particularly in Afghanistan and Persia, the story is rather different. Many of the earlier published parts of Flora Iranica, of which almost fifty, mostly small, families have now appeared, have already been quite seriously outdated by recent collections and the preparation of accounts for this ambitious floristic work is often much hampered by lack of adequate material. The other problem, of correlation, is more difficult to overcome. There are obvious inherent dangers in writing Floras of political as opposed to natural areas and although most authors try to correlate their own work with that of others, the difficulties involved in preparing satisfactory taxonomic accounts of very large genera, such as *Astragalus* or *Cousinia*, are overwhelming. How many, for instance, of the huge numbers of *Cousinia* species from Persia and Afghanistan supposedly endemic to these areas are really different from Soviet central Asiatic species? The problem is particularly acute in genera that are well represented throughout Europe, south-west and central Asia. *Onobrychis*, currently being studied for Flora of Turkey, is a case in point; the wide-ranging species complexes of this most difficult genus are extremely difficult for a taxonomist to understand without undertaking a monographic revision. And as most Floras have to adhere to a fairly strict timetable, within a tight budget, such revisions are quite impossible.

Boissier completed his monumental, more or less one-man-Flora in seventeen years. At the current rate of progress, all the Floras currently being written will be finished before the centenary, in 1984, of the appearance of its last volume. It is to be hoped that several supplements to the current Floras will have been published by then and that emphasis will have swung away from Flora writing towards the preparation of comprehensive monographic revisions.

I. C. HEDGE

FLORA OF TURKEY VOL. 2*

Before going into details about the second volume of P. H. Davis' Flora of Turkey, I want to make a few general remarks on the work as a whole. When I was asked to review this volume I decided after some hesitation to agree, in spite of many other urgent commitments, because, in many cases, major publications are being reviewed by persons not familiar with the preparation of works of comparable type and size. Being myself involved in a similar task, my standpoint might be different—more indulgent in details and more critical in general questions of taxonomical treatment.

The two volumes published so far are definitely examples of the best tradition in British book production. They are solidly bound, clearly printed on excellent paper and the text is easy to survey. The keys are clear and the descriptions concise and diagnostic rather than descriptive. There are 16 excellent whole page figures and 68 maps; in this point the request of a reviewer of volume I to increase the number of figures at the expense of some of the less informative maps has not been complied with. One of the possible points of disagreement is the grid system adopted for the quotation of localities. It took me some time to get accustomed to it because I associate

* Flora of Turkey and the East Aegean Islands. Volume 2. Edited by P. H. Davis, D.Sc., assisted by J. Cullen, Ph.D., and M. J. E. Coode, B.A. The University Press, Edinburgh 1966. 581 pp. Price £9.9.0.

primarily distributional data with country and place-names rather than with symbols and figures. But as the range of the old historical provinces has changed considerably and as the Turkish Government protests against the use of familiar but politically incriminated geographical terms like Armenia, Kurdistan, etc., and as the modern Vilayets are too small and their names not well enough established as yet, the grid system may be the best alternative.

The present volume contains a very useful list of botanical collectors in Turkey since 1888 (the date of the supplement to Boissier's Flora Orientalis). The sequence of families differs even more from Boissier's system than in volume I and several apetalous families treated by Boissier in volume IV of Flora Orientalis have been placed near their petaliferous relatives (Caryophyllaceae, etc.) in the Centrospermae. The major families treated in volume II are Caryophyllaceae, Polygonaceae, Chenopodiaceae, Guttiferae, Malvaceae and Geraniaceae. Besides the two assistants in the Flora of Turkey project, J. Cullen and M. J. E. Coode, who have already contributed to volume I, fourteen more authors have furnished treatments of families and genera.

On first thought one might be astonished to find P. H. Davis himself quoted as author of a comparatively small part of the volume (Linaceae, Geraniaceae) but one can guess how actively he had to work behind the scene in the tremendous task of supervising his more or less permanent fellow workers and of modifying and editing the manuscripts furnished by external contributors.

It might be worth while to analyse the individual treatments to which degree they are based on original research work. The treatments roughly fall into the following categories: condensed abstracts of recent monographs by the monographers themselves, e.g. *Tamarix* (Baum), *Hypericum* (Robson), *Arenaria*, *Minuartia* (McNeill), *Haplophyllum* (Townsend); treatments based on research work carried out for the Flora of Turkey area, as Chenopodiaceae (Aellen), Linaceae, Geraniaceae (Davis); abstracts by the Flora of Turkey staff from existing monographs by other authors, as Malvaceae (Zohary), *Rumex* (Rechinger). The remainder fall into a fourth category. Here the authors of the individual treatments in the absence of recent monographs have to rely on their own judgement when faced with the problem of furnishing within limited time keys and descriptions for genera of sometimes tremendous size like *Dianthus* (67 species) or *Silene* (119 species). Very appropriately in some of these cases it has been stressed that the treatments are to be regarded as provisional.

Clearly enough one of the major obstacles is always the interpretation of representatives of widely spread often "weedy" groups neither appealing to the collector nor to the monographer. It would be unfair to expect a solution of this type of problem within the relatively narrow range of a Flora of Turkey.

The treatment of *Paronychia* is evidently a special case. Here we have an abstract of an unpublished monograph by M. N. Chaudhri, remarkable by the fact that 16 of the 28 species occurring in Turkey are new and some of them have several subspecies and varieties—in no other case such a high percentage of supposed new Turkish endemics has come to light; future work will have to prove how far these really are good species.

While reading page proofs of Polygonaceae for Flora Iranica just now I

came across some errors in the Flora of Turkey. The most serious one is in the explanation of fig. 7 (page 282). To give reliable identifications of the illustration of the perianth segments it would be necessary to check the whole specimens including leaves from which these were taken; no. 8 is *Rumex ponticus* (not *R. cristatus*), nos. 9, 10, 13, 14, 15 are definitely not what they are supposed to be. *Polygonum icaricum* is not an endemic of Ikaria but occurs also on the island of Samothrake (see Flora Aegaea). In the key of *Polygonum* some of the reference numbers are not superimposed correctly, e.g. numbers 13, 20, 23; *Polygonum arenarium*, "leaves elliptic, 15 × 4 mm", is certainly not identical with the true Hungarian plant, which has narrow linear leaves. The length of the perigonium of *Polygonum bellardii* is 3–4 millimetres (not centimetres).

Besides providing easy means for naming Turkish plants, the new Flora of Turkey will, when completed, furnish a solid base for far reaching plant-geographical considerations. For the present it is stimulating to compare the representation of certain genera in Flora of Turkey and in Flora Iranica, as *Hypericum* (69 against 21 species), *Calligonum* (1 against 18), *Rheum* (1 against 8), *Haplophyllum* (14 against 26).

It is remarkable that it was possible to publish volume II so shortly after volume I. We are looking forward to the appearance of the following volumes at equally regular intervals.

K. H. RECHINGER

FLORA IRANICA**

The most recent issue of K. H. Rechinger's Flora Iranica to reach our hands is H. Riedl's account of Boraginaceae. As this is also by far the most substantial family published to date it provides a good point at which to review the work as a whole and the latest parts in particular.

This is a Flora not of political Iran but of the whole of the central highlands of western Asia from Iraqi Kurdistan in the west eastwards to Baluchistan, the Khyber and Swat in western Pakistan. It is a huge and brave undertaking and the forecast of ten years work suggests a level of industry well above that being applied to most similar projects. Those who know Professor Rechinger's immense energy will not underestimate the progress that can still be made within the ten year period; but, with half of it already gone and only some 400 out an estimated 2,500 pages in print, completion is scarcely possible. Let there not be any desperate effort to maintain the timetable at the expense of accuracy. If this work is to stand sound for many years, a little longer in the waiting is a small price.

A Flora is primarily a means of identification, and lay-out is of paramount importance. How does Flora Iranica stand up to scrutiny in this respect? Scattered through the account of Boraginaceae are little headings and diagnoses indicating subfamilies, tribes and subtribes. These are in no way part of the apparatus of identification and are quite useless as they stand. For example if you get into the genus *Cynoglossum* (Boraginaceae, p. 142)

** Flora Iranica. Edited by K. H. Rechinger. No. 48, Boraginaceae by H. Riedl. Graz, Akademische Druck-u-Verlagsanstalt. 1967. 281 pp. 48 plates (some col.).