

Taking things all in all we have every reason to congratulate ourselves on a successful year.

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LECTURES AND EXCURSIONS

On Wednesday, September 7th, Mr. V.W. Lindauer lectured to us most entertainingly on the subject of seaweeds. He began with a brief history of Algological research in New Zealand, concluding with an indication of the great amount of work still remaining to be done and the obstacles thereto. The lecturer gave us interesting systematic information and also spent time wandering down a number of fascinating byways and discussing the different practical uses to which various seaweeds have been put both inside and outside N.Z. Incidentally, he has kindly promised the editor a few really satisfying seaweed recipes for a future number of the News Letter. On the subject of nomenclature, Mr. Lindauer showed that while new species were constantly being discovered, in some cases further knowledge brought simplification. For instance, all N.Z. forms of Ecklonia are now held to constitute one species - Ecklonia radiata. The meeting closed with a hearty vote of thanks to the lecturer.

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The Society enjoyed an unexpected treat on Wednesday September 21st, when Prof. S. Cooke, University of Minnesota, a visiting metallurgist, spoke to us on plants and flowers of the Rocky Mountains. This lecture consisted of a commentary on his own beautiful slides photographed in the field in natural colours. An enthusiast for wild flowers, Prof. Cooke took long excursions through many of the splendid National Parks with which the State of Montana is so richly endowed. We saw something of the glories of both spring and summer on both the lower slopes and alpine heights. It was a delight to see so many "garden" flowers rioting wild in mountain and meadow - blue larkspurs, pink phlox, splendid buttercups, daisies in yellow and white, violets, fritillaries and *Sisyrinchium* - to mention only a few. Not only were we intrigued by flowers and flowering shrubs, but we also saw species of mountain cacti and other succulents, which are characteristic of the more arid mountain regions.

At the conclusion of the lecture a hearty vote of thanks

was carried. We all hope that Professor Cooke will visit New Zealand again some day.

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On Wednesday, October 5th, at 8 o'clock we enjoyed a most informative lecture from Dr. Frank Newhook, a foundation member of our Society, on Antibiotics and Plant Diseases. As Dr. Newhook has recently carried out research for two years at London University on diseases of lettuce, he dealt with a subject on which he is well qualified to speak with authority. Below we print a summary of his lecture kindly provided by Dr. Newhook.

ANTIBIOTICS AND PLANT DISEASES

Antibiotics is a branch of science which is very well established in the field of medicine, having received a great impetus from the development of Penicillin and latterly Streptomycin. It is natural to ask whether the same or similar antibiotic substances may have a useful application in the control of plant diseases.

Antibiotic substances are generally regarded as toxins produced by micro-organisms (i.e. by fungi and bacteria and the intermediate group the actinomycetes, and also perhaps by protozoa) which prevent the growth of other micro-organisms. The first record of antibiotic activity was that of Pasteur in 1877, when he found that certain bacteria repressed anthrax in susceptible animals. Further research attracted little attention until after the publication of Sir Alexander Fleming's first paper on Penicillin in 1929. However it is of interest that in 1908 Potter controlled a turnip rot by spraying plants with a toxin produced by the causal bacteria themselves.

Since almost all diseased material sooner or later returns to the soil without the soil becoming increasingly infectious, attention has been directed largely to the soil in the search for useful antibiotic organisms. Several cases are now known where soil-inhabiting micro-organisms destroy plant pathogens, e.g. a green mould Trichoderma parasitises Pythium and Rhizoctonia, the fungi causing damping off of many types of seedlings. Attempts are being made to control soil borne diseases by introducing suitable materials to the soil to encourage the growth of antibiotic organisms. Thus the addition of grass clippings and organic