

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.

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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-