

NATURE

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DEVELOPMENT OF BACKWARD TROPICAL REGIONS *541/c*

IN a memorandum issued with the first report of the Select Committee on Estimates for the session 1948-49*, the Colonial Office replies to some earlier criticisms by the Committee suggesting that there was no coherent strategy of economic planning in the schemes for Colonial development which had been put forward. The Colonial Office in its reply refers to an unpublished memorandum of April 1944 on "The Planning of Social and Economic Development in the Colonial Governments", which states that the two primary objectives of British Colonial policy are the promotion of the best development of the social and political institutions of Colonial peoples, and of their true welfare in the widest sense. The memorandum assumes that the planning of developments to be undertaken in the Colonies would be 'outline' planning in the sense of providing a general framework while leaving a more or less substantial residue of decisions about production and consumption to private planning or individual initiative. On this interpretation of planning, in which strategy is defined as the selection of objectives and the marshalling of the forces necessary to reach those objectives, the Colonial Office submits that there has been a perfectly coherent strategy. The reply goes on to point out that from the beginning it was made clear that the ten-year 'developments' were not to be imposed from Whitehall, but were to be the creation of Colonial Governments and indeed of Colonial peoples themselves. The execution of the plans and the tactics employed are then defended, but in a way which is not altogether convincing.

There is, perhaps, less difference between the Colonial Office and the Select Committee on Estimates than the Colonial Office is disposed to admit. Far more stress was laid by the Select Committee on the necessity of associating the Colonial peoples with development plans at an early stage than would appear from this reply. The Colonial Office indicates the difficulties in co-ordinating the planning of developments in forty-five separate territories; but it never really answers the fundamental criticism that early information on the acute shortages of equipment, materials and man-power, which have brought certain schemes into acute competition for capital equipment required urgently for European reconstruction and development, could only have come from Whitehall. In the field of capital equipment it would seem that a case can be made for criticism. The Select Committee recommended that schemes of Colonial economic development requiring equipment in short supply should be framed in consultation with a planning authority in the United Kingdom having responsibility for allocation among home needs, export demands and all forms of Colonial development. This recommendation the Colonial Office regards as impracticable; but it recognizes the importance of the considerations on which the

* First Report from the Select Committee on Estimates. Session 1948-49. (London: H.M. Stationery Office, 1948.) 9d. net.

recommendation is based and is attempting to meet the need in other ways. Other recommendations of the Select Committee, it is stated, have already been adopted.

Despite this rather heavy-handed reply, it would appear that the criticism of the Select Committee has not been wide of the mark and has had an effect. Moreover, it is obvious from recent discussions on the progress of the groundnut scheme in Tanganyika that the bearing of the general criticism of the Select Committee on the operations of the Overseas Food Corporation has not escaped notice. It has at least strengthened the hands of those who are pressing for information both on the progress of the groundnut scheme and for parliamentary discussion on the activities of the Corporation. President Truman's recent proposal for American participation in the development of backward areas adds a further powerful reason for full public discussion of all the issues involved in Colonial development.

That there is much of scientific interest in such discussion requires no stressing. Thus, Mr. A. J. Wakefield read a paper on the groundnut scheme in East Africa before Section D (Zoology) at the British Association meeting at Brighton in which he emphasized the long-term character of the project and the way in which it is associated with questions of the production of other crops; he showed that it calls for the services of agronomists, soil chemists and surveyors, entomologists, pathologists, plant breeders, biochemists and others. At the same meeting, Sir Frank Stockdale stressed biological aspects of Colonial development, while the contribution of the scientific worker to human welfare in the Colonial territories was also brought out in the addresses of Lord Rennell of Rodd and of Dr. E. Scott Robertson, as well as in a specific discussion on scientific aspects of Colonial development before Section E (Geography).

Since that meeting, the publication of the four reports prepared for the Tsetse Fly and Trypanosomiasis Committee, reviewed by Sir Philip Manson-Bahr in these columns (*Nature*, January 22, p. 118), have demonstrated the thoroughness with which the task of survey and control of trypanosomiasis in Central Africa is being carried out and its bearing on Colonial development as well as health and welfare. The announcement of the new drug 'Antrycide' indicates the way in which scientific and industrial research in Britain is continually providing the medical and veterinary worker, the protozoologist and entomologist with new weapons, and opening up fresh prospects of controlling the major diseases and pests that ravage human and animal life and limit development in tropical areas. Some of these possibilities have no doubt been considered by the International Scientific Committee for Trypanosomiasis Research which met in London on February 8. This non-government standing committee of scientific men from the United Kingdom and the Colonies, France, Belgium, Portugal, South Africa, Southern Rhodesia and the Sudan, was formed as a result of the international conference held at Brazzaville in French Equatorial Africa in February 1948.

An important section of the report of the Commission of Enquiry into the Swollen Shoot Disease of Cacao in the Gold Coast not only praised the work of the West Africa Cacao Research Institute as basic to the maintenance of the cocoa industry in the Gold Coast, but also suggested an extension of research involving a considerable increase in both the facilities and staff at the Institute. It will also be recalled that in launching the groundnut scheme, the Government expressed the belief that its long-term importance might lie less in increasing the supply of fats for Britain and the rest of Europe than in its practical demonstration of the improved productivity, health, social welfare and prosperity which scientific agriculture can bring to Africa. In a recent address to the Manchester Statistical Society, urging the need for more capital for the Colonies, Prof. Arthur Lewis emphasized that more than this is required. The fundamental needs in all colonies are, in fact, the same. Apart from greater capital investment, the people must learn the laws of good husbandry. Proper cultivation, protection against erosion, the planting and felling of trees, selective breeding of livestock and irrigation where possible are fundamental in the development of every Colony. Behind all lies the need for further research in tropical agriculture: research into plant diseases and fertilizers, the breeding of immune varieties, methods of conserving water, the elimination of pests and the preservation of animal health.

The demands that are thus made on the Colonial Powers may well absorb all the surplus resources of Western Europe for years to come, and indeed a large part of those of the rest of the industrial countries of the world. This demonstrates the immediate significance of President Truman's proposal. This proposal would appear to accept and endorse the recognized basis of British Colonial policy, namely, that the development of the backward areas can only be achieved with outside technical and scientific assistance and large capital investment which must be carefully watched and controlled to avoid exploitation; and it offers to put the vast resources of the United States behind a great effort to carry out such a policy throughout all the under-developed areas of the world. Such association in itself may well prevent misunderstandings, which may sometimes arise when economic development appears to clash with the advance towards full self-government, and so forestall misrepresentation. The announcement that the Economic Co-operation Administration has approved the British Government's proposal for the augmentation of the Colonial Surveys by about fifty trained American workers, whose salaries would be met by that Administration, is a welcome sign of the beginning of such co-operation.

Research and education must, indeed, precede capital development, and it is a task which Great Britain at present finds peculiarly difficult, owing to its straitened resources of scientific man-power, to discharge adequately even within the Colonial Empire. It may well be hoped, therefore, that one effect of Mr. Truman's proposal may be so to implement both the Fulbright Act, which provides for sending

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Americans to study, teach and engage in research abroad and for the cost of travel of nationals of other countries who wish to visit the United States for similar reasons, and also the Smith - Mundt Act of January 1948 for the establishment of an educational exchange service. An agreement between the Governments of the United Kingdom and the United States to put the Fulbright Act into effect was signed on September 22, 1948, but in the present currency situation the chief beneficiaries will be Americans. If, in view of the President's proposal, Congress now makes the necessary appropriations under the Smith - Mundt Act for international co-operation in the interchange of persons, knowledge and skills, the rendering of technical and other services and the interchange of developments in the field of education, the arts and the sciences, the purpose of the Fulbright Act may still be achieved.

Meanwhile, it is worth noting that the Colonial Office has now begun to issue a *Journal of African Administration*, one of the aims of which is to serve as a link between research and administration; the first issue refers to contacts which are being developed between the Colonial Office and the appropriate departments and institutions of foreign Colonial Powers. Here is further encouragement for men of science working in fields touching on human welfare, health and agricultural development, who have already recognized how much international co-operation can do to make their efforts fully effective in areas such as tropical Africa. President Truman's proposal is rightly linked with the European recovery programme and the firm establishment of world order; but there are few fields in which Anglo-American co-operation, the pooling of knowledge and scientific and technical resources and the interchange of staff, could contribute more quickly and richly to human welfare and social advance throughout the world than in the development and education of the backward areas of the world.

TAXONOMY OF THE HAWKWEEDS

A Prodrum of the British *Hieracia*

By H. W. Pugsley. (Journal of the Linnean Society of London, Botany, Vol. 54.) Pp. iv+356+17 plates. (London: Linnean Society, 1948.) 60s.

THE hawkweeds have long been known as a group of plants presenting peculiar difficulties to taxonomists. The general facts can be simply stated: in most parts of the generic range the hawkweeds are more or less locally limited entities which morphologically differ definitely, but not greatly, from other entities. These microspecies, or whatever they be called, come true in their differential characters from seed. In the British Isles, the northern and western parts are richest in *Hieracia*, and in the past their study has attracted many British botanists. The late Mr. H. W. Pugsley published "Notes on British Hawkweeds" in 1920, so that it is safe to say that the present prodrum is the result of more than a quarter of a century's investigations.

Within the limits of a 'micro-taxonomical' subject the work is in many ways excellently done. The descriptions are clear, sufficiently full yet concise, and easily comparable one with another. There is judicious citation of specimens and localities. The history of the classification of British *Hieracia* is adequately considered, and there is an interesting section on their morphology.

A conspectus of accepted species classifies these into sections and series; but it is unfortunate that no artificial key is provided to the latter. The greater part of the prodrum consists of descriptions with keys to the 260 groups recognized as species, the keys being generally placed under the series into which the species are classified. A considerable number of such species are here described and named for the first time. Under some of the species varieties are accepted. There is an index to the species and subsidiary groups, and seventeen plates show plants in black-and-white outline.

Various questions arise in perusing this volume. Modern research has shown that many *Hieracia* are apomictic—they set seeds without fertilization. Much of this cytological research has been done in Scandinavia, and apparently British hawkweeds have not been examined for their chromosomes or the absence of fertilization. There is, however, very little doubt that the entities accepted by Pugsley as species are apomicts (or groups of apomicts). Genetically, apomicts are the equivalent of clones. Unlike clones that are propagated, as clones, only by vegetative means, they spread by seeds which reproduce the clone. With these peculiarities there are good arguments for maintaining that apomicts should be taxonomically treated neither as species nor as varieties, but should be classified as distinct categories. It is to be regretted that Mr. Pugsley did not explain clearly the general principles by which he determined which of the presumably apomictic entities should be considered 'species' and which 'varieties'.

Another matter that may be disputed is his treatment of the part played, in the more or less long distant past, by hybridization. On this matter his statements appear to be confused. If *Hieracia* be completely apomictic, at the present day, hybridization cannot occur between the apomicts; but this does not mean that hybridization did not occur when amphimixis was the rule in the genus. Indeed, some cytologists have held strongly that hybridization is an important cause of apomixis.

W. B. TURRILL

THE SPECIES OF MODERN MAN

Human Ancestry from a Genetical Point of View

By Professor R. Ruggles Gates. Pp. xvi+422+27 plates. (Cambridge, Mass.: Harvard University Press; London: Oxford University Press, 1948.) 42s. net.

THE subdivision of modern man into distinct species rather than into "races" is justified in the first instance, says Prof. R. Ruggles Gates in his new book, on the score of "convenience" (p. 11). "Consistency in nomenclature and methods of classification necessitate the recognition of several species of living man", he adds (p. 406). Like Prof. Ruggles Gates, anthropologists well appreciate the difficulty of distinguishing (except arbitrarily) clear-