

There are, however, a number of facts overlooked by Schweinfurth which indicate that the 'New Race' were conquerors of an older Egyptian civilization; nor is it likely that the Bedchas would have occupied so exclusively the left bank of the Nile, when their homes were east of its right bank. Petrie's supposition is still the most probable of any offered.

A PHILOSOPHIC SECT.

IN the May number of the *Journal of the Anthropological Institute*, Mr. H. Balfour describes the sect of the Aghori fakirs in India. Their doctrine and their practice are based on the philosophic principle of the fundamental equality of all things, and, therefore, they are sticklers for absolute indifferentism. They disregard caste and creed, and receive accessions from the votaries of all religions. They are mendicants and despise property and labor. They eat with indifference carrion, offal or excrement, and as a cup or dish they use a fragment of a human skull, often quite fresh. In creed they are monotheists, believing in one god only, and have no respect for persons except the teacher or *guru*, who has initiated them into the sect. He gives each disciple a name, thus blotting out his past self.

It seems somewhat inconsistent that they should have a form of marriage, but other writers speak of their women as prostitutes. Originally, they seem to have been worshippers of Devi, the wife of Siva, in whose cult obscenity and bestiality were pushed to their furthest extremes.

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NOTES ON INORGANIC CHEMISTRY.

AN account is given in *Nature* of the meeting of the International Congress on Technical Education held in London, June 15th-17th. The opening day was devoted to the teaching of chemistry. In one paper

Dr. Otto N. Witt, of the Polytechnic School of Berlin, said he could not admit any fundamental difference in the methods of research of pure and applied chemistry; consequently he could not admit the necessity for a difference of instruction for the two. A well-organized instruction in pure chemical science would be the best preparation of any young chemist for his future career. Schools for producing specialists are not wanted; specialism comes as a matter of course in later life. Chemists are needed who embrace their science as a whole, and who are incapable of separating either practice from theory or theory from practice. Dr. Gladstone, speaking of evening schools, said that when the school was situated in the neighborhood of factories it would be allowable and even desirable that the illustrations should be chosen with some reference to the prevailing industry. This is a principle capable of wider application.

In a paper by Professor Lunge, of Zurich, the writer held that, to raise English chemical industry to the foremost rank, it is necessary that the technical management of chemical factories should not be left in the hands of 'rule-of-thumb' men, but should be entrusted to real chemists. These men should have a much fuller education than the majority of chemists seem to obtain at present in Great Britain, which means that they must spend more time and money on their training than they generally do. At college the student should receive a thorough training in scientific chemistry, taking this in its widest meaning, not merely as a 'testing' exercise. Next to this, but not to the same extent, he should be taught physics, mineralogy, technology, mechanics and the elements of engineering. Professor Lunge held that it was unwise for the common workmen or even the foremen to have a knowledge of chemistry or technology, as it is their duty

to simply carry out instructions, and not to meddle with the chemical process itself. Professor Silvanus P. Thompson, in discussing Professor Lunge's paper, urged that where a great industry is localized, science should be applied to that industry, and an institute should be put there devoted to monoteknical rather than polytechnical instruction. Training in research is absolutely necessary, and specific research should not be undertaken too soon by students who have not been taken through an all-round course in chemistry. Sir Henry Roscoe pointed out that England suffers chiefly from the failure of her manufacturers to see, as they ought to see, the importance of the highest scientific training for their employes. Scientific teaching has taken up a sound position already, and if manufacturers will only appreciate its value England can turn out scientific men as well as any country in the world.

THE last *Berichte* of the German Chemical Society contains a series of observations of the amount of carbon dioxide in the air of Sheffield, by W. Carleton Williams. The mean amount found in 142 determinations in the suburbs is 3.266 parts per 10,000, the maximum being 5.14 and the minimum 2.16. The average of 22 determinations in the center of the city is 3.9, with a maximum of 6.22 and a minimum of 2.80. These figures are higher than those observed in Paris (2.85), Dieppe (2.94) and Odessa (3.04), and only equaled by those in Dundee (3.9). As regards the conditions pertaining at the time of the experiment the following conclusions are drawn. During mist and snow the amount is increased; no difference is shown in rainy weather (previous observations on this point differ); a maximum (3.6) is reached in January, decreasing to a minimum (2.59) in April; the amount decreases with the increase of temperature—below 0°, 4.06; 0°–5°, 3.31;

5°–10°, 3.22; 10°–15°, 2.98—possibly due to increased fuel consumption in cold weather; increase with very high or very low barometer. These observations contribute to the view that the amount of carbon dioxide in the atmosphere is by no means constant under varying conditions.

G. SPEZIA contributes to the *Atti* of the Turin Academy an investigation on the action of water on quartz under pressure. Pfaff had shown, using quartz powder, that at 18° and 290 atmospheres' pressure one part of quartz dissolved in 4,700 parts of water; using plates of quartz, Spezia finds that at 25° and 1,750 atmospheres (in one experiment 1,850 atmospheres) in the space of over five months absolutely no quartz went into solution.

J. L. H.

SCIENTIFIC NOTES AND NEWS.

THE subject of Professor W. P. Mason's address as Vice-President of the American Association for the Advancement of Science (Section C., Chemistry) will be 'Expert Testimony.' The subject of Vice-President L. O. Howard's address (Section F., Zoology) will be 'The Spread of Land Species by the Agency of Man with especial reference to Insects.' The subjects of the other addresses have already been announced in this JOURNAL.

THE party from the zoological department of Columbia University reached Puget Sound, Washington, in the latter part of June, and gave a fortnight to the further exploration of the waters of the Sound. Upon July 8th they started for Sitka, Alaska, where they will remain from four to six weeks, returning to Port Townsend at the close of the season. The party includes Professor Wilson, Dr. Calkins, Professor Lloyd and five others.

PROFESSOR OSBORN has recently returned from a visit to the various parties sent out by the American Museum of Natural History. The systematic collection of vertebrates this year is extended for the first time among the reptilia, and two parties are working in Kansas and Wyoming. Professor Osborn and Dr. Wort-