

minds of many chemists to the necessity of broader views of chemical compounds; it has stimulated many chemists to fuller investigations in the inorganic field, and it has led at the hands of the two leaders to a vast enrichment of our chemical knowledge of large classes of compounds. We may add that for the most part it has been conducted in the best spirit.

IN the Trans-Caucasian region, from the Black Sea to the Caspian, are scattered many mud volcanoes, both in the naphtha regions and elsewhere. In the *Zeitschrift für anorganische Chemie*, P. Melikoff describes the analyses of the products of one of these mud volcanoes, that of Ahtala. The principal ingredients of the water are salt and soda. The solid matter is chiefly a plastic clay, with fine grains of calcite, feldspar and quartz. The greater part of the paper is a discussion of the origin of the soda and of sodium carbonate deposits and waters in general. The experiments of the author show that in the presence of ferric or aluminum hydroxid, as well as of colloidal substances and zeolites of the soil, sodium sulfate and calcium bicarbonate react readily with formation of sodium carbonate, and the same is true of sodium chlorid and calcium bicarbonate. The hydroxid present, and in soils the colloidal substances, hold the reaction products with different degrees of firmness, preventing reverse reactions and allowing in natural leaching process the separation of these products. Thus in the latter reaction the ferric hydroxid has a greater capacity for absorbing soda than for calcium chlorid, hence the latter is first removed by washing, and the later wash waters contain largely soda. Similar reactions take place in the presence of ammonium carbonate, which is present in most soils. Thus the natural soda formation is attributable to the interaction of salt or sodium sulfate, on the carbonates dissolved in natural waters in the presence of the soil.

J. L. H.

#### CURRENT NOTES ON ANTHROPOLOGY.

##### LINGUISTICS OF THE CHACO.

THE very few students of South American languages may be interested to learn that in the 'Proceedings' of the American Philosoph-

ical Society for October, 1898, I have published a paper of thirty pages, together with a linguistic map, on the languages of the Chaco region, embracing portions of the Argentine Republic, Paraguay, Brazil and Bolivia. The map covers the area from lat. 20° to 30° south, and long. 56° to 66° west from Greenwich. In this area the colors define the extensions of nine linguistic stocks, based on the most recent investigations. Especial interest attaches to the newly-found Ennima stock, first recognized as such by Guido Boggiari in 1895, although vocabularies of it had been printed before that date. While this paper does not solve all the problems of the Chaco tongues, it certainly diminishes their number.

##### THE CRANIOLOGY OF CRIMINALS.

WHAT are the differences between the skulls of criminals and those of 'respectable people'? This is the question which M. E. Pitard undertook to solve by comparing the crania of fifty-one convicts who had died in the penal colony of New Caledonia, with the average crania of the citizens of Paris. Practically, there turned out to be no constant difference at all, unless it was that the vertical index of the criminal skulls was slightly higher; in other words, the convicts were 'brainier' than the good folks. There was also the same amount of variation in the heads of the criminals. Some were long, others broad-skulled; some had a notably large, others a small cubical capacity; these variations running parallel to those of the general population. M. Pitard's article, with abundant data, is in the *Bulletin* of the Anthropological Society of Paris, 1898, Fasc. 3.

##### THE FOLK-LORE OF THE FJORT.

THIS is the title of the latest volume issued by the Folklore Society of Great Britain. It is written by R. E. Dennett and edited by Miss Mary H. Kingsley. The 'Fjort' is the name applied to the negro tribes of the French Congo, who once formed the great native kingdom of Congo. The volume is much more than a collection of folk tales. Miss Kingsley in the introduction and the author in his commentary and notes furnish fresh and valuable information on the religious beliefs, marriage and burial customs and mode of life of these

semi-savage peoples. Their songs and stories are carried in the memory by strings of objects each of which corresponds to a heading or line. These songs take us into the arcanum of the savage mind and present a strange picture of its psychology. The volume is illustrated and forms a welcome addition to the series published by the Society.

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#### SCIENTIFIC NOTES AND NEWS.

THE United States Fish Commission steamer *Fish Hawk* left Porto Rico for the United States on February 23d, having completed her work in the waters about the island and having visited all the principal ports. No details of the expedition have yet been received, but the most interesting results are expected from the operations on the sandy submarine plateau which extends to the eastward of the island.

THE French Geographical Society has awarded its medals, the two chief gold medals being given, respectively, to General Galli  ni for his work in Madagascar and to M. E. Gentil for his explorations in Africa. The F  lix Fournier prize has been awarded to M. Henri Brenier for commercial explorations in China.

MR. W. H. PREECE, C.B., F.R.S., having attained his sixty-fifth birthday, has retired from the position of Engineer-in-Chief and Electrician to the English Post Office, but it is hoped that his services will be retained by the Postmaster-General as consulting engineer.

PROFESSOR ALBERT F. BRIGHAM, of Colgate University, sailed on February 21st for Europe for ten months. He is now enjoying a sabbatical year, and will spend the time in geographical study in England and Switzerland, and in literary work for several months at Oxford. He will probably make arrangements to be with Professor Davis for a trip in the summer through parts of the Alps.

PROFESSOR R. VON WETTSTEIN, of Prague, has been appointed Director of the Botanical Gardens of Vienna and professor in the University.

PROFESSOR WALTER WISLICENUS, of the University of Strassburg, is intending, with the as-

sistance of the German Astronomical Society, to prepare a yearbook of astronomy, giving abstracts of the papers appearing during each year, beginning with 1899.

THE death is announced of The Rev. William Colenso, F.R.S., at the age of 87 years. Mr. Colenso began life as a printer, and when the Church Missionary Society established a press in New Zealand, in 1833, he was given charge of this and became both printer and missionary. He was one of the chief authorities on Maori antiquities and rites, and on the natural history of New Zealand.

WE regret also to record the following deaths: Mr. John Kreusi, a mechanical engineer and inventor, at Schenectady, N. Y., on January 22d, aged 56 years; Mr. Thomas Cook, a well-known teacher of anatomy and writer on the subject, in London, on February 8th; Dr. L. A. Veitmeyer, a civil engineer at Berlin, and Dr. Carl Schoenlein, of the Zoological Station at Naples, at the age of 40 years.

THE New York Academy of Sciences proposes to hold its sixth annual exhibition in the American Museum of Natural History on April 11th and 12th. The first evening is reserved for members of the Academy and the second for the Scientific Alliance and friends of science in general. The afternoon of the 12th will offer an opportunity for students and those who cannot attend in the evening. The exhibition will illustrate the advances during the last year only. Any worker in the field of science who may have material which he believes of interest to the scientific world should communicate immediately with the chairman of the committee, Professor William Hallock, Columbia University, New York City. The exhibition is not limited to the work of members of the Academy, but the committee has final authority as to what material will be accepted. The departments represented are: Anatomy, astronomy, botany, chemistry, electricity, anthropology, ethnology, experimental psychology, geology, mineralogy, paleontology, photography, physics, physiography, physiology and zoology.

THE National Educational Association will meet next year in Chicago. Mr. A. B. Down-