

ing to find that the King of the Seminoles threatened a certain Mr. McLatche that "if he did not comply with his requisitions, he would command the thunder and lightning to descend upon his head, and reduce his stores to ashes." They had also a remarkable cult of the sacred fire. "The Spiral Fire, on the hearth and floor of the Rotunda, is very curious; it seems to light up in a flame of itself at the appointed time, but how this is done I know not."

Another important article in the same reprint is that by E. G. Squier on "The Archaeology and Ethnology of Nicaragua." He describes a curious kind of spindle, resembling a gigantic top, which revolved in a calabash, and an equally primitive hand-loom. Mr. Squier was the first traveller who collected a vocabulary and prepared a grammar of the speech of these tribes. They used, he says, the vigesimal system of counting by twenties instead of the decimal, while the Eskimos, Algonkians, and Choctaws counted by fives. They were emigrants from Mexico, "and presented the extraordinary phenomenon of a fragment of a great aboriginal nation, widely separated from the parent stock, and intruded among other and hostile nations; yet from the comparative lateness of the separation, or some other cause, still retaining its original, distinguishing features, so as to be easily recognised." Their arms were identical with those of the Mexicans—lances and arrows pointed with flint, copper, and fish-bones, with blades of obsidian set on the edges. These papers are specially interesting, because they were written before the age of scientific ethnography, and were prepared without reliance on any particular theory of the origins, social organisation, or beliefs of the tribes which were studied by their authors. The re-publication of this valuable material is a laudable enterprise on the part of the Ethnological Society.

PURIFICATION OF WATER BY STORAGE.

THE third annual report, compiled by Dr. Houston, of the Metropolitan Water Board, on the results of the chemical and bacteriological examination of the London waters for the twelve months ended March 31 has just been issued, and contains a mass of valuable information. The chief conclusions formulated by Dr. Houston may be summarised as follows. The raw waters from which the supplies are derived are usually unsatisfactory, particularly during the winter months, and a judicious selection for waterworks purposes is important. The storage is unequal, and in some cases inadequate in the different works; filtration is also unequal, and in some instances too rapid. The quality of the filtered water is likewise variable, and in some cases not altogether satisfactory, though a remarkable percentage improvement in the quality of the raw water is effected by storage and filtration; on the whole, however, the water supplied to the consumer is of satisfactory quality. Storage has been clearly proved to be advantageous in all respects. The recent investigations of the Board point to the fact that the present sources of the water supply of the metropolis may be regarded with less disfavour than previously.

Dr. Houston, in a fourth report on research work, also details the results of an investigation on the vitality of the cholera microbe in artificially infected samples of raw Thames, Lee, and New River water, which may be considered to be supplementary to his previous report on the vitality of the typhoid bacillus in similar circumstances (see NATURE, vols. lxxviii., p. 377, lxxix., p. 259, and lxxx., p. 286). A number of different strains of the cholera vibrio was dealt with, and only those which, after investigation, might be regarded as undoubted cholera vibrios were employed in the research, and their bacteriological characteristics are detailed. The conclusions are that cholera vibrios rapidly die in the raw waters as a result of storage in the laboratory. At least 99.9 per cent. of the organisms perish within one week, and none could be isolated even from 100 c.c. of the water three weeks after infection. These results are of considerable interest now that cholera is prevalent in Russia and other parts of Europe, and emphasise the importance of storage of the raw water as a safeguard against water-borne disease.

R. T. HEWLETT.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

DR. R. K. McCLUNG has been appointed lecturer in physics in the University of Manitoba, Winnipeg.

DR. FRITZ COHN, extraordinary professor of mathematics and astronomy at the University of Königsberg, has been appointed professor of theoretical and mathematical astronomy, and director of the Königliche Astronomischen Recheninstitut, at Berlin; he enters upon his new duties on October 1.

THE Central News Agency reports from New York that, by the will of the late Mr. Cornelius C. Cuyler, the sum of 100,000 dollars is bequeathed for the immediate benefit of the Princeton University, and on the death of Mr. Cuyler's widow several million dollars will pass into the hands of the University authorities.

WE have received a copy of the Directory for higher education, 1909-10, issued by the Education Committee of the Staffordshire County Council. The directory contains the regulations of the committee and the details of schemes in operation throughout Staffordshire. We notice that a very complete scheme of technological instruction is provided throughout the county by the committee. In the case of mining, instruction is given by two lecturers, whose whole time is devoted to the work, and their assistants. For this purpose the county is divided into two portions, comprising the North Staffordshire Coalfields and the South Staffordshire Coalfields respectively. Theoretical and practical classes in metallurgy and iron and steel manufacture are conducted in accordance with the regulations of the Board of Education and the City and Guilds of London Institute. Lectures and laboratory work in pottery and porcelain manufacture will be given during the coming session at Burslem, Longton, Stoke, and Tunstall. The services of an instructor in boot and shoe manufacture are engaged jointly by the committee and the Education Committee of the Borough of Stafford. Silk manufacture is taught at Leek, glass manufacture at Stourbridge, and art metal-work at Bilston. To enable teachers in elementary and secondary schools to impart instruction in various branches of technical and manual training, special classes are provided at convenient centres by the committee. Courses of lectures on health and the care of children are delivered at suitable localities in both rural and urban districts, and demonstrations and lectures are also provided on gardening, bee-keeping, and poultry-keeping. An elaborate system of scholarships is in vogue, including training scholarships for teachers and midwives, extensive aid is given to secondary schools, university extension lectures are provided, useful work has been arranged in rural districts, and numerous evening classes are available. Altogether the Staffordshire committee is making adequate provision for the education of young men and women anxious to equip themselves properly for their work in life.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, August 17.—M. Bouquet de la Grye in the chair.—The synthesis of unsaturated fatty ketones: F. Boudroux and F. Taboury. Calcium carbide attacks the ketones of the fatty series. Acetone gives mesityl oxide and other condensation products; butanone is dehydrated in a simpler manner, the unsaturated ketone $C_4H_7.C(CH_3)=CH.CO.C_2H_5$ being formed.—The influence of the reaction of the medium on the development and proteolytic activity of Davaine's bacteridium: Mlle. Eleonore Lazarus. The limits of acidity or alkalinity between which it is possible for the organism to develop, as well as the reaction corresponding to the maximum proteolysis, depends, not only on the strain, but also on the nature of the food material.—The mitochondria of the muscular fibres of the heart: Cl. Regaud.—The geological history of the Tellian Atlas of eastern Numidia (Algeria): J. Darest de la Chavanne.