Flora of the Caucasus*****

The seventh volume of the second edition of Grossheim's Flora Kavkaza represents a major step forward in the completion of a project which started as long ago as 1939. It includes such major families as Umbelliferae, Boraginaceae, Labiatae and Scrophulariaceae. Following the same pattern as its predecessors, it gives keys to the taxa, short diagnostic descriptions, summarised distributions, a few illustrations and—the special feature of the Flora—distributional maps for every species dealt with. Under the general editorship of Professor A. Fedorov and with several specialists contributing accounts, the overall standard of production and presentation is high.

Although it is not easy to assess impartially the quality or uniformity of the taxonomic treatments, the impression one forms is of considerable variation from one account to another. In some cases, they are merely extracts from Komarov's Flora U.R.S.S. For example, with scarcely an exception, all the difficult and frequently ill-defined Caucasian species of *Thymus* in the account by Klokov published in 1954 are still recognised in Ter-Chachaturova's account. In other cases, as in the account of the Umbelliferae by S. Tamamshian, several changes have occurred. There are additions to synonymy and several new taxa are recognised. This new treatment seems very satisfactory and if a few more generic names have made an appearance, this is probably justified.

In common with the standard, and often over-rigid, format of Soviet Floras, there are no remarks or discussions after the species. Although the flora of the Caucasus is well-known it is not *so* well-known that no further problems exist and one of the functions of a detailed flora written by specialists should be to point out what further work is needed. A further general criticism is the tendency to disregard or be unaware of recent work by non-Soviet botanists. Several examples in different families were noticed where there was no reference to pertinent recent taxonomic papers. To cite only one, *Schraderia actetabulosa* (Vahl) Pobed. is still recognised although it was pointed out by the present reviewer in 1958 (Notes R.B.G. Edinb. 22: 427–428) that the grounds for recognising *Schraderia* as a separate genus were extremely slender when extra-Soviet species were taken into account and that the epithet "*acetabulosa*" could not be applied to this plant. Although differences of opinion may exist, there should at least be references to papers which directly affect nomenclature and taxonomy.

The tremendous richness of the Caucasian flora is illustrated by the fact that with at least two more volumes to follow, over five thousand species have already been recognised. There are some noticeable differences (even allowing for varying taxonomic treatments) between the species representation of many genera in Caucasia and its neighbouring countries, e.g. Turkey. This is particularly true in cases that reflect the absence of a strongly developed Irano-Turanian element in the Caucasus. *Verbascum* for example is represented by forty species in Caucasia whereas in Turkey, about two hundred are currently recognised; *Ferulago* has three Caucasian species and over thirty are known in Turkey.

The distribution maps, whose compilation represents a tremendous amount

***** Flora Kavkaza by A. A. Grossheim. Volume 7. Umbelliferae to Scrophulariaceae ed. A. Fedorov (in Russian). Leningrad, Izdatel'stvo 'Nauka, 1967. 893 pp. incl. 620 maps. Price: £2.12.0.

of observation and collecting, are very useful to plant geographer and taxonomist alike. One notes, for instance, the presence of *Rhamphicarpa medwedewii* Alb.—the only temperate northern hemisphere representative of a tropical and S. African genus with about forty species—restricted to the fringe of the south-eastern coast of the Black Sea. For a taxonomist concerned with the Turkish flora, the maps are invaluable since species records from the erstwhile Russian provinces of Erzurum, Kars and Artvin are included. Although almost all species are apparently dealt with in the maps, *Marrubium alternidens* Rech. fil. is not plotted although a reference to a map is given in the text.

Five years elapsed between the publication of volumes six and seven of "Grossheim". One hopes that the next volume will appear within a shorter period.

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