

## MEETINGS OF THE BOTANICAL BRANCH.

February 25th, 1911, at the home of Mr. J. J. Carter. Meeting addressed by Dr. M. O. Malte, members present, besides the host and the speaker, Prof. John Macoun, Messrs. Whyte, G. H. Clark, W. T. Macoun, Attwood, Eastham, Newman, Sirett, Eddy and Groh.

Dr. Malte gave a short report of some of the results obtained when studying the grasses of the Geological Survey Herbarium. These results must be regarded as only preliminary, as a decisive knowledge of the Canadian grasses can only be obtained by studies in nature.

When beginning the study of the grasses, Dr. Malte realized the necessity of paying the most careful attention especially to the construction of the flowers and spikelets, these parts of the grass-plant being less variable than the vegetative characters and forming a safer basis for the exact judgment of the systematic value and relationship of the different forms. Especially when trying to make a natural system out of a polymorphous genus, the main groups, each of which contain a number of different species, will be found very easy and with more accuracy, if based upon essential flower characters. This was demonstrated in the genus *Panicum*.

In grouping the Canadian species of *Panicum*, about thirty in number, according to the construction of their spikelets, four main groups will be obtained. When comparing the different species of each of these groups, they all show the most striking correlation between flower-construction and general appearance. One type of spikelet is thus combined with a certain type of panicle and a special general character of the leaves; another type of spikelet corresponds to another type of panicle and another shape of the leaves, etc. The closer studying of the flowers has also been of important value for the distinct limiting of polymorphous species. In fact, the microscopical examination of the spikelets of different specimens of a polymorphous species has often shown, that what has been regarded as one species, in reality is a mixture of two or more species. The difficulty of recognizing these systematically independent species has often been due to the fact, that the descriptions, given by some grass-monographers, do not at all agree with the original descriptions of the species in question, and even are based upon more than one type, some characters having been picked up from one type, other characters from another. Such confusion of species will for instance, be found within the genus *Calamagrostis*.

The Greenlandian *C. hyperborea* Lge. is thus supposed to be widely spread all over Canada. In fact, no one of the Canadian