Phytochemistry, 1975, Vol. 14, p. 317. Pergamon Press. Printed in England.

BOOK REVIEW

Chemotaxonomie der Pflanzen Band 6: ROBERT HEGNAUER. Birkhäuser Verlag, Basel, 1973. 882 pp. DM 160.

Chemotaxonomie der Pflanzen was conceived in 1956 as a series of monographs: "Chemotaxonomische overzichten" (*Pharm. Weekbl.* **91,** 437). Its origin was described some years later (*Pharm. Acta Helv.* **33,** 287), in a paper entitled "Phytochemie und Systematik: Eine Rück- und Vorausschau auf die Entwicklung einer Chemotaxonomie", as an answer to a challenge from the Swiss botanist A. P. de Candolle (Essai sur les propriétés médicales des plantes, comparées avec leurs formes extérieures et leur classification naturelle, 1816): "J'estimerai n'avoir pas été entiérement inutile, si je puis engager quelque chimiste a entreprendre un travail [i.e. 'l'étude des matériaux immédiats des plantes'] si important, et qui promet tant de résultats curieux".

The genealogy of the infant so conceived was, however, even more distinguished, starting as it did with Aristotle and gaining strength through J. Petiver ("Some attempts made to prove that herbs of the same Make or Class for the generality, have the like Vertue and Tendency to work the same Effects", 1699) and Linnaeus (Philosophia Botanika, 1751) "Plantae quae genere conveniunt etiam virtute convenient; quae ordine natural continentur, etiam virtute proprius accedunt; quae classe naturali congruunt, etiam viribus quaddammodo congruunt".

Full term was reached in 1962 with the appearance of Vol. 1 of *Chemotaxonomie der Pflanzen*, which dealt with Thallophyta, Bryophyta, Pteridophyta and Gymnospermae, occupying 571 pp. In his preface, the author discusses Linnaeus's thesis, and remarks particularly the need for care in using chemical characters to make sure of their homology. He sets out very clearly the scope and deliberate limitations of his project, hoping "dass es ihm gelungen sei, ein Werk zu schaffen, das die chemische Merkmale der Pflanzen in einer für Systematiker brauchbaren weise behandelt".

Five more volumes have now seen the light of day, and the family is complete: or almost so, because the Leguminosae, for which one entire volume had been reserved, has in the meantime been adequately treated by nineteen authors under a triumvirate of editors (*Chemistry of the Leguminosae*, 1971, J. B. Harborne, D. Boulter and B. L. Turner, Eds. Academic Press, London).

With this sixth volume, therefore, we can now take a look at the work as a whole. The first thing is the sheer magnitude of it as one man's work. Even regarding it as a mere compilation of data it would have been sufficiently impressive; but it is far more than that. The selection and arrangement of the data carefully fulfil the intention of inspiring research into characters which are systematically meaningful, and where there is already enough evidence for systematic pointers to be identified this is discussed. Of numerous instances in this volume, the discussions concluding the accounts of the Saxifragaceae, Thymelaeaceae and Umbelliferae are as typical as any. From these discussions the meaning the author attaches to Chemotaxonomy becomes apparent—the drawing of legitimate systematic inferences from the presence and absence of particular kinds of chemical substances.

So the Vertues and Vices—the virtute and the viribus—of the Make or Class of herbs are beginning to be interpretable in terms of kinds of substances; the chemistry is beginning to appear congruent with the natural orders; and de Candolle would have been well satisfied with the many curious results which he predicted would accrue. What Aristotle might have said is anybody's guess!

Of course, the series is too expensive for most individual scientists, but every biological chemical and pharmaceutical library should have at least one set. The information this and other volumes contain is so absolutely indispensible to all who work on natural products and completely unavailable anywhere else.

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