

The two great geographical areas of the Nile Valley and West Africa, inhabited, one by an eastern Nilotic and predominantly Negro-Hamitic population, the other by a great mass of predominantly forest Negroes, show a most striking community in ideas and customs. There can scarcely be any doubt that a number of the traits common to Ancient Egypt and the western area arose in Egypt and were passed on to the negroid tribes of the Nile Valley and the Negroes of the Congo. The evidence whether they were further transmitted from the Congo to Nigeria is much less clear, although it can scarcely be doubted that Egyptian influence sometimes did reach West Africa.

Summarising the facts, however, there are certain main conclusions to which they lead. At a remote period of more than 5,000 years ago, in that part of the Nile Valley now called Upper Egypt, the king or tribal leader among the pre-dynastic Egyptians was particularly associated with vegetation, the cultivation of the crops and the welfare of the land. This king, there is reason to believe, was slain ceremonially when he had reigned for a certain number of years or when he had grown old. Whether this be so or not, at any rate during historical times, a group of ceremonies known as the *sed* festival was performed, which had for their purpose the confirmation of the king in his kingship (re-investiture) and probably rejuvenation. These too can be traced back to pre-dynastic times.

There is abundant evidence for the direct extension of Egyptian ideas, beliefs, art-forms and technical devices southwards for some distance up the Nile Valley. To the south, among the Negroid tribes of the Nile basin, we find at the present day kings who are especially associated with the welfare of the crops, herds and people and these kings may either be killed ceremonially on showing signs of ill-health or senescence (Skilluk), or after a number of years at their own request (Dinka). Sometimes such kings, though concerned with the welfare of the crops, are not killed (Nuer, Latuka); sometimes a 'confirmation' or 'rejuvenation' ceremony is performed for their benefit (Baganda). Among a neighbouring tribe, the Bakitara, the most prominent feature of the *sed* festival, the shooting of arrows towards the cardinal points, constitutes a rite at the installation of the king, which is repeated annually at the beginning of the year.

In spite of these amazing resemblances, chronological factors forbid us to believe that the Divine Kings of the Sudan are directly due to Egyptian influence. Rather must they be regarded as examples of an old and widespread Hamitic belief, though there has become attached to them through Egyptian influence a number of specifically Egyptian rites such as the *sed* ceremony.

Turning to West Africa, we find Divine Kings in their typical form in a group of tribes (Jukun, etc.) with sun-worship and a ceremony corresponding to the *sed*. Here the quality of the Divine Kings conforms more closely to the Egyptian agricultural pattern than it does in the Nile Valley, where the concern of the tribesmen for their cattle may have diminished their interest in agriculture. But here again it must be recognised that we are dealing not with the transmission of a specifically Egyptian custom, but with an older Hamitic belief, which did, however, reach West Africa from the east, that is, from the neighbourhood of the Great Lakes, via the Congo.

Speculating on the deeper significance of the beliefs and ceremonies, more weight, Prof. Seligman held, should be given to the complicated installation ceremonial ritual of the Divine King than had been done in the past, for it is in the installation and rejuvenation ceremonies that there is especially the emotional projection upon the Divine King of his peoples' deepest desire for life, fertility and prosperity.

University and Educational Intelligence

CAMBRIDGE.—Prof. H. A. Harris has been elected professor of anatomy as from October 1, 1934, in succession to Prof. J. T. Wilson, who will retire on that date. Prof. Harris is at present professor of clinical anatomy at University College, London.

Prof. W. Heisenberg, of the University of Leipzig, has been appointed Scott lecturer for the year 1934 and Prof. G. von Hevesy, of the University of Freiburg i. Br., for the year 1935.

A. E. Platt has been elected to the Gwynaeth Pretty studentship.

The George Henry Lewes studentship in physiology has been awarded to Dr. John Burnaston Bateman.

LONDON.—The celebration of the one hundred and tenth anniversary of the foundation of Birkbeck College will be held on Wednesday, December 13. The foundation oration will be delivered by Col. John Buchan at 8.15 on "The Margins of Life". Admission is free.

OXFORD.—In convocation on November 28, the honorary degree of D.Sc. was conferred on Prof. Arthur Thompson, who is about to resign the chair of human anatomy, which he has held for nearly fifty years. The Public Orator in presenting him referred to his eminent services to the Medical School in Oxford, to his professorship of anatomy at the Royal Academy, to his achievements as an anthropologist, and to his skill as an artist.

Congregation has also approved the preamble of a statute providing for the addition of 'entomology' to the style of the Hope professorship of zoology.

THE annual conference of the Geographical Association will be held at the London School of Economics on January 3-6. The presidential address will be delivered on January 3 by Prof. P. M. Roxby, Rankin professor of geography in the University of Liverpool, on "China as an Entity—the Comparison with Europe". Lectures will be delivered by Prof. J. D. Greene, Dr. J. H. Hutton, Prof. G. C. Allen, Prof. J. Coatman, Commander L. C. Bernacchi, Dr. S. W. Wooldridge, Mr. D. L. Linton, and Prof. Julian Huxley. Two discussions have also been arranged: for teachers in primary schools, on "The Place and Problems of Local Geography", to be opened by Mr. J. C. E. Rogers; for secondary schools, on "Suggestions for a First School Certificate Geography Syllabus", to be opened by Mr. J. A. Mortlock. Further information concerning the conference can be obtained from the Clerk, Geographical Association, c/o Municipal High School of Commerce, Princess Street, Manchester, 1.

THE twenty-second Conference of Educational Associations will be held at University College, Gower Street, London, W.C.1, on January 1-8, under the presidency of Dr. George Dyson. On January 1,

Dr. Dyson will deliver his presidential address entitled "Education for Life". A joint conference on "The Failure of Modern Science Teaching to Develop an Adequate Cultural Background to Life" will be held on January 4, when the principal speakers will be Prof. Julian Huxley, Mr. St. John Ervine and Sir Arnold Wilson. Among the lectures to be given before the large number of societies and associations taking part in the Conference are "Experimental Work on Heredity", by Dame Helen Gwynne-Vaughan (School Nature Study Union), and "Biology and the School Curriculum", by G. W. Olive (British Social Hygiene Council—Educational Advisory Board). Further information can be obtained from the Conference Secretary, 29 Gordon Square, London, W.C.1.

THE thirty-fourth annual meeting of the Science Masters' Association will be held in the Chemistry Department of the Imperial College of Science and Technology, South Kensington, London, on January 2-5; evening meetings will be held at King's College of Household and Social Science, Campden Hill Road, London. The following lectures have been provisionally arranged: H. T. Tizard, "Science and the Industrial Depression"; Prof. E. N. da C. Andrade, "New Experimental Work in Sound"; Prof. H. V. A. Briscoe, "Valency"; Dr. Allan Ferguson, "Some of London's Contributions to Science"; Mr. J. Ramsbottom, "Fungi"; Prof. A. Brammall, "Geochemistry applied to the Genetic Study of 'Hybrid' Rock Types"; Dr. H. Spencer Jones, "The Structure of the Universe"; Prof. R. A. Fisher, "Adaptations and Mutations"; Mr. H. Harle, "Polarisation of Light and its Applications to Photoelasticity". A discussion on School Certificate science will be held. It is also proposed to make a special feature of the exhibition of members' apparatus; in the event of a member not being able to attend the meeting, apparatus may be sent to the Secretary. Further information can be obtained from Mr. H. G. Lambert, Shirley Corner, Boden Road, Hall Green, Birmingham.

THE modern universities' shortcomings have been discussed in a series of articles in recent issues of the *Universities Review*. In the October issue there is an article entitled "Suggestions for a Reformed University Curriculum" based on the assumption that the aim of university education is to further human welfare by equipping the best minds for effective intervention in the philosophical and practical problems of to-day, that university studies ought to be fitted into schemes framed in accordance with this aim, and that inasmuch as they are turning out year by year large numbers of graduates who are quite uneducated, the universities are failing deplorably in their mission. On the science side, all undergraduates should receive, it is contended, a general scientific education, either a natural philosophy course, humanised by, for example, work in the history and philosophy of science and by such co-ordination as the linking up of mathematics with statistical science and economics, or a biological course treated with definite reference to fundamental modern problems. Specialised study should be permitted only after graduation and should in every case be "the activity of a mature mind stimulated by a real desire to know" instead of, as happens too often, "amassing a deal of useless information that will be promptly and rightly buried in the recesses of the university library".

Calendar of Nature Topics

December Frosts

December, the first month of winter, is often traditionally associated with frosts. Actually, in England, December is not so cold as either January or February, the average temperature at Greenwich over a period of 90 years having been just above 40° F., while the historic frosts of the seventeenth to nineteenth centuries did not usually begin until January. The most notable exception was the intensely cold month of December 1879 in western Europe. In the British Isles the chief characteristic of December is the frequency of rain, which, at most places, is greater than in any other month, though the actual amounts which fall may be less than in October or August. In the French Revolutionary Calendar of 1793, the period November 21–December 20 was the month *Frimaire*, but this refers rather to the formation of hoar-frost on the ground at night than to the occurrence of temperatures persistently below freezing point. In December, the air still contains a large amount of water vapour, while clear calm nights are cold enough for the ground to fall below 32° F., and under these conditions the deposits of hoar frost may be heavier than they are later in the winter when the temperature is lower.

Halcyon Days

In Virgil's "Georgics", Book 1, appears a reference to the fourteen halcyon days, which he describes as beginning on December 11. The legend relates to the myth that the lovers Ceyx and Alcyone were changed into kingfishers or halcyons by the gods for their presumption. Kingfishers were formerly supposed to construct nests floating on the sea, and their breeding time is near the winter solstice. Hence from about seven days before to seven days after the solstice, through the influence of Aeolus the wind god, father of Alcyone, all gales were hushed and the sea calmed so that the lovers' floating nest might not be injured by the waves or carried out to sea. The wind data for examining this belief are not readily available, but while periods of fine weather sometimes occur in the Mediterranean in winter, it is unlikely that they are especially frequent during the legendary period. 'Halcyon days' was later extended to include any period of fine calm weather.

Seasonal Variations in Tropical Animals

In a general way, it appears to be true that sexual rhythms associated with the seasons, such as are familiar in temperate regions, do not occur amongst tropical animals. Nevertheless, the seemingly uniform tropical breeding season has, at any rate in cases which have been carefully investigated, an indication of minor cycles not definitely associated with temperature. The case of the common toad of southern Asia (*Bufo melanostictus*) has been investigated by Gordon Alexander by morphological methods (*Univ. Colorado Bull.*, 33, 195; 1933). It has been suggested that in certain areas November marks an increase in sexual activity, while Boulenger and Flower state that in the Malay Peninsula the breeding season is in March and April. Alexander dissected the gonads of sixty-eight specimens from Bangkok, and examined externally several hundreds of individuals from China; he found that the ovary weight was greatest in November; that although the breeding season extended through all the months