

habitants have an increased attraction for American students.

In the February number of the *Journal of the Anthropological Institute* the eminent antiquary, Dr. Oscar Montelius, offers some new views on the subject. He identifies the Etruscans of Italy with the Tyrrhenians and the Pelasgians, and the earliest Etruscan culture with the Mycenaean. Both, he believes, emerged from Asia Minor, the Etruscans reaching Italy by sea about 1050 B. C., bringing with them their peculiar alphabet. The 'Tursha' of the Egyptian inscriptions of the 13th century B. C., he argues, were the Tyrrhenians.

In the discussion which followed, some of these views were opposed by Mr. Arthur Evans and Mr. J. L. Myres, the former maintaining that the 'root elements' of the Mycenaean civilization were European and not Asiatic; and the latter referring with approval to the theory that the Etruscans belonged to the Hamitic stock of North Africa, advanced on linguistic grounds by myself.

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NOTES ON INORGANIC CHEMISTRY.

A RECENT number of *Nature* (March 11th) contains an interesting review, by T. K. Rose, of the extraction of gold by chemical methods; much of the gold in ores is in a state of very fine division, the particles being often less than one thousandth of an inch in diameter, and sometimes less than one twelve thousandth. Such particles are much more readily dissolved by chemical means than by mercury. In sulfid ores, too, mercury is an unsatisfactory solvent. Such ores have until lately been worked by the chlorination process, which is now nearly fifty years old. The sulfids must, however, be very completely roasted, as the chlorin has a greater preference for sulfids than for the gold. When alkaline earths are pres-

ent, salt must be added in the roasting. This however occasions, save in the improved furnaces, a loss of chlorid of gold by volatilization. The ore is generally treated with chlorin water in large vats or in revolving barrels under pressure. The plant at Mount Morgan, Queensland, is the largest in the world, 1500 tons of ore being treated at a cost of \$4.50 per ton, about \$25 in gold being recovered for each ton. The gold is best precipitated from the chlorin solution by hydrogen sulfid, though iron sulfate or charcoal in boiling solution may be used. On account of the expense of roasting and, the non-recovery of any silver in the ore, the chlorination process is being gradually superseded by the cyanid process, which, while hardly recovering the gold as completely as the former, can be used with sulfid ores directly, and which recovers also any silver present. It has been long known that potassium cyanid in dilute solution dissolves gold, especially in the presence of air, with the formation of potassium aurocyanid, $K Au (CN)_2$, and this reaction is used practically in the process introduced by MacArthur and the Forrests. The action of the cyanid is most rapid in one-fourth per cent. solution, but at the best it is slow, and Sulman and Teed propose to hasten it by the addition of cyanogen bromid. The gold is precipitated either by zinc shavings, or, less commonly, by electro-deposition with iron cathodes and anodes of lead foil. The use of zinc is cheaper, but $1\frac{1}{2}$ to 2 dwts. of gold per ton of liquid remain unprecipitated, and the gold obtained is only about 700 fine. The electrolytic process is more complete and the bullion produced is very fine. At the Worcester mine, in the Transvaal, seventy tons of liquid are treated a day at an expenditure of five horse power, and 12,000 square feet of surface of lead are exposed.

The cyanid process enables low-grade

ores to be worked successfully, and it may be expected that these ores, such as those of the Rand, will be the most important source of gold in the future.

J. L. H.

SCIENTIFIC NOTES AND NEWS.

WE record with deep regret the death of Professor Edward D. Cope, professor in the University of Pennsylvania, editor of the *American Naturalist*, President of the American Association for the Advancement of Science, and eminent for contributions to paleontology, zoology and a wide range of natural science. Professor Cope became seriously ill on Tuesday of last week and died on Monday from uræmic poisoning. In his death science has suffered an irreparable loss, and for many the personal loss is equally severe.

THE German Zoological Society proposes to hold its seventh annual meeting at Kiel on June 9th-11th, under the presidency of Professor O. Bütschli, of Heidelberg. Reports are expected from Professor Brandt on the fauna of the Baltic Sea, and by Professor Chun on the *Siphonophora*. The report of the editors of *Das Tierreich*, which is published under the auspices of the Society, will also be presented. Lectures and demonstrations are announced by Professor B. Henson on the North Sea Expedition of 1895, by Dr. Apstein on the Methods and Apparatus of Modern Marine Biological Investigations, and by Dr. Vanhöffen on the Marine Fauna of Greenland.

MR. C. H. TOWNSEND has been appointed Chief of the Division of Fisheries, U. S. Fish Commission, while Dr. H. M. Smith is assigned to the Division of Scientific Inquiry. Mr. Townsend has been connected with the U. S. Fish Commission for fourteen years and has for a long time held the position of Naturalist on the Albatross which he now relinquishes. He is especially familiar with the fisheries of the Pacific Coast, including the many problems connected with the salmon canning industry, which is prosecuted under such varying conditions in the United States and Alaska that no one law can be made applicable to all localities. Mr. Townsend also has a long acquaintance with

the fur seal question, and it is to his investigations that we owe most of our knowledge concerning the food, breeding habits and migrations of this animal.

A SECOND circular of the Committee of Arrangements for the International Geological Congress has been issued and the Committee announces a most attractive program. As we have already stated, three excursions are arranged before the Congress: to the Ural region, to Esthonia and to Finland. After the Congress the chief excursion is to the Caucasus, leaving St. Petersburg on the 24th of August in three groups, each under special directors. All the details have been worked out with the greatest care, and expenses are reduced to a very low figure by practically free transportation and by hospitality offered by many of the large cities. The Finland excursion, for example, is estimated at only fifty francs, while the very extensive excursion to the Caucasus is estimated at six hundred and sixty-five francs. The sessions of the Congress take place at St. Petersburg between the 17th and 23d of August, in the rooms of the Imperial Academy of Sciences.

AT a meeting in the rooms of the Royal Society in 1893, the Prince of Wales in the chair, it was unanimously resolved "that the eminent services of the late Sir Richard Owen in the advancement of the knowledge of the sciences of anatomy, zoology and paleontology should be commemorated by some suitable memorial." A fund was collected for a bronze statue, which has been executed by Mr. Thomas Brock. This statue has just been placed in the Central Hall of the Natural History Museum, where it stands facing Boehm's statue of Darwin.

THE annual meeting of the American Institute of Electrical Engineers will be held in New York on May 18th. The Council have nominated Professor Francis B. Crocker, of Columbia University, for President. The Institute will hold a general meeting at Greenacre, Maine, beginning on July 26th.

THE Women's National Science Club met in the lecture room of the National Museum, Washington, on April 7th, 8th and 9th. Many