

being one of the first of nearly forty throughout the world, grouped together in an international federation of archives with its headquarters in Paris, and devoted to the permanent preservation of films of historical value, and it is no part of its function to duplicate the work of the many production libraries existing within the film industry.

#### "Clean Air Year Book"

A USEFUL feature of the "Clean Air Year Book for 1960" is an outline summary of the Clean Air Act which came into force about two years ago, together with details of relevant Acts and by-laws. The latest estimates of the pollution of Britain's atmosphere show that more than a million tons of smoke are emitted yearly from domestic fires compared with half a million tons from industry and 100,000 tons from the railways. On the other hand, domestic chimneys contribute only 100,000 tons out of the 900,000 tons of grit and dust that are emitted. Sulphur dioxide gas, emitted from all solid fuels and fuel oils, total  $5\frac{1}{2}$  million tons, to which domestic fires contribute nearly a million tons. The "Year Book" contains a complete list of local authorities which have smoke-control areas or smokeless zones in operation or approved. So far as acreage is concerned, Hayes and Harlington in Middlesex have more smokeless zones than any other town or city. Another feature of interest is the chronological history of the struggle against air pollution which began in 1273 when the use of coal was prohibited in London as being "prejudicial to health". The "Year Book" can be obtained from the National Society for Clean Air, Palace Chambers, Bridge Street, London, S.W.1, price 2s. 4d. including postage.

#### The Scottish Field Studies Association

THE annual report for 1959 of the Scottish Field Studies Association, presented to the eleventh annual general meeting at Perth on May 7, at which Mr. P. F. Holmes, warden of the Malham Tarn Field Centre, spoke on the importance of field studies in modern education, records a slight reduction in the number of courses offered, as it was not possible to make arrangements at Kingussie, and the number of student-days fell from 3,642 to 2,972 (Pp. 28. Glasgow: Scottish Field Studies Association, c/o Department of Botany, The University, 1960. 2s. 6d.). The paid ordinary membership on December 31, 1959, was 534 and the number of affiliated bodies 33. The Bursary Scheme continued successfully and 61 members of local scientific societies attended courses as bursars. Half the eighteen courses arranged were planned for the Association's own field centre at Garth; four were in co-operation with the Holiday Fellowship, Ltd.; two in hotels, and two at Newbattle Abbey. In his address, Mr. Holmes stressed the importance of an understanding of country problems, and of conservation keeping pace with the increase in the numbers of people visiting country districts and the inadequacy of normal class-room techniques for this purpose. New methods must be devised and especially field studies for younger children. The annual report is accompanied by an admirable illustrated paper by Dr. Joy Tivy on "The Geography of the Garth Area: the Central Highlands in Miniature", based on material collected and compiled by members of the various Geographical Studies Field Classes who attended Garth during the summers of 1957-59.

#### Rock Shelter Paintings near Bauchi in Northern Nigeria

DURING an investigation in the area around Geji, not far from Bauchi, Hamo Sassoon, deputy director of the Nigerian Department of Antiquities, found several painted rock-shelters. Of these the most important was near Geji itself. Four styles of painting were determined: there is a naturalistic style, the painting being made in solid red pigment; two series in a more diagrammatic style; and another series once again in solid red pigment, but much less naturalistic than the first. Antelopes, cows, monkeys, men and a horse are depicted. This last, which occurs in one of the diagrammatic series, is important, as it would seem that the horse would not have been known at Geji before about A.D. 1500. Only two superpositions can be observed and they happen not to be very helpful. It is not, then, possible to determine the relative ages of the four series, and as to an absolute date one can only say that one of the diagrammatic series cannot be earlier than A.D. 1500. Although the drawings are protected from the weather by an overhanging rock, it is very unlikely that any rock-shelter paintings can be of any vast antiquity. Precipitation and subsequent evaporation degrade the walls and any paintings tend to disappear. Only in deep caves, where conditions have not changed for long periods, can one expect survival. But the newly found paintings in Nigeria are of considerable interest. The local inhabitants have no idea who made them, but they do attribute magic qualities to them.

#### Relaxin

IN a paper presented before the American Society of Biological Chemists in Atlantic City, N.J., Edward H. Frieden, of the Arthur G. Rotch Laboratory, Boston, Mass., has reported his analyses of relaxin (United States Department of Health, Education, and Welfare: Public Health Service. Publication No. 739: Highlights of Research Progress in General Medical Sciences, 1959. Pp. v+23. (Washington, D.C.: Government Printing Office, 1960.) 15 cents). Relaxin is secreted by the ovaries and apparently serves to relax the uterus during childbirth. Previous work by Frieden had indicated that relaxin was composed of a single molecular series; he now suggests that there are three components. The relaxin preparations, isolated from the ovaries of pregnant sows, were separated in a solvent system of 2-butanol and 0.2 per cent trichloroacetic acid. A total of 355 transfers was made, with the relaxin compounds spread rather uniformly over 50 tubes. Pooled material from this distribution was re-run in the same solvent system, separating the three components. The amino-acid contents of the components were determined by paper chromatography of their acid hydrolysates and were found to be qualitatively identical. They included cystine, aspartic acid, glutamic acid, glycine, serine, histidine, lysine, arginine, alanine, valine, theonine, leucine and isoleucine.

#### U.S. National Centre of Atmospheric Research

DR. WALTER ORR ROBERTS, of the High Altitude Observatory, Boulder, Colorado, has been appointed director of a (U.S.) National Centre of Atmospheric Research. The National Science Foundation has granted 500,000 dollars to the University Corporation