, &c.,

The Under Secretary, Wellington.

S. HERBERT COX.

Enclosures.

[Extract from "Seventh Annual Report on the Colonial Museum and Laboratory," p. 21.]

WATERS.

Nos. 1083 and 1211.—Two mineral waters have been partially examined, the quantity of each being too small to admit of more being accomplished upon them. One of these is from the Hot Spring at Haveraroa and Tarawera, and its general characters are as follow:—

Reaction distinctly acid, opalescent, colour faint reddish blue, with an odour of sulphuretted hydrogen. The substance conferring opalescence upon it is hydrated silica. Traces of sulphuric and hydrochloric acids were found besides, with a little iron, lime, and magnesia.

These results show that the water is of the class silicated waters, to which that from Rotomahana also belongs.

The other water is from Pahau, East Coast, on Mrs. Sutherland's run, and is very interesting on account of the comparatively large quantity of iodine it contains, and also from the absence of sulphuric acid.

This water gives very good reaction of iodine to the proper tests, even when unconcentrated.

By comparative chromatic tests it was ascertained that the quantity of iodine present in a gallon of this water would not be less than one grain.

As a gallon or two of this interesting water has been promised by the contributor, it is intended at an early date to make a more complete analysis.

[Extract from "Eighth Annual Report on the Colonial Museum and Laboratory," pp. 20 and 23.]

Several waters have been carefully analyzed for the Town Council of Wanganui, in connection with the system of waterworks projected for this town. These samples were selected from the most available sources, and of these that known as Virginia Lake was recommended for this purpose, and has, I believe, since been decided upon as the one to be used by the authorities there.

Besides these waters and the others of minor interest cited in the Schedule, thirteen samples of mineral waters have been received from the hot springs of Auckland and Napier. Of these, three have been fully analyzed, and the remainder examined as far as the quantity to hand of each allowed.

The following are the results of the three analyses:—

No. 1404.—Mineral water from Puriri, Auckland; composition calculated in grains per gallon.

Chloride of sodium	...	...	...	...	21·938
Iodide of magnesium	...	...	...	...	traces
Sulphate of soda	...	...	...	...	·940
Sulphate of potash	...	...	...	...	4·938
Carbonate of iron	...	...	...	...	Traces
Bi-carbonate of lime	...	...	...	...	28·506
Bi-carbonate of magnesia	...	...	...	...	25·625
Bi-carbonate of soda	...	...	...	...	452·393
Bi-carbonate of silica	...	...	...	...	traces
Phosphoric acid	...	...	...	...	not determined
Silica	...	...	...	...	2·772