far as its proceedings were concerned, had earned the right to be regarded as a national rather than a local body. That fact is recognised in the change of title. On the other hand, the strength gained from local interest will be preserved by an organisation of local groups under honorary secretaries, which will focus interest in specific local areas.

Thanks very largely to the activities of Mr. J. Reid Moir, the Prehistoric Society has never feared the difficulties which beset the pioneer in archæological investigation; and if we may judge by the contents of the first volume of its *Proceedings*, the same policy will commend itself to the Society in its revised form. It will offer a free field for open discussion. This at least is the inference to be drawn from the tone of the first presidential address by Prof. V. Gordon Childe on "Changing Methods and Aims in Archaeology". Pointing out that the remarkable strides in discovery of prehistoric archæology during the last ten years call for a complete reconsideration of the position in prehistoric studies, he focuses a variety of 'discontents' expressed in various quarters, and boldly accepts their implication of the necessity for certain fundamental changes of nomenclature, point of view and method. For example, while he holds that chronology is the essential of prehistory, as it is of history, the old chronological classification of 'ages'—stone, bronze, iron—can no longer be regarded as bearing any precise significance, owing to the wide distribution in time as well as in space to which it is now recognised these terms are applicable as cultural designations. On the other hand, as he himself has already suggested, the various 'ages' do express phases in economic development, which have their place in a temporal relation, thus becoming even more significant when viewed in the light of Prof. Childe's reference to the present aim of archæology, which centres not so much on the intrinsic interest of the objects recovered as in the reconstruction of the culture of which they are an indication.

Prof. Childe dismisses in like vein the familiar chronological classification in a sequence of cultures based on the archæological finds of France, which no longer applies in the world-wide view of prehistoric problems which must now be taken. But in dealing with this and other concepts hitherto generally accepted, his criticism—a constructive criticism be it said is that the implication of the emphasis now laid on culture must be accepted to the full. It is no longer the period, but the culture which is the object of investigation. The chronological problem is to be solved through the relation in space and time of the various distinguishable cultures *inter se*.

Of the varied communications which follow the presidential address a bare mention of a few must suffice. Mr. G. A. Holleyman and Dr. E. Cecil Curwen describe their investigation of bronze age lynchet settlements on Plumpton Plain, Sussex. This produced some interesting pottery which is described by Mr. C. F. C. Hawkes. The pottery confirms and emphasises the distinction in date between site *A*, which belongs to the earlier Late Bronze Age from about 1000 B.C., and site *B*, which cannot be dated before 750 B.C. and covers the transition to the Early Iron Age centring approximately on 500 B.C. Mr. Henry Bury provides a welcome discussion of the Farnham terraces and their sequence and Dr. Grahame Clark furnishes an equally opportune survey of the prehistory of the Isle of Man.

The recent discussion, at the Norwich meeting of the British Association, of the antiquity of man in East Anglia, gives a special interest to papers by Mr. Reid Moir on the Darmsden flint implements and a description of three Combe Capelle hand-axes from Norfolk; and a similar interest in a different context is attached, in view of recent discoveries in the county of Lincoln, to three papers dealing with long barrows—a description of the Therfield Heath Long Barrow, Royston, by Mr. C. W. Phillips, a discussion of a possible pedigree of long barrows and chambered cairns by Mr. W. J. Hemp, which is both suggestive and to some degree provocative, and a note on the relative chronology of English long barrows by Mr. Stuart Piggott. Mrs. Jacquetta Hawkes adds to her previous contributions to consideration of the place of origin of the Windmill Hill culture and advances her views a stage further.

A valuable feature of the miscellaneous items which complete the volume is a survey of results in the field in Great Britain and Ireland during 1935. Mention must also be made of a valuable résumé of recent work in Russia by Prof. Gordon Childe.

Educational Topics and Events

CAMBRIDGE.—The following have been approved for the degree of Sc.D.: W. N. Bailey, of Trinity College, C. G. Darwin, Master of Christ's College, J. O. Irwin, of Christ's College.

At King's College, Dr. D. Purdie has been elected into a fellowship. Dr. Purdie was placed in the first class of the Natural Sciences Tripos, Part II, in 1932, and was elected to a Charles Kingsley Bye-Fellowship at Magdalene College in 1934.

EDINBURGH.—Prof. W. H. McMillan, professor of mining in University College, Nottingham, has been appointed to the James A. Hood chair of mining in the Heriot-Watt College.

LONDON.—Prof. A. K. Henry has been appointed as from March 1 to the University readership in surgery tenable at the British Postgraduate Medical School. Since 1925 he has been professor of clinical surgery in the Medical School, Cairo, and director of the Surgical Unit, Kasr el Aini Hospital, Cairo.

LOUGHBOROUGH COLLEGE has been noted for many years as the sponsor of a combined theoretical and practical training system, essentially its own, which should constitute a good preparation for the administrative side of engineering. It has now extended this to include aeronautical engineering, and offers a course that should appeal to a type of man not very largely catered for at the present. The combined lectures, workshop, and aerodrome practice, constitute a four-year course leading to the College diploma and the Air Ministry's ground engineer's licences. A fifth year qualifies for an honours diploma, and covers the syllabus of the examinations of the Royal Aeronautical Society. The instruction comprises lectures and laboratory work, sandwiched with work in the production engineering workshops, on alternate weeks. The training is general during the first two years, but in the third and fourth year the practical work is entirely aeronautical, including aircraft rigging, maintenance, sheet metal work, engine repairs and testing. Flying instruction is also

given during that period. The fifth year covers the more advanced side of aircraft and engine design, or alternatively advanced flying up to the standard required for a pilot's *B* licence. The teaching is carried out by the college engineering staff, with the addition of three special aeronautical instructors.

THE education of Negroes formed the subject of a national conference held in Washington under the auspices of the United States Federal Office of Education in May 1934. A preliminary report has now been published, as Bulletin No. 6 of 1935 of the Federal Office, under the title "Fundamentals in the Education of Negroes". The title, suggesting, as it does, differentiation between the principles of education applicable to Negroes and those applicable to whites, is rather misleading. The purpose of the conference was to determine what are the fundamental requirements for raising the standard, both quantitative and qualitative, of education of Negroes up to the level of the education of whites. One of the conclusions reached is that the southern States are not able to provide public education for all children on an equal basis with the other sections of the country, and another is that glaring inequalities exist in the expenditures of school funds for the benefit of Negroes and whites respectively. Eleven southern States spent, in 1930, 35½ dollars per pupil in all schools but only 12½ dollars per pupil in Negro schools; moreover, 64 per cent of the Negro schools were one-teacher schools. Associated, both as cause and as result, with the inadequate provision of schooling for Negro children, is the fact that more than half of all American Negroes live in the open country or in villages.

IN "Science and the New Humanism", a series of articles contributed to the Workers' Educational Association's monthly, the *Highway*, Prof. L. Hogben, of the London School of Economics, outlines a field of study which he commends to the Adult Education Movement as one that offers an opportunity for work of the utmost national importance. The "Retreat from Reason", so ominously apparent among the younger generation in this as in other countries, he attributes to a dualism in educational politics, a cleavage between the education of scientific workers and technicians on one hand and of leaders and administrators on the other. This dualism, again, is a result of failure to adjust educational policies to the changes wrought in the structure of society by the enormous advances in the applied sciences. It is urgently necessary to devise methods of education which will give the community representatives who can co-operate intelligently with technical experts in constructive social enterprise at present suffering from paralysis as a result of educational dualism. In the first of his articles, Prof. Hogben exposes some of the faults of method that stultify current unscientific social 'science' doctrine. He quotes passages from the new humanistic studies making a fetish of mere logic, reducing their work to the level of a game of chess. Much, also, is sacrificed, he shows, to the idol of purity, so that a social inquiry which tends to the conclusion that something has to be done is said to be "tendencious", as if researches of a worker in natural science should be deemed worthless if there were grounds for suspecting the researcher of *wanting* to get a particular result, or an investigator is looked askance at for poaching on the preserves of investigators wearing a different subject label.

Science News a Century Ago

Lambeth Literary and Scientific Institution

ON April 12, 1836, a series of weekly lectures began at the Lambeth Literary and Scientific Institution, Wellington Terrace, Waterloo Bridge Road. The first and fourth of the lectures, by W. M. Higgins, were on electricity; in the second, third and sixth Dr. Lardner dealt with the principles and structure of the steam engine and its application to railroad and to navigation, while the fifth of the series was on the eye, the theory of vision and optical illusion, and was given by W. C. Dendy.

Petroleum and Titanium at Coalbrookdale

IN a paper on the physical features, geological structure and organic remains of the Coalbrookdale district, read to the Geological Society on April 13, 1836, Prestwich said that the petroleum or tar spring, for which Coalbrookdale has been so long celebrated, issues from a thick bed of sandstone, in the upper part of the coal measures: it yielded formerly more than a hogshead a day, but produces now only a few gallons a week. Another spring had been discovered, and petroleum is frequently found to some extent in working the coal. Titanium has been produced in considerable abundance in the iron furnaces. It often occurs in crystals of great beauty, but principally in amorphous masses. On examining some portions of hearth stones belonging to a furnace which had been at work for nine or ten years he discovered lumps of titanium as large as a marble cemented by a small quantity of iron.

Death of James Horsburgh

ON April 14, 1836, the eminent British seaman and hydrographer James Horsburgh died at the age of seventy-three years. Horsburgh was born at Elie in Fifeshire on September 23, 1762, of poor parentage. He learned elementary mathematics at school, and at fifteen years of age became an apprentice in a collier brig employed in the North Sea. In 1780 the vessel in which he was serving was captured by a French frigate, and Horsburgh was for a time a prisoner at Dunkirk. Regaining his liberty, he sailed for the East, and while first mate of an East Indiaman turned his attention to hydrography, teaching himself to draw and engrave. His voyages took him to China, Batavia and New Guinea, and some of his sailing directions and charts were published by the East India Company. Returning to England in 1796, his reputation gained for him the friendship of Banks, Maskelyne and Cavendish, but after a short stay at home he sailed again for the East, continuing his scientific observations. Back in England in 1806, he was admitted a fellow of the Royal Society, and in 1809 was appointed hydrographer to the East India Company in succession to Alexander Dalrymple. Few men contributed more to the safety of navigation in Eastern waters than Horsburgh.

On the Temperatures of Hot Springs

AT a meeting of the Royal Society held on April 14, 1836, Prof. J. D. Forbes concluded the reading of his paper "On the Temperatures and Geological Relations of Certain Hot Springs; particularly those of the Pyrenees; and on the Verification of Thermometers". He expressed his regret that notwithstanding the great interest of the subject, information on