adult leaf form, which is very similar to the last stage shown but completely glabrous. Parallel with the transition from hairy to glabrous leaves there is a passage from densely glandular hairy internodes through others with a decreasing indumentum until the adult glabrous internodes are reached. The colourless, water-storing hypoderm which is a well-known feature of the adult leaves of *Aeschynanthus* forms an even larger proportion of the leaf tissue in the juvenile leaves (fig. 2, C1).

The observations reported here in the post-cotyledonary stages of the main axis confirm those of Fritsch except that he describes the transition from juvenile to adult foliage as being much more abrupt.

There is a further interesting observation to be added, however. These seedlings are producing lateral shoots from the axils of the juvenile leaves and these lateral shoots bear just the same series of leaf-forms as the main axis; their lower leaves are recurved at the margins and pubescent, the later ones approach the mature form. It may be remarked that when mature plants branch the leaves of the lateral shoots do not show any juvenile characters; at least not in other species of the genus which are in cultivation at Edinburgh, for example *A. Lobbianus* and *A. Hosseusii*.

The inequality of the cotyledons, now described, is of considerable systematic interest as it ties the very distinct tribe of the *Trichosporeae* more closely to the rest of the Old World Gesneriaceae. Unlike most of the strictly herbaceous species, however, the *Aeschynanthus* seedlings, though they develop into caulescent plants, do not develop a mesocotyl. Such species as *Streptocarpus caulescens*, *Chirita lavandulacea*, etc., develop this mesocotyl through axial growth carrying the larger cotyledon up above the level of the smaller one. Clearly there are possibilities of discovering characters of systematic value if only the observations on the seedlings of these plants can be made sufficiently extensive.

A Compendium of the European Flora (review)*.—Dr. Friedrich Hermann's achievement of producing a flora of north and central Europe in a single, not unwieldy, volume is by no means inconsiderable. For such a work the need has long been expressed, but it is doubtful if this brave attempt to meet that need will be found satisfying in the sense that the touring botanist will be content to have this book, and this book only, in his luggage. Yet, if it is not to be the complete companion, is purchase at this exorbitant price justified?

There are good things about this work: but there is a rather considerable balance of bad things, too. It is good to find a broad concept of genera and to find infrageneric groupings used properly by being keyed out first. Dr. Hermann's comprehensive views of *Triticum*, which here includes

* Flora von Nord–und Mitteleuropa, von Friedrich Hermann. Stuttgart, Gustav Fischer Verlag, 1956. Pp. xii+1154. Price 96 DM.

Agropyron, *Aegilops*, *Secale* and *Elymus*, may sound retrograde to those attuned to constantly narrowing concepts; yet it derives some support from no less an authority than Dr. G. L. Stebbins*. His inclusion of *Dryopteris* in *Polystichum* may be arguable, but the retention in the same genus of *Thelypteris* flies in the face of every modern opinion (including Christensen, Copeland, Holttum and Manton.)†

One thing that is quite deplorable is the use of many new names (distinguished by an asterisk) for infrageneric groups. As they are described only in German and their rank (whether subgenera or sections) is nowhere indicated, they are wholly without nomenclatural validity. It would be most unfortunate if these names should be adopted into general use: yet if the user of the book is not to become accustomed to remembering these group names, why are they there? Thus a feature of the work, which is admirable in principle, is completely vitiated by irresponsible nomenclature. Nor can Dr. Hermann's practice of omitting the name of the transferring authority when a species is removed from its original genus be commended. Botanists have endorsed a code of nomenclature and the flagrant disregard of it will certainly earn this book a cool reception.

A work of this scope must necessarily be, in part, compilation and its format is too compact to permit either explanation or adequate synonymy. Faced with the unexpected, one therefore has difficulty in deciding whether it is deliberate (based on the author's personal knowledge) or inadvertent. *Dryopteris Borreri* is recognized (as *Polystichum paleaceum*), but *D. abbreviatum*, surely just as worthy of specific rank, finds no mention. *Saxifraga spathularis* is accepted for the Irish flora and *S. umbrosa* is excluded (as all would now agree), yet *S. Geum* is retained and *S. hirsuta* is not accepted as Irish, despite Pugsley's and Webb's demonstrations to the contrary. The absence of synonymy means that some names in use in British Floras can only be traced from the keys: for instance *Carex Otrubae* Podpera is evidently included under *C. nemorosa* Rabentisch. Cross-reference from keys to enumeration would have been greatly helped by having the species numbered.

The reviewer is left with the feeling that here are the makings of a very useful book, but that it is yet a long way from being made.

B. L. BURTT.

* Taxonomy and Evolution of Genera with special reference to the family Gramineae. G. L. Stebbins in Evolution, x, 235–245 (1956).

† Cf. I. Manton, Problems of Cytology and Evolution in the Pteridophyta, 81 (1950).