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AUCKLAND BOTANICAL SOCIETY

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LECTURES and EXCURSIONS

The Annual General Meeting of the Auckland Botanical Society took place on Wednesday, May 8th.

After the election of officers, a hearty welcome was extended to Professor V. J. Chapman, newly appointed Professor of Botany to the Auckland University College, and newly elected President of the Society. Afterwards we bid a very regretful farewell to the retiring President, Professor Wall, who is shortly leaving for Christchurch. Appreciation was expressed of his able and enthusiastic services in the past, and hope was expressed that in his new home he will not forget us. We look forward to hearing from him again.

After the business was concluded, the meeting took the form of a talk by Professor Wall, on his journeys in Northern India. The address was illustrated by many beautiful lantern slides.

Professor Wall has very kindly written the following summary of his lecture:

The speaker described his journeys in (1) the great valley of Kashmir in a houseboat by rivers and lakes, a well-watered country which grows rice, cereals and many kinds of fruits and vegetables, intensively grazed and cultivated below but encircled by mountains rising to about 15,000 feet; these carry plenty of alpine vegetation; and (2) the arid regions beyond the Zeji La Pass and the border-

lands of Tibet and Chinese Turkestan where cultivation is only possible by the clever use of irrigation wherever any stream descends from the glaciers and snowy heights; here the natural vegetation is extremely scanty except among the high pastures between about 12,000 and 17,000 feet above sea-level, where a rich alpine flora offers itself for the inspection of the botanist and affords fine opportunities for the photographer. The Kashmir Valley abounds in large shallow lakes which provide fodder for countless beasts in the form of water plants. Among the more interesting and showy of these are the "Water Walnut", Trapa bi-spinosa, a plant of the Onagraceous Family which bears a pretty pink flower and later a large black edible nut furnished with long sharp spikes. Pictures were shown of this and of the famous Nelumbium or Water Lily of Kashmir, which grows to six feet above the water and has huge pink flowers as large as soup-plates, a truly magnificent object. The lower levels of the Valley are too intensively grazed to allow of much natural wealth of flowers, only unpalatable things like Euphorbias being able to grow freely, yet here and there some very pretty things may be seen even by roadsides and the banks of the smaller streams. Among them are the pretty Tulip, Tulipa stellata, yellow and pink; the old garden favourite Fritillaria Imperialis, or Crown Imperial; Royle's Fritillary, greenish flowered; the huge and handsome Umbellifer, Ferula, and the better known Archangelica growing twelve feet high in the forests of spruce and fir; Trollius, making a great show in the beds of streams and marshy places, very like the well-known English Globeflower; a lovely Saussurea, S. candicans, seeds of which were successfully grown in Christchurch later on; several species of Sage, including Salvia Moorcroftiana, common in fields and roadsides; and the common Iris of our poor soils, used by Mohammedans to decorate their cemeteries. Several visits were made to the alpine pastures or "Margs", some of which are popular health resorts, such as Gulmarg, and at this place a large area is closed to the grazing stock in order to conserve the water supply, a happy hunting ground for the botanist. Many of our familiar garden beauties grow in these Margs-Columbines, large and small; Aconites; "Iceland Poppies"; different species of Anemone; Saxifrages, Delphiniums; Asters, conspicuous among which is the large handsome species,

A. Falconeri; at least a dozen different species of Gentian, and about as many of Primula, many of both being well-known as garden plants; in rocky and shady situations may be found the beautiful Meconopsis aculeata, the famous Blue Poppy of Kashmir; Polemonium, or Jacob's Ladder, sometimes grows in such profusion as to give the appearance of a great sheet of water. Some ideal rockery plants grow abundantly here such as Androsace, Bergenia, and Mertensia. The Androsace sarmentosa especially, forming low-growing masses, is a favourite in rock-gardens; the uninitiated, amusingly, sometimes refer to it as "Moss". The general effect of the display of alpiners is much the same as in other mountainous regions of the Northern Hemisphere, Switzerland and the Tyrol for instance, but the climate here is not wet enough for the famous Azaleas and Rhododendrons of the more southerly Himalayas, and only one or two rather undistinguished species of each are to be seen in Kashmir. Some of the Polygonums are surprisingly beautiful.

A few remarkable plants flourish in the dry barren country through which the Indus flows for some part of its course, just west of the Tibetan border, but even here large numbers of sheep, goats, ponies, donkeys, yaks etc. are kept by the inhabitants, feeding on the margins of the small streams which provide the water for their cultivations of wheat, barley and similar grains, and for their apricot and apple orchards. Between the villages, which are true oases, grows the Caper, Capparis, straggling over the ground in large masses and bearing a large flower not unlike an Azalea. Two species of Nepeta, or Catmint, grow abundantly, one with lovely pink flowers, N. floccosa, the other purple, a much larger plant which often adorns the stone walls enclosing the tiny fields. At the higher levels, indeed up to an almost incredible altitude, grow the Primulas, Gentians, Aconites and Poppies etc. At 15,000 feet, where a camp was made during the ascent of the Khardung Pass, pictures were taken of a most attractive composite, Allardia, and at 17,000 feet of Primula Moorcroftiana which occurs at high levels throughout Kashmir and adjoining regions. Even on the top of the Pass plants were to be seen, at 17,000 feet, but unfortunately none of them was in flower when the ascent was made. In spite of the strong resemblance between certain stony slopes of these mountains to those of the Southern Alps of New Zealand, it was noted that there are no specially adapted plants such as we find in the screes of our own Alps.

On Sunday, March 17th, an excursion was made to the Narrow Neck reef.

On arriving the tide was high so an examination was first made of the drift weed, which was found to consist mainly of "large browns", species of *Carpophyllum*, *Sargassum*, *Ecklonia*, *Dictyota*, etc. We also found beautiful lace-like examples of the red *Placodium* and *Ceramium*.

While the tide still covered the reef, examination was made of the zones of minute seaweeds above high water mark. These form bands of different colours varying from green to black. Prof. Chapman, who has made a study of similar zones in other parts of the world, explained that they were composed of minute green algae such as *Rhizoclonium* and blue green algae, only to be distinguished by the aid of the microscope. Professor Chapman stated that two honours students in Botany were at present engaged in investigating these zones locally, one working on the East Coast and one on the West. We hope to hear something of interest from them later!

At low tide, members repaired to the main reef, which provided a rich collection of species,--the larger greens-- species of *Codium*, *Caulerpa*, etc., many browns and some reds. At the end of the reef was noted a fine growth of *Pterocladia lucida*, important for agar manufacture. Dr. Chapman mentioned how in different parts of the empire the gelatine producing seaweeds, *Gracilaria*, *Chondrus*, *Gigartina*, etc. were being exploited, and important new uses being found for seaweed products generally.

In happy contrast to previous seaweed excursions, the weather was delightful, and members spent a very pleasant, as well as a very instructive day.

The excursion was led by Dr. Chapman. Assistance in the identification of local species was given by Miss Crookes and Miss Molesworth.

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