

The Students' Association of Natural Science. Upsala.

Geological and Physico-Geographical Division.

Meeting, February 2nd 1900.

Directors were appointed:

C. A. FORSBERG, Secretary.

C. WIMAN, Treasurer and Redactor.

J. P. GUSTAFSSON }
H. D. FORSSEEN } Reporters.

Mr A. GAVELIN read a paper on »Ice-lakes in the mountainous region of Westerbotten». (Bull. Geol. Inst. Upsala. N:o 8. P. 231—242.)

Mr HÖGBOM demonstrated Hansen: »Om menneskeslægtens ælde».

Meeting, February 17th 1900.

Mr J. GUNNAR ANDERSSON read a paper on the geology of Beeren Eiland. (Bull. Geol. Inst. Upsala. N:o 8. P. 243—280.)

Meeting, March 2nd 1900.

Mr OTTO NORDENSKJÖLD spoke about »Fjord»-formations illustrating his discourse by maps and photographs. (Bull. Geol. Inst. Upsala. N:o 8. P. 157—226.)

Meeting, March 17th 1900.

Mr J. P. GUSTAFSSON reviewed N. Ekholm: Om klimatets ändringar i geologisk och historisk tid samt deras orsaker. (Ymer 1899. P. 353—403).

Mr P. J. HOLMQUIST demonstrated a geological map of North Sweden made by the Swedish Geological Survey and intended for the Paris Exhibition; at the same time the lecturer showed a collection of stuffs from the rocks characteristic of these regions.

Mr HÖGBOM showed a map of the village of Åliden in the parish of Jörn, Westerbotten, presenting a peculiar moraine-topography.

Meeting, April 6th 1900.

Mr A. HAMBERG read a paper on the inhomogeneity of crystals.

Mr A. HOLLENDER spoke on the quarternary geology in the neighbourhood of Ulricehamn. The bottom of the valley of the river Ätran is covered with sand and clay, whereas moraine-material predominates along the sides of the valley and in higher situated parts. Levellings had been made at the sediment border and at the shore-lines equivalent to it near lake Åsunden. During the time when the last land-ice was melting away, the water of that lake reached a few metres higher at its outlet, but about ten metres higher at its northern end than is the case at the present day, owing, no doubt, to the unconformable level-changes which have taken place since the end of the glacial period. In the valley above and North of the lake sediment was deposited by the glacier-streams descending from the land-ice and inundating the bottom of the valley. In this way the level of the water was raised about 10 or 20 metres higher in the different places than is the case at present in the river Ätran.

Mr J. P. GUSTAFSSON showed some plan-drawings and views from the mountains of Falbygden. He pointed out that the north sides of these mountains are generally steep, the south sides sloping gently, and expressed the opinion that this fact might possibly be explained by assuming that previous to the final dissolution of the ice they had formed »nunnatakks».

Meeting, April 20th 1900.

Mr HÖGBOM spoke on changes of climate in geological times.

Meeting, September 25th 1900.

Directors were appointed:

A. GAVELIN, Secretary.

J. GUNNAR ANDERSSON, Treasurer and Redactor.

E. VRETLIND }
S. SÖDERLIND } Reporters.

Mr J. G. ANDERSSON spoke on his researches concerning some occurrences of sandstone in central Sweden.

The sandstone in Granholmen in the western part of the Mälars, formerly found only as loose blocks, is a red algonkian sandstone which is even observed cropping out in the S. W. part of the island. The sandstone from Väringen West of Arboga belongs to the lower Cambrian. The occurrences of sandstone near Möckeln and Finnerödja belong to another type, a yellow, loose sandstone entirely unlike the Cambrian sandstone and probably belonging to the Visingsö-series.

Meeting, October 16th 1900.

Mr J. P. GUSTAFSSON spoke about some littoral formations from inland lakes. More especially he directed the attention to the fact that a beach-wall of remarkable height had been found round a small lake near Dödesjö in the mountainous region of Småland. From its height and general character it was evident that it could not be supposed to have been formed by the waves, but must be looked upon as having been piled up by the ice of the lake. Similar mounds had been observed in many places in this region and even, though smaller in size, in the sheet-map »Ankarsrum».

Mr E. G. VRETLIND reviewed A. S. JENSSON: Om Levninger af Grundtvandsdyr paa store Havdyb mellem Jan Mayen og Island. (Vidensk. Med. fra Naturhist. Forening. København 1900. P. 229—239.)

Mr WIMAN showed a number of fossils that he had detached from a block found by Mr R. OTTERBERG in Börstil parish in Roslagen. The rock was a greenish gray *Orthoceras* limestone, containing *Asaphus raniceps* DALM., *Nileus Armadillo* DALM. and *Illeenus Esmarki* SCHLOTH which forms are all characteristic of the lower gray *Asaphus* limestone. Through Mr OTTERBERG's find the presence of this horizon within the Silurian system of the Bothnian Gulf has been evinced for the first time with certainty.

Mr HÖGBOM described some phenomena caused by fluvio-glacial erosion from the parish of Arvidsjaur in Westerbottens lappmark. (Geol. Fören. Förh. 1901. P. 83—94).

Meeting, October 30th 1900.

Mr HOLMQUIST called attention to a mistake frequently made in microscopical researches by using balsams of fir of different degrees of evaporation for the purpose of preparing the microscopical slides. In rocks rich in quartz many microscopists thought that they had found a zonary structure in the grains of the quartz because of a centre containing enclosures in great quantity and surrounded by brighter quartz being visible in the slides. In some cases Professor TÖRNEBOHM had shown that these particles rich in enclosures were lying immediately on the under side of the slide properly speaking and must necessarily have got there when the slide was prepared. By a number of experiments the lecturer had ascertained that the distinct line which is sometimes seen to surround these small particles, lies likewise on the under side of the slide and is caused by the balsam of fir applied when the covering glass was fastened having percolated through the interstices between the grains of the rock and forced the more evaporated mass used

before a little way further in beneath the grains. In this way the above-mentioned line is produced, owing to the fact that the various sorts of balsam have a somewhat different refractive power. When examining such slides by the aid of the microscope one is easily induced to believe that these phenomena belong to the mineral grains of the rock.

Mr SÖDERLINDH reviewed CLEMENS WINKLER: »Über die Möglichkeit der Einwanderungen von Metallen in Eruptivgesteinen unter Vermittelung von Kohlenoxyd»

Mr VRET Lind reviewed Chamberlain: »On the early vertebrates».

Meeting, November 13th 1900.

Mr HAMBERG read a paper on the quarternary geology of the Sarjedistrict. (Ymer 1901.)

Mr A. HOLLENDER spoke about his researches into the level-changes of Sweden during the antropozoic time. (Geol. Fören. Förh. 1901 p. 231—274).

Meeting, November 27th 1900.

Mr K. WINGE reported on his detailed investigations of the geognostic features in the Dalsland part of the sheet-map »Åmål» during the summer 1898 and 1899.

Mr WIMAN showed a silurian block found by Mr J. P. GUSTAFSSON at Gefle. The block, consisting of black slate, contained: *Ceratopyge forficula*, *Shumardia pusilla*, *Orthis sp.*, two other brachiopoda and a graptolite; it is belonging to the Ceratopyge-slate lying between the Dictyonema-slate and the Ceratopyge-limestone.

Mr HÖGBOM showed two stuffs from Bamble in Norway affording granophyric intergrowth between quartz and muscovite.

Meeting, December 11th 1900.

Mr HÖGBOM read a paper on »Säterdalen and Dalälfdalen». (Turistfören. Årsskrift 1901).

Mr A. GAVELIN gave a report on some observations made by him with regard to the quarternary geology of the mountainous regions of Kvikkjokk.

Mr J. P. GUSTAFSSON spoke on discordances between glacial clay and Litorina-clay at Galgbacken near Upsala.

