

SCIENCE

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THE GEOLOGICAL CONGRESS AT ST. PETERSBURG.

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THE Seventh International Geological Congress convened at St. Petersburg, Russia, on August 29, 1897, in accordance with the Czar's invitation, presented at the Fifth Congress in 1891.

The enrollment far exceeded that of any previous Congress, the preliminary list showing 966 names, of which only 270 were of Russians. The final list has about 1,100, about 120 of them being American.

The arrangements were upon an imperial scale. Free transportation on all Russian railroads was provided not merely for the members, but also for their families. Excursions were given such as no other Congress can expect, unless, indeed, another meeting be held in Russia. A guide book of 660 pages, with many maps, plates and sections, was prepared, giving detailed information respecting the geology of regions to be visited, a most valuable contribution to geological literature, making accessible, to geologists all over the world, facts previously published for the most part only in proceedings of scientific societies and sealed up in the Russian language.

Three excursions preceded the Congress. That to the Ural Mountains, shared in by somewhat more than 200 members, was in charge of Dr. Tschernychew and lasted for four weeks. This, extending beyond railroad and all other ordinary means of trans-

portation, afforded opportunity for the study of localities almost inaccessible to travellers. That the journey was completed with so little discomfort and with so great advantage to those taking it reflects great credit upon Dr. Tschernychev's management. The excursion to Finland, in charge of Dr. Sederholm, was taken by somewhat more than 100. That region is not so far in miles from civilization as is that of the Urals, but the perplexities of one in charge of a large party are hardly less. The success of this excursion was complete, and Dr. Sederholm earned the gratitude of those who accompanied him. The Esthonia excursion, under Dr. F. Schmidt, had only twenty-five members, but, according to the testimony of them all, the two weeks were spent pleasantly and with great profit.

A fourth excursion began on September 5th, at the close of the Congress. This was to a more distant part of the empire, extending to the Caucasus and in one division to Mt. Ararat.

During the week allotted to meetings of the Congress, two days were given to excursions. One to Peterhof, the summer palace of the Czar, was for pleasure only; the other, combining pleasure and instruction, was to the Falls of Imatra—a long excursion in short time. The excursionists left St. Petersburg at 6:30 a.m. and reached the Falls at 1 p.m. They remained there until 7 p.m. and then returned, reached St. Petersburg at 1 a.m., thoroughly fatigued for the most part, but well repaid. The hospitality in the city began to manifest itself on the evening prior to the assembling of the Congress, when the Committee of Organization gave a reception to the members at the Germania club. On August 30th the Grand Duke Constantine gave a reception at his palace to about 200 delegates and the Mayor of the city held a grand function at the Hotel du Ville on September 2d.

The Congress was opened at noon on August 29, 1897, in the large hall of the Zoological Museum of the Academy of Science. Addresses of welcome were delivered by the Grand Duke Constantine, the Princess of Oldenburg and the Minister of Agriculture, to which Professor Capellini replied on behalf of the Congress. The list of officers prepared by the Bureau was read by Professor Renevier and chosen by the Congress, after which an address was made by Professor Karpinsky, the President, who was followed by Dr. Tschernychev, the Secretary-General, who outlined the business which would be presented by the Council. A brief address by the President of the Geographical Society closed the exercises and the Congress adjourned for the day.

The Congress sat twice each day on Monday, Wednesday, Friday and Saturday. The morning sessions were devoted to discussion of principles of nomenclature and to transaction of such matters as were presented by the Council, while those of the afternoon were taken up in the reading of memoirs.

The morning discussions were simplified greatly by the memoirs of Bittner, Loewenson-Lessing and others prepared at request of the committee and printed prior to the Congress. It must be conceded that the results of these discussions do not appear at first glance to be of very great importance; the points agreed upon were such as impose no burdens and they were adopted unanimously. But where the question proved to be serious and material differences of opinion seemed likely to develop, the matter was referred to a committee for consideration and for report to the next Congress. This, however, was the wisest mode of procedure. The Congress has no power to bind its members except in so far as they consent, so that it is not the place in which to thrust one's conceptions too

strongly. Any matter which does not commend itself readily at the first presentation should be laid aside promptly, that no member be allowed to express himself in such manner that his *amour propre* would be wounded in case the vote should go against him. All of the matters referred will be considered carefully by the committee as well as by a great part of the membership during the next three years, and there will be little difference of opinion respecting important matters at the Congress of 1900.

The reading of memoirs was somewhat perfunctory, or rather the listening was so. The feeling seemed to be that these would be printed and that members would have opportunity to digest them at leisure. Several reports were presented by committees, and they will be published in the volume of proceedings. A committee was appointed to consider the principles of chronological classification of sediments and another to consider the propriety of establishing an international journal of petrography. The Congress expressed itself as earnestly favoring the establishment of a permanent floating institute to carry on work such as that of the Challenger expedition, and also as favoring the developing of geological courses for higher classes in lycees and gymnasia. The members were called upon to urge these matters upon their governments.

The Congress adjourned on September 5th, to meet in Paris in 1900.

The real value of this as of previous Congresses is not to be measured by the list of memoirs or by the records of discussions. Important as those may be, they are of vastly less importance than the actual contact of men coming from all parts of the world. Geologists from Asia, the Pacific islands, the Americas and almost all nations of Europe met together; too often known to each other previously only as streaks of printers' ink, they became actual

entities; those devoted to similar studies found opportunity to compare observations; many, whose conceptions of phenomena were limited by the little area of their country, have gone home with a broader knowledge; and a long step has been taken toward binding together our men of geology. The true work of the Congress was done not so much in the sessions as in the huge lobby, wisely provided, where those of like minds were gathered in little clusters making liberal dividends of knowledge. This feature was recognized as all important by the Committee of Organization, which, with this in view, planned the excursions on which so much of the real work was done.

To speak of individual members of the Committee of Organization as especially worthy of remembrance may seem ungracious when all were so untiring, but one cannot refrain from acknowledging the indebtedness which all must feel to Karpinsky, Tschernychew, Nikitin, Chrustchhoff and Michalski, while the Americans will remember pleasantly the courtesies rendered by Mr. Gardiner, the only American student in the University of St. Petersburg.

JOHN J. STEVENSON.

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A NEW INVESTIGATION OF MAN'S ANTIQUITY AT TRENTON.

I.

A RENEWED search for evidence of glacial man at Trenton induced Professors G. F. Wright and Arthur Hollick, Messrs. H. B. Kummel and G. N. Knapp, of the New Jersey Geological Survey, and myself, on June 25, 26, 27 and 28, 1897, to explore a site on the summit of the glacial gravel terrace at Trenton, where Mr. Ernest Volk*

* Working under the direction of Professor F. W. Putnam for the New York Museum of Natural History, Mr. Ernest Volk was generally present at the