be cut during that season; therefore other methods of getting rid of the sap must be resorted to. In some parts of Great Britain, and notably in the Imperial Dockyards, the timber is "streamed," the running water washing out the sap, and being afterwards itself more easily got rid of. A less efficient plan is to stack the wood in such a way that it is exposed to the full benefit of the rain and wind. The kauri timber of Auckland is much improved by being floated down the streams to the place of shipment. When timber is placed in contact with damp earth decay can only be prevented by its infiltration with antiseptic fluids, or other preservatives. The totara (*Podocarpus totara*) is indebted to a secreted oil for its preservation. In the crude petroleum of Poverty Bay we possess an excellent artificial substitute for this natural secretion, and it therefore only remains to prove whether the renewal of timber every few years would cost less than the oil and its application. The permeating power of petroleum is very great. Either by painting the surface, or by infiltration, wood already in use might be made safe for many years. It may not be generally known that the application of kerosene will arrest dry rot. The author finished by pointing out that our present hand-to-mouth system can only be productive of short-lived buildings.

The Hon. Mr. Waterhouse said that the paper read did not nearly exhaust the subject. Certain seasons should be set apart for cutting timber. The very best heart of totara piles in his house were quite rotten after being only six years in the ground. A knife could be pushed into their very centre. Some timber at Castle Point also rotted at the base after six years. The timber had been cut in summer, and at once placed in the ground. Charring is a good preservative for wood in the ground, and manuka cut at the proper season and charred is preferable to anything; but if cut in summer it will only last a short time. Sleepers should always be charred. He hoped the matter would not be lost sight of.

2. "On Solar and Terrestrial Radiation," by C. Rous Marten, F.M.S.

(ABSTRACT.)

The author described the instruments employed in the registration of the solar rays, and the methods adopted by meteorologists to obtain readings. He then proceeded to point out that the solar radiation in the South Island attained a degree which was never reached in the North Island. In Melbourne, where the temperature usually ranged much higher than in New Zealand, the highest solar range registered during a period of 16 years was 160°. At the Cape and in Sydney the highest range was 140°; while, in the South Island, readings of 170° were frequently shown, and on one occasion in Southland the solar rays reached the extraordinary reading of 195°. The author said that he would read a fuller paper on the subject at a future meeting.

Mr. Travers was aware that the high readings spoken of by Mr. Marten

were on record, but it would be very interesting if Mr. Marten could place the meeting in possession of some explanation as to the cause of this peculiarity in the climate of New Zealand. Possibly the difference in the vegetation of the two islands might in some measure account for the different readings.

Mr. Marten considered the excess in the case of the South Island too great to be accounted for in this way.

Mr. Gore said he was sorry Dr. Hector was absent, as he was sure he would have a great deal to say on the subject of radiation. For his own part, he had long been aware of the facts stated in Mr. Marten's paper; indeed, they were known to everyone who had consulted the printed meteorological returns. It had always been a matter of surprise to him to find the solar radiation so much higher at some stations than at others, and especially strange that it should be higher in Southland than at most of the other places in New Zealand, and even greatly in excess of that recorded at Melbourne. He had hoped that Mr. Marten's paper would throw some light on the subject, and he was rather disappointed at not hearing some good reason assigned for such an excess of the solar radiation in Southland. He hoped that Mr. Marten would yet explain the matter, for until some cause could be set forth he was inclined to distrust such excessive readings of the black bulb thermometer.

The Hon. Mr. Waterhouse, before the meeting concluded, suggested that the Council of the Society should endeavour to popularize science by holding a *conversazione* periodically, at which short papers upon what he might call popular subjects would be read, and at which all classes, particularly the working classes, might be instructed and entertained by simple illustrations of scientific subjects, varied by the introduction of musical selections.

Mr. Travers remarked that as far as his experience went science was not at all popular in Wellington, and he did not think the course proposed by Mr. Waterhouse would make it so. Something of the kind suggested had already been attempted and had failed.