

collotype plates, the production being of the high standard associated with the Oxford University Press. Contributions will, it is hoped, cover all aspects of palaeontology, and included in the first number are articles on the true *Rhynchonella*, Upper Viséan goniatites, the type-species of *Girvanella*, the Cretaceous ammonite *Leymeriella*, *Encrinurus multi-segmentatus* and its allies, and descriptions of a new genus of foraminifer and a new Tertiary calcareous alga. The membership subscription is two guineas annually (the price per part of the journal is 35s. or 5.20 dollars). The president of the Association is Dr. R. G. S. Hudson, and the treasurer Dr. W. S. McKerrow, University Museum, Oxford.

### Evolution

It has been said that the greatest and most enduring monument to the late Dr. O. G. S. Crawford is the journal *Antiquity*, which he inaugurated thirty-one years ago and edited up to the time of his death. He planned his last number, which appeared posthumously in December 1957 (pp. ii+185-257+5 plates. London: Phoenix House, Ltd., 1958. 10s. 6d. net), as a special evolution number to commemorate the Darwin-Wallace centenary, and it is particularly noteworthy for its frontispiece of a hitherto unpublished sketch of Charles Darwin made in 1855. The number includes a concise and authoritative summary of human evolution by R. Singer, a well-reasoned statement by K. P. Oakley on the evidence for the earliest stages of tool-making, and short articles by the late Prof. Gordon Childe on "The Evolution of Society", and by L. A. White on "Evolution and Diffusion". Another essay, highly appropriate because of its relation to some of Darwin's own studies, is by R. J. C. Atkinson on "Worms and Weathering"; it is the aim of this essay to direct attention to disturbances of the soil produced by worms which, unless taken into careful account, may tempt archaeologists to base conclusions on what is really a falsified stratigraphy.

### Cleaning Inscriptions

THE *Museums Journal* for December 1957 includes an article by Dr. David Smith concerning the cleaning of inscriptions and sculptures in sandstone. The objects comprised altars, military inscriptions, tombstones and sculptures of the Roman and Anglian periods previously housed in the Black Gate Museum in Newcastle upon Tyne. They were cleaned in preparation for exhibition in the new museum erected by the University of Durham. The first step was to remove the surface dirt with a gentle spray of water directed from a rubber hose. For some of the worst cases this was the maximum treatment that the stone could stand. In other cases experiments were conducted with household detergents, dilute hydrochloric acid and fibre scrubbing brushes with hot water; and steel wire scrubbing brushes were also used with much success. This may seem a drastic method, but providing the surface of the stone is sound and the work is done under a constant flow of hot water, it has been found that no harm results. Each stone when completely cleaned was washed and maintained at a fairly constant temperature of 55° F. in another room. After about three months, a colloidal solution of silica in alcohol (ethyl silicate) was applied. This reinforced the natural bond of the stone, hardening it and reducing its porosity without completely sealing it or affecting it in any other way.

### Remanent Magnetism

STUDY of the natural remanent magnetism of rocks is becoming a familiar method for determining the direction of the Earth's magnetic field at past stages in its geological history, and has led to interesting speculations about the wandering of the geomagnetic poles or of the continents themselves. An alternative use for measurements of remanent magnetism, namely, the determination of the temperature of formation of pyroclastic deposits, is described by Shigeo Aramaki and Syun-ito Akimoto in the *American Journal of Science* (255, 619; November 1957). The method depends on the fact that if all the fragments composing a deposit of this kind maintained a temperature above the Curie point of the constituent ferromagnetic minerals during emplacement, and cooled below this point only after coming to rest, their thermo-remanent magnetism must show a uniform orientation parallel to the geomagnetic field at the time and place of cooling. If, on the other hand, the fragments had already fallen below the Curie point before settling, the natural remanent magnetism of the fragments will have random orientations. Using this criterion, the authors have been able to distinguish between *nuée ardente* deposits and mud-flow deposits associated with several Japanese volcanoes and formed at various periods from recent historical to late Pleistocene times.

### Wilmot Breeden Fellowships

THE Wilmot Breeden Group of Companies, the manufacturing interests of which include motor-vehicles and gas-turbine components, hydraulics and electronics, are sponsoring two fellowships, each worth £1,000 per annum, one at the University of Birmingham and the other at the Birmingham College of Technology. Successful candidates will divide their time between the University or College and the Company. The fellowships will be advertised every year in March, in odd years in association with the University and in even years in association with the College. Each fellowship will normally be held for a period of two years. Candidates, who should have an honours degree of a university in the British Commonwealth, a diploma in technology, or an equivalent qualification, should normally have had two or three years experience of research or industry. An application for a fellowship should outline a two-year programme of research on which the candidate seeks to work. Inquiries can be addressed to the Secretary, Wilmot Breeden (Holdings), Ltd., Amington Road, Birmingham 25.

### Society of Analytical Chemistry: Officers

THE following officers of the Society for Analytical Chemistry were recently elected for the forthcoming year: *President*, J. H. Hamence; *Past-Presidents serving on the Council*, D. W. Kent-Jones, J. R. Nicholls, G. Taylor and K. A. Williams; *Vice-Presidents*, N. L. Allport, R. C. Chirnside and A. A. Smales; *Honorary Treasurer*, A. J. Amos; *Honorary Secretary*, R. E. Stuckey; *Honorary Assistant Secretary*, S. A. Price; *Ex-Officio Members of Council* (chairmen of Sections): A. N. Leather (North of England Section), Magnus A. Pyke (Scottish Section), S. Dixon (Western Section), R. Belcher (Midlands Section), D. F. Phillips (Microchemistry Group), R. A. C. Isbell (Physical Methods Group) and S. K. Kon (Biological Methods Group).