

could present a long list of valuable contributions to chemical science from American laboratories but it was a regrettable fact that many of their teaching chemists were so overburdened with the duties of instruction and the business of managing large laboratories that they could find but little time for original work.

The president next gave an account of the many important investigations in agricultural chemistry which had been conducted by the chemical division of the United States Agricultural Department, among those mentioned being the practical determination of the number and activity of the nitrifying organisms in soil, the influence of a soil rich in nitrogen on the nitrogen content of a crop, the manufacture of sugar from the sorghum plant, and the comparative study of typical soils of the United States. Of agricultural experiment stations there were now 59, and the 148 chemists connected with them had done a large amount of original investigation in subjects more or less closely allied to agricultural and physiological chemistry. One of the most important purposes of these stations was the protection of the farmer from the cupidity of the dealers in artificial manures, every fertilizer sold being now subjected to careful analysis, of which the results were published from time to time. Many other researches in this branch of chemistry were enumerated in the address, which went on to refer to the work of the United States Geological Survey and to the progress of sanitary chemistry in America. Professor Chandler next gave a long and comprehensive account of the chemical industries of the United States. Beginning with a statement of the raw materials produced by the country, he passed on to speak of the various ways in which they were utilized, and gave an immense amount of information respecting the manufacturing processes in use.

In particular he referred to the progress made in electro-chemistry, and described the methods now adopted for the reduction of aluminium at Niagara and also for the manufacture of carborundum and artificial graphite. Speaking of water gas he described the opposition which had been brought to bear against its

introduction for illuminating purposes. The question came before the Health Department of New York, of which he was at the time president, and after careful investigation the department decided that the gas was such an improvement in quality and price while the increased danger as compared with that from old-fashioned coal gas was so slight, that it was not wise to interfere with it. The water gas industry had now taken almost complete possession of the whole country. It seemed safe to say that there were at least 500 gas companies using water gas wholly or in part, and it was estimated that in 1899 three-quarters of the entire consumption, or 52,500 million cubic feet, consisted of carburetted water gas. The price of this was reduced ultimately to \$1 per 1000 cubic feet, the average quality being between 26 and 27 candle power, as against bituminous coal gas at \$3.75 per 1000, with an illuminating power of 16 or 17 candles.

#### THE JESUP NORTH PACIFIC EXPEDITION.\*

MESSRS. WALDEMAR JOCHELSON AND WALDEMAR BOGORAS, of the *Jesup North Pacific Expedition* of the American Museum, have recently started for the northeastern part of Asia, by way of San Francisco and Vladivostok, to continue the work of the Expedition in Siberia.

The region which Messrs. Jochelson and Bogoras are about to visit is situated northeast of the Amoor River. They will study the relations of the native tribes of that area to the inhabitants of the extreme northwestern part of America, and also to the Asiatic races visited by Dr. Laufer, under the auspices of the Museum, and to those living farther west. It is expected that in this manner they will succeed in clearing up much of the racial history of these peoples, and it is hoped that the question as to the relations between the aborigines of America and Asia will be definitely settled. Thus the work of these explorers is part of the general plan of the Jesup North Pacific Expedition, which was organized for the investigation of the relations between the tribes of Asia and America. It is fortunate that this inquiry has been taken up at the present time, since the gold discoveries along the coast of

\* From the *American Museum Journal*.

Bering Sea are rapidly changing the conditions of native life ; so that within a few years their primitive customs, and perhaps the tribes themselves, will be extinct.

The expedition, after leaving Vladivostok, will go by sea to the northeastern part of the Sea of Okhotsk, where they will establish their winter quarters. Mr. Jochelson expects to spend the winter among the tribes of this coast, part of whom belong to the great Tungus family which inhabits the greater part of Siberia, while others belong to a little-known group of tribes inhabiting the extreme northeastern portion of Asia. Mr. Bogoras will make a long journey by dog-sledge across that part of the country which is north of the peninsula of Kamtchatka, and will spend much of his time among the Chukchee, whose mode of life is quite similar to that of the Eskimo of the Arctic coast of America. Mr. Bogoras is exceptionally well prepared for this work, since he has spent several years among the western Chukchee, who are a nomadic tribe, and subsist on the products of their large herds of reindeer. There is also a small tribe of Eskimo living on the Siberian coast, whom Mr. Bogoras expects to visit.

Mr. Jochelson, after finishing his work on the coast of the Okhotsk Sea, will proceed northwestward, crossing the high mountains which stretch along the coast, on a trail never before visited by white men. Over this route he expects to reach the territory of another isolated tribe, the Yukagheer. On a former expedition Mr. Jochelson visited a western branch of this tribe, whom he reached starting from Irkutsk, in southern Siberia. Owing to the difficulties of the passage, Mr. Jochelson will not return to the coast of the Okhotsk Sea, but will continue his journey westward through Asia, and reach New York by way of Moscow and St. Petersburg.

Both Mr. Jochelson and Mr. Bogoras have carried on a series of most remarkable investigations in Siberia, which are at present being published by the Imperial Academy of Sciences in St. Petersburg. The results of their previous investigations embrace a mass of information on the customs, languages, and folk-tales of the tribes whom they visited.

It may be expected that their journey, which will extend over a period of two years, will result in a series of most interesting additions to the collections of the Museum, and in an important advancement of our knowledge of the peoples of the world.

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#### SCIENTIFIC NOTES AND NEWS.

A MOVEMENT has begun in London to arrange for the erection of a memorial in honor of the late Sir William Flower.

THE Royal Society of Surgeons of England has elected, in connection with the celebration of its centenary, a number of honorary fellows, subject to their attendance at the celebration. These include Dr. I. H. Cameron, Toronto University ; Dr. William S. Halsted, Johns Hopkins University ; Sir W. H. Hingston, Laval University ; Dr. W. W. Keen, Jefferson Medical College ; Dr. T. G. Roddick, McGill University ; Dr. J. C. Warren, Harvard University, and Dr. R. F. Weir, Columbia University.

PROFESSOR CAMILLO GOLGI, eminent for his researches on the nervous system, has been made a senator of the kingdom of Italy.

PROFESSOR RUDOLF LIPCHITZ, professor of mathematics in the University at Bonn, has been elected a correspondent of the Paris Academy for the section of geometry.

SIR JOHN EVANS has been elected chairman of the Society of Arts, London.

MR. GRANT-OGILVIE, principal of the Heriot-Watt College, has been appointed director of the Museum of Science and Art, Edinburgh.

LORD KELVIN has been elected Master of the Worshipful Company of Clothworkers for the year 1900-1901.

THE steamship *Queen* which arrived at Victoria on August 4th from Alaska had among its passengers W. F. King, the British Alaskan Boundary Commissioner ; O. H. Tittman, the American member of the Commission, and O. B. French, assistant. They have concluded their work on White, Chilkoot and Chilkat passes.

DR. W. J. HOLLAND, of the Carnegie Museum, sailed for Europe on August 7th. He will be absent for four weeks.