

News and Views

Prof. G. Barger, F.R.S.

THE appointment, which is announced elsewhere (p. 556) of Prof. G. Barger, professor of chemistry in relation to medicine at the University of Edinburgh, to the Regius chair of chemistry in the University of Glasgow, will give general satisfaction. By his work during the past thirty years, Prof. Barger has exercised a considerable influence on the development of organic chemistry and biochemistry in Great Britain. In his well-known early collaboration with Dr. (now Sir Henry) Dale, in the laboratories of Messrs. Burroughs, Wellcome and Co., he was jointly responsible for one of the most fruitful applications of organic chemistry to biological problems which has ever been made; he is a distinguished worker in the field of alkaloid chemistry and by his own work and through his pupils he has made major contributions to what may be called in general terms organic biochemistry. Prof. Barger's appointment in 1919, after holding the professorship of chemistry at the Royal Holloway College, London, to the newly instituted chair of chemistry in relation to medicine at Edinburgh, was in itself a recognition of the outstanding characteristic of his work, namely, the attack of organic chemical problems related to biology not from a narrowly chemical point of view but with true appreciation of their biological implications. His Department at Edinburgh has continued to work on these lines, and has at the same time been responsible for great improvements in the teaching of chemistry to students of medicine. Prof. Barger's influence in chemistry to-day is further enhanced by the many contacts which he maintains with colleagues in other countries, aided as he is by linguistic attainments of distinction. It is encouraging to those who believe that organic chemistry has still vital contributions to make to biology that an important chair of chemistry such as that at Glasgow should be occupied by one who has shown the keenness of his biochemical interests by his own sustained efforts and through the work of his pupils.

Memorial to Samuel Smiles, LL.D.

IN the latter half of the last century a book called "Self Help" was widely read, and an indication of this is shown by its having been translated into twenty-two languages. It developed from a lecture given by Dr. Samuel Smiles in the old Cholera Hospital, Leeds, to a mutual improvement class of working men. Smiles was born in 1812 at Haddington and educated at the Burgh School and at the University of Edinburgh, where he qualified as a medical man. Not having sufficient patients, he wrote articles, and these were seen by the proprietor of the *Leeds Times* who in 1838 asked him to be editor. In 1842, having then "had enough of unquiet life of newspaper work", he set up as a surgeon in Holbeck,

South Leeds. He was partly attracted there by the activities of a school and in his autobiography he says: "On Sundays I taught young men and sometimes gave addresses in Zion School, New Wortley." Smiles married the daughter of a Leeds contractor and in 1845 became secretary of the Leeds and Thirsk Railway, which was afterwards absorbed into the Midland Railway system. This occupation brought him into contact with engineers, and he began to collect data which later appeared in his five volumes of the "Lives of the Engineers"; "Industrial Biography"; "The Lives of George and Robert Stephenson", etc. By his writings and lectures, etc., he helped to create in the West Riding a strong public opinion on such questions as the repeal of the Corn Laws; Parliamentary reform; national education and free public libraries. Zion School was one of the first to have such a library. A memorial tablet in bronze is to be fixed on the old school building, and a set of his books has been presented by Sir John Murray, whose firm published them. Sir Walter D. Smiles, M.P., is also presenting an enlarged framed portrait. The organizer of the memorial is Mr. E. Kilburn Scott, of 38 Claremont Square, London, N.1.

"Shiva's Temple", Arizona

WIDESPREAD interest has been aroused by the investigation of "Shiva's Temple", in the Grand Canyon, Arizona, U.S.A., which is being explored by the Paterson-American Museum Grand Canyon Expedition, with Dr. Harold Anthony, curator of mammalogy in the American Museum of Natural History, as its leader. Shiva's Temple, an isolated cliff of limestone, rises to a height of 1,200 feet above the floor of the Canyon, and is surmounted by a wooded plateau two hundred and seventy-five acres in extent, which is reputed never to have been visited by man since the cliff was separated from the mainland at some time about the close of the Ice Age. It was anticipated that forms of animal life, if any, surviving on the plateau after so lengthily a period of isolation might afford valuable evidence of adaptation and divergence. Dr. Anthony and Mr. Edwin McKee, chief naturalist of the Grand Canyon National Park, with six other members of the expedition, reached the plateau on September 16 after a three hours' climb. Shed antlers of deer were seen, as well as chipmunk, a rabbit and signs of coyote. The first specimens brought to the base camp were a pair of leaf-eared mice. Traps have been set for other animals by Dr. Anthony, who remained on the plateau when other members of the party returned to the base camp. Supplies were dropped from an aeroplane, including water, of which no trace has been found on the plateau. This makes it remarkable that the party should have been much troubled by mosquitoes.

It would appear that before it was isolated, the plateau was a favourable hunting ground for early man. A number of stone arrow-heads and knives have been found. Unless these are the relics of an early party of adventurous climbers, which seems unlikely, they should help in assigning a date to the period of isolation, more especially if the arrow points should conform to the highly specialized type of stone implement known as the Folsom point, which is widely distributed over the High Lands of the south-western United States from Wyoming to New Mexico, though not yet found in characteristic form in Arizona. As mentioned below, stone implements have been found recently in South America in association with the extinct horse and giant ground sloth, while Folsom points have been found embedded in the bones of an extinct bison, as well as in association with that form and with the mammoth, at Folsom and Clovis in New Mexico and elsewhere. It is now beyond question that in certain parts of North America early man was contemporary with an extinct fauna which in Europe would justify a Pleistocene dating in the later part of the Ice Age. In America, however, it is generally conceded, the characteristic Pleistocene fauna, or at least certain members of it, may have survived to a much later date than in the Old World, while conditions militated against a very early appearance of man in the New. If the implements of Shiva's Temple are of the earliest type, and belong, as appears probable, to the pre-isolation period, they indicate on a conservative estimate an upward limit for the period of isolation of approximately ten thousand years, or possibly a little but not much more.

Ancient Man in Chile

AN expedition to Chile of the American Museum of Natural History, New York, extending over a period of two and a half years, is reported to have discovered a succession of stone age industries claimed to be of greater antiquity than any previously known in South America. More than four thousand stone implements, it is stated by Science Service, Washington, D.C., have been collected by Mr. and Mrs. Junius Bird, on behalf of the Museum, from two cave sites, Fell's Cave and Palli Aike Cave on the banks of the Rio Chico in southern Chile, near the Straits of Magellan. In the former of the two caves was a stratified succession of five cultures, of which the earliest included tanged spear-points, unique in South America, associated with the bones of the extinct horse and giant ground sloth. This culture was covered by a rockfall, while at Palli Aike, twenty miles away, the oldest culture period closes with a deposit of volcanic ash. Some considerable time after the fall of rock, Fell's Cave was again occupied by man. With the artefacts of this period are associated at first bones of the horse and ground sloth, and later of foxes, of which one form is extinct, and birds. The implements are cruder than those of the early stage. In this and the preceding period the animal bones have been split for the extraction of marrow and show the effects of fire.

The succeeding culture introduces the bola, of which the carefully grooved weights have been found with the stone gravers used to make the grooves. Arrow points and knives appear with the bola in the fourth culture, which is dated tentatively at 2000 B.C. on comparative evidence. The last occupants of the cave, who show no affinity with their predecessors, were the possessors of a culture in many ways comparable with that of the Ona of Tierra del Fuego, who, up to a few years ago, used stone arrow-points similar to those found in the cave. The cave seems to have been abandoned before the Spanish conquest, as no bones of the horse then introduced into America have been found in it.

University Development at Birmingham

IT is reported that the University of Birmingham is selling the Mason College site, and the price is said to be £400,000. If the negotiations are satisfactorily completed, the long-desired transfer of the whole of the University to the Edgbaston site will soon be an accomplished fact, and the uneconomical and very inconvenient separation of the faculties will be a thing of the past. Already the building of the new medical school (between the great new hospital and the University at Edgbaston) is nearing completion, and it is hoped that the school will be ready for opening next year. Such an event would be a fitting crown to the work of the Vice-Chancellor (Sir Charles Grant Robertson) who has expressed his intention of retiring at the end of the coming session and who has taken a leading part in the establishment of both hospital and medical school. The money resulting from the sale of the Mason College site will also make possible the expansion, and improvement of the equipment, of some of the departments already at Edgbaston, the Physics Department in particular, which is at present partly housed in old Army huts, inconvenient and unsightly.

Health and the Community

IN the account of the discussion in Section I (Physiology) of the British Association on "Health and the Community", which appeared in NATURE of September 18, p. 493, it is stated on p. 494 that the safest rate of reproduction for both mother and offspring is the modal rate. The author of the article has asked us to point out that this statement holds for any size of family, but the example of modal rate actually given was for a family of seven. This does not bear the implication that seven is the ideal number per family. Actually the lowest mortality was found in families of three, produced *at the modal rate*. The author has also sent the following supplementary note. "One point in the discussion of immense importance for the future not only of the race but also threatening civilization itself, was not sufficiently stressed in the article, namely, the *differential* birth rate. It follows from the facts that the modal rate is, on the whole, observed only in the lowest paid members of the community, and that they start reproduction early (less than twenty years of age), that the number of the population