

the average attendance being 17.3. At the close of the year these boys were examined in mineralogy and blow-pipe analysis, with very gratifying results. Eleven of the boys succeeded in getting 60 per cent., or more, of marks, and thus obtained a certificate of having passed the examination. Two boys, Ernest Kissell and Hardy Kitching, obtained 75 per cent. of marks, respectively, and were suitably rewarded with books. The examination, though an elementary one, was fairly hard, and great credit is due to the boys for the amount of attention which they evidently devoted to the subject. It must, however, be borne in mind that the boys who did best were those who, having belonged to my former class, had had a three years' course.

"A course of lectures on elementary chemistry was also given during the winter months of the year. These lectures proved highly interesting to many of the scholars in the State schools, but only a few, comparatively, availed themselves of the opportunity of attending them. Nine lectures were given, at which the average attendance was about thirty.

"In the month of April, arrangements were made with the Hon. R. J. Seddon, for Mr. Aitken, of the Reefton School of Mines, to visit Nelson for the purpose of delivering a few lectures on School of Mines' work. Mr. Aitken's lectures were well advertised, but only half a dozen persons thought it worth while to attend. An assay-class was formed, and six lectures on assaying were given. After Mr. Aitken's departure the class was conducted by myself for the remainder of the winter months. The members of the class, though few in number, proved to be very intelligent, painstaking students, whom it was a pleasure to teach.

"Past experience has shown that there are not many adults in Nelson interested in School of Mines' work, but that a great deal of good may be done by teaching the elements of mineralogy and blow-pipe analysis to the elder scholars of the State schools. Those boys who have been in my classes for two or three years are able to identify, either by inspection or by the aid of the blow-pipe, all the ordinary ores of commercial importance. But, what is of more value, their faculties of observation have been trained. They know that there are many valuable ores which have nothing specially inviting in their appearance; and they have been trained to examine every stone, however insignificant its appearance at first sight. These boys when rambling on the hills would be more likely to discover valuable mineral deposits than totally inexperienced persons; or, if this should not happen, the knowledge which they possess would, at any rate, greatly increase the pleasure of a country walk. My only regret is that there are so few who have thus studied the subject. If mineralogy could be studied during school-hours, many more boys would take it up; but to expect boys to study it after school, while their fellows are playing at cricket or football, is to look for too much. Only the more thoughtful and earnest boys will sacrifice their play, even for so fascinating a study. I hope the time will come when the elements of the primary industries of agriculture and mining, the industries from which all others spring, will be efficiently taught to the rising generation of this colony."

MINOR SCHOOLS ON WEST COAST.

During three months last year Professor Black's assistant, Mr. Goodlet, was employed giving instructions in some of the small schools on the West Coast, while Mr. A. Purdie, M.A., was employed for a similar period as assistant to Mr. Parks, at the Thames School. During Mr. Goodlet's visit to the Rimu School he found rubies in some of the boulders in that locality, and also some osmiridium. One of the rubies was sent to Professor Ulrich, of the Otago University, who is acknowledged to be one of the best mineralogists then in the Australasian Colonies, and he pronounced it genuine. The following are the Professor's remarks on this subject, and also on a specimen of tin-ore shown him from Humphrey's Gully by Mr. Goodlet:—

"I examined the mineral specimen you recently gave me as broken from a boulder of some 40lb. in weight, found in the gold-drift at the Back Creek, near Rimu, Westland, and I am glad to inform you that it is not only of great interest mineralogically, but the discovery may also prove of commercial value. The red mineral is true Oriental ruby, namely, a variety of corundum, as conclusively proved by its strong dichroism, crystalline form (hexagonal prism), and hardness, which exceeds that of the topaz—being nine according to Mohs' scale. The abundance in which the precious stone exists in the green matrix is really astonishing, and I can find no record of a similar occurrence from any part of the world producing true rubies. Although in the specimen I examined the crystals are rather small and of a dull purplish-red colour, still some appear in parts clear and of a fine carmine or magenta colour—a fact giving promise of larger and really valuable ores of the kind being found if looked for. You should certainly advise the owners of the claim in which the boulder was found to save and carefully examine the heavy sand resulting from gold-washing, and also look out for other boulders of the kind; because, irrespective of the chance of finding stones valuable as gems and for jewellery watches, the—as it might fitly be termed—"ruby-rock" could, I think, in small pieces be sold at a good price as mineral-specimens to collectors, or, if ground fine, would furnish polishing-powder superior in quality to the common emery-powder. The emerald green—in parts fine scaly—matrix in which the ruby-crystals are imbedded requires a quantitative analysis for determination of its species-name. According to blow-pipe trials it is an infusible silicate of alumina, coloured green by chromium oxide. Its comparative softness (3-4) no doubt favours the disengagement of the ruby-crystals and their dispersion through the drift. Regarding the piece of grey, minutely granular, tin-ore, which you showed me as found in the gold-drift of Humphrey's Gully, it bears the closest resemblance to the kind of ore found in such large masses at the celebrated Mount Bischoff Mine, Tasmania. There is, I think, great probability of prospecting in the ranges the drift is derived from being some day rewarded by the discovery of a rich parent deposit (lode or stockwork) of this ore."

This shows that there is a fair prospect of finding both rubies and tin-ore on the west coast of the Middle Island. With such knowledge the miners will be more careful in examining the boulders and small stones found amongst the gravel-drift, for if larger samples of the rubies can be