

but united by identity of language. The Bushmen and Hottentots in the far south form a separate group, with individual characteristics. But the whole race is distinguished from others by the combination of a dark skin and crisped hair.

ETHNOGRAPHY OF TUNIS.

Few portions of northern Africa are as interesting for the historian and ethnographer as Tunisia. There Carthage was situated and extended her powerful sway far inland, and thither Homer leads Ulysses to find the lotos-eaters.

The most thorough student of its ethnography, both past and present, is Dr. L. Bertholon, of the city of Tunis. He has published a number of memoirs of marked value, notably a *résumé* of the anthropology of Tunisia (1896), and anthropological exploration of Khumidria and the island of Gerba, the latter being the scene of the Homeric lotophagi (*L'Anthropologie*, 1897).

In the *Revue Tunisienne* (October, 1897) he sums up the evidence to show the European origin of certain elements of the Berber population of north Africa, from the ancient race of Europe represented by the Cro Magnon type. In supporting this thesis he calls to his aid both the survivals of the type in the present population and the information contained in Egyptian inscriptions and classical writers.

THE CHULTUNES OF LABNA.

LABNA is one of the ruined cities of Yucatan, and a *chultun* is the Maya name for a peculiar kind of chamber, constructed ten or fifteen feet below the surface and communicating with it through a well-like opening. They are common elsewhere in Yucatan and were described by the traveler Stephens in his familiar books. Some of them have finely polished, stuccoed sides, while others are roughly finished. Those at Labna are described with care by Mr. Edward H. Thompson in the 'Memoirs of

Peabody Museum,' Vol. I., No. 3 (Cambridge, 1897).

By some they have been considered granaries, by others water reservoirs. Mr. Thompson found in many of them human bones, stone implements and pottery. Those remains he inclines to believe are not indicative of the original intention of the chambers, but were, for some obscure reason, placed in the reservoirs when their original purpose was abandoned.

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

NOTES ON INORGANIC CHEMISTRY.

At the recent meeting of the American Chemical Society in Washington attention was called to the fact that much of the best work now being done on atomic weight determinations is by American chemists. In this work Professor Richards, of Harvard, stands in the front rank, and his latest work is of great importance. In the Proceedings of the American Academy he has published, in connection with Mr. A. S. Cushman, a revision of the atomic weight of nickel, and, in connection with Mr. G. P. Baxter, a revision of the atomic weight of cobalt. The atomic weights of these two metals are of unusual interest, because, according to most determinations, that of cobalt is greater than that of nickel, while from its position in the periodic system the reverse would seem to be demanded. The late Professor Krüss attributed the discrepancy to impurities in the metals used by previous experimenters, and isolated from them what he supposed to be a new metal, 'gnomium,' whose existence has never been confirmed. Professor Richards' results are of decided comparative value, inasmuch as the same compound—the bromid—was used of both metals, and the analyses were carried out by exactly the same process. The metals were most carefully purified, but little variation was found

in the analysis of samples which had been purified to an extreme degree and those in which the purification had not been carried quite so far. Thus, no evidence was found showing the presence of any other element or any impurity in the nickel bromid and cobalt bromid used. The figure obtained for the atomic weight of nickel is 58.69, and for cobalt 58.99, and the results of former observations as to the anomalous order of these elements in the periodic system are confirmed. An explanation of the anomaly is not forthcoming, and the same may be said regarding the atomic weight of tellurium. Further work upon the atomic weights of nickel and cobalt involving the use of other compounds than the bromid are now in progress in the Harvard laboratory.

A RECENT number of the *Journal* of the Society of Arts contains an extended article by Thomas Bolas on arsenical poisoning by wall papers, etc. After pointing out that the work of Gasio and Emmerling has conclusively shown that certain moulds have the power of living on arsenical paper and forming volatile arsenic compounds, the author points out that arsenic even in small quantities is poisonous to these moulds and that the throwing off of arsenic in a volatile form may be an effort of nature to cast out the poison. Further, the most dangerous papers may be those which contain mere traces of arsenic, as when a large quantity is present the moulds themselves could not live. He suggests that traces of arsenic may come into wall papers from the imperfect washing of the vessels used to contain the more highly arsenical colors, and states that dyed and printed fabrics now very frequently contain traces of arsenic. He recommends the use of the precipitated borate of copper as a green pigment to replace arsenical greens, as long ago proposed by Bolley. In view of the

present low price of boric acid, this pigment could be used commercially.

A NOTE in a recent number of the *Chemical News* by Percy A. E. Richards calls attention to the presence of zinc in a water which, after being stored in a reservoir, was conveyed to a private residence through a galvanized iron pipe some two miles long. The amount of zinc bicarbonate in the water was 7.3 parts per 100,000 or 73 milligrammes per liter. In the following number of the same journal Dr. T. L. Phipson makes note of the presence of zinc in a sample of water which was conveyed into the town of Funchal, island of Madeira, through galvanized iron pipes. Dr. Phipson remarks that, 'as zinc is a metal whose compounds have a noxious action upon the economy, it is evident that galvanized iron pipe cannot be used with safety to supply water for drinking.' It would seem probable that the large amount of zinc in the water described by Mr. Richards (more than half a grain in a pint) would have a decided effect upon the health, though zinc is probably far less injurious than several other metals occasionally present in drinking water. The distance the water was conveyed and the probability of its relatively slow passage through the pipes would account for the large quantity of zinc present.* Where only short lengths of galvanized iron pipe are used there would be far less danger, but the subject deserves further study.

Among recent articles on calcium carbide and acetylene is one by Lunge and Cedercreutz in the *Ztsch. Angew. Chemie* on their analysis. The gas from ordinary calcium carbide contains up to four per cent. of impurities; among them hydrogen sulfid and phosphin are the most important. These are very injurious, and the gas may be puri-

* An account of a very similar case to that reported by Mr. Richards is given in the London *Lancet* for March 1, 1884, as occurring in the water supply of the village of Cwmfelin, Wales.

fied from them by passing through a solution of bleaching powder, which readily oxidizes them. The amount of acetylene furnished per kilogram of commercial calcium carbide should be not less than three hundred liters. According to Fuchs and Schiff in the *Chemiker-Zeitung*, two samples of the Neuhaüser carbide gave, the one 286.8, and the other 297.6 liters per kilo.

J. L. H.

SCIENTIFIC NOTES AND NEWS.

SURVEYS OF FOREST RESERVES.

IN response to a resolution adopted December 15th, the Secretary of the Interior has transmitted to the Senate a report, prepared by the Director of the U. S. Geological Survey, of the operations of the survey in carrying out those provisions of the last Sundry Civil Act which relate to the survey of the public lands which have been or may hereafter be designated as forest reserves.

The report goes into the subject of organization of the work under the several branches, the characters of the land to be surveyed, progress and results, etc. To the date of the report more or less work had been done in nine reserves—the Black Hills, the Big Horn, the Teton, the Uinta, the Bitterroot, the Priest River, the Washington, the Lewis and Clarke, and the Flathead. The work consists of (1) a topographic and subdivision survey, and (2) an economic examination of the forests of the areas. The surveys comprise base-line measurement, triangulation, detailed topography, including the sketching of all timber areas on the map, leveling and the placing of permanent bench-marks, and land subdivision surveys. The examination of the forests comprises the study of the distribution of forest areas and woodlands, the size and density of the timber, and the distribution of species, the ravages of forest fires, the extent of pasturage and its effects and the extent of timber already cut. The report shows that the progress made in the work as a whole was not as great as had been anticipated, this being especially true of the surveys, and also that a large proportion of the appropriation is still unexpended. There are

two reasons why the progress has not been greater: first, the fact that the work was not started until very late in the season and was thus greatly hampered by storms and cold; and, second, the extremely rugged and density-timbered character of the country under survey. Professor Walcott reports in detail the progress made in the few weeks in which work was done. It is hoped, with the coöperation of Congress, to resume operations early in the spring and make a full season in these reserves.

W. F. M.

GENERAL.

THE Bruce gold medal of the Astronomical Society of the Pacific Coast has been awarded to Professor Simon Newcomb, of Washington, D. C., for his distinguished services to astronomy. This is the first award of the medal, to the establishment of which we some time since called attention.

REPRESENTATIVE WHEELER, of Alabama, has introduced a joint resolution to fill the vacancies in the Board of Regents of the Smithsonian Institution by the appointment of Mr. Alexander Graham Bell, to succeed Mr. Gardiner G. Hubbard, deceased, and the reappointment of Mr. John B. Henderson and Mr. Wm. Preston Johnston, whose terms expire January 26th.

M. WOLF succeeds M. Chatin as President of the Academy of Sciences, Paris, while M. Van Tieghem, the botanist, has been elected Vice-President in the place of M. Wolf.

AT its meeting on January 12th the American Academy of Arts and Sciences elected John M. Coulter, of Chicago, and Douglas H. Campbell, of Palo Alto, as Associate Fellows in the Section of Botany, and Elias Metschnikoff, of Paris, as Foreign Honorary Member in the Section of Zoology and Physiology.

A BANQUET in honor of Professor Virchow's fiftieth anniversary as a university teacher and as editor of the *Archiv für pathologische Anatomie* was given at Berlin on December 28th. Speeches were made on Professor Virchow's services as a teacher and man of science by Professors Waldeyer and Liebreich, and Professor Virchow replied.

THE memorial meeting in honor of the late