

genes; the substance of Dr. Little's recent and authoritative review of coat-colour genes in rodents and carnivores would be a useful additional chapter for future editions without making the book over-large, and would widen its use for reference purposes. It is already a valuable standard work, and a tribute to the patience of its author which only those of his colleagues who work with the longer-lived mammals will fully appreciate.

ALEX COMFORT

FLORA OF WEST AFRICA

Flora of West Tropical Africa

The British West African Territories, Libéria, The French and Portuguese Territories South of Latitude 18° N. to Lake Chad, and Fernando Po. By Dr. J. Hutchinson and Dr. J. M. Dalziel. Second edition revised by R. W. J. Keay. Vol. 1, Part 2. Pp. ii+297-828. (London: Crown Agents for Oversea Governments and Administrations, 1958.) 55s.

SCIENCE, fortunately, need not always wait on politics, and for thirty years the essential unity of the Upper Guinea region of Africa has been recognized and provided for by an excellent "Flora". It is not without interest to trace the historical background.

During the middle part of last century large collections of dried plants (herbarium specimens) began to arrive at Kew from what was then the British Empire, and Sir William Hooker, followed by his son Sir Joseph Hooker, initiated and undertook the vast project of providing "Floras" of these territories. The four major works, which started publication in 1860, were, in chronological order: "Flora Capensis", "Flora Australiensis", "Flora of Tropical Africa" and "Flora of British India". Of these the "Flora of Tropical Africa" (Vol. 1, published in 1868) was by far the least satisfactory for, with a few exceptions, only the periphery of the area was well known, and the earlier volumes often contained no more than about 10 per cent of the species now known to science. In the later decades of the nineteenth and the earlier decades of the twentieth centuries German botanists, inspired by Adolf Engler and encouraged by the political climate of German imperial expansion in Africa, did a vast amount of botanical work on tropical Africa, often without very close co-operation with similar work at Kew and the British Museum. By the 1920's the taxonomy of the flora of tropical Africa was in real confusion, and it was realized at Kew that a solution had to be found. Whether it would have been better to start a new edition of the "Flora of Tropical Africa" (the first edition of which has not been entirely completed to this day) is a matter of opinion, but the decision was taken, probably rightly, to start a new series of African regional "Floras". With institutional and, indeed, international co-operation, botanical work on Africa south of the Sahara has proceeded along that course with a fairly satisfactory regional division of the territory, leaving, however, a few unfortunate lacunae, of which the French Cameroons - French Congo region is the worst.

This brief historical summary is necessary to see the "Flora of West Tropical Africa" in perspective. It was the first of this new series of regional floras but differed fundamentally, in many respects, both from its aged parent and from its later successors ("Flora du Congo Belge", now well advanced; "Flora

of East Tropical Africa", in course of publication; and "Flora Zambesiaca", in gestation). The original edition was initiated by Sir Arthur Hill, then director of Kew, financed by the British West African Governments, entrusted to Mr. (now Dr.) J. Hutchinson and the late Dr. J. M. Dalziel and completed over the period 1927-36. This represented very rapid work, and speed of production and conciseness were two of its main features. Synonymy, references and descriptions were cut to a minimum; but there were rather elaborate keys containing descriptive elements and the illustrations were generous. The arrangement of the families departed considerably from Bentham and Hooker traditions by following Hutchinson's own ideas on classification—usually, though not invariably, an improvement on the older one.

The work was at the time the only large-scale modern "Flora" of tropical Africa available and was in great demand not only in the territories for which it was intended but also throughout Africa, providing, often enough, the means for the field-botanist to achieve at least generic determinations anywhere in Africa south of the Sahara. It is not surprising that the first edition soon sold out, and it is gratifying that Kew has been able to undertake a much-needed revision and second edition.

This second edition was entrusted to Mr. R. W. J. Keay, of the Department of Forest Research, Nigeria, assisted by Mr. F. N. Hepper and several other members of the Kew staff. Keay, with an excellent knowledge of the plants obtained in the field, most unusually joined with an admirably balanced taxonomic judgment, has made a magnificent job of it, correcting the many errors which had not unnaturally been discovered with the passage of time in the original work and reorganizing some portions completely, although keeping the original format and reconciling so far as possible the conflicting claims of accuracy and speed. It is a splendid work of the highest value and importance taxonomically, ecologically and economically. To see the extent of change and progress represented by the second edition, one may turn to the important genus *Cola*, entirely rewritten with the help of Mr. J. P. M. Brenan, and note that twenty-five species have expanded to forty-two and that nine more are recorded as still imperfectly known.

The part now under review is of great economic importance, containing the Leguminosae (divided into Caesalpiniaceae, Mimosaceae and Papilionaceae) and the Meliaceae (African mahoganies). In reviewing a second edition it is hard to decide exactly what criticism is legitimate, in view of the fact that the format of the original cannot be drastically changed. Though Keay has partially removed them, there still remain traces of a certain Kew insularity. It is, one supposes, to be taken as almost axiomatic that any specimen cited is represented in the Kew Herbarium; but this is not always so, and it may be suggested that the internationally accepted system of herbarium abbreviations should have been used to indicate the location of specimens. Of minor errors there are, of course, a few, inevitably so in a work on this scale, but the general standard is very high and to pick out the odd slip for criticism would reflect more on the mentality of the reviewer than on the ability of the editor. The price (55s. for 532 pages) is a considerable increase on that of Part 1 (25s. for 295 pages) and a stronger paper cover might have been provided in view of the increased bulk.

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