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 Book Reviews
 

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**F. Weberling: Morphologie der Blüten und der Blütenstände.** Stuttgart: Ulmer 1981. 392 pp. 193 figs. Hard bound DM 108,-.

This beautiful book pays great homage to the absolute master Troll and his typology, though the essence of the latter is not discussed. Does this mean that the lower condition is only an imperfect expression of the immanent, immaterial, complete 'idée'? The flower is here presented as such more indirectly than by Troll but vestiges of Troll's theories are evident in a negative way: evolution remains soft-pedalled, the connection with Gymnosperms remains vague, a discussion on the primacy of dicliny vs. monocliny or anemophily vs. zoophily is absent, telome-theory fails in the register.

The classical Goethean concept of the flower quoted in the opening sentence, remains a sacred dogma. All kinds of deviant theories are done away with on one, small-lettered page. Current theories on the cruciferous flower as a contracted inflorescence are not treated.

The facts on floral structure are treated clearly, with fine figures from Troll's institute. The classical carpel-concept is maintained for the gynoeceum, including the free-central placenta. The significance of vasculature as a conservative element is denied.

The most original part considers the inflorescences and their enormous terminology. If one might doubt the necessity of recognizing them as inherent structures (except for description) and might point to branches with isolated flowers, then the possibility of an inflorescence returned to vegetative growth is invoked. Internally differentiated and re-integrated inflorescences, forming parallels with a flower, are discussed fully.

In the last chapter, although autonomous 'Gestalt' is considered as primary, a supplement is presented on functional adaptations for pollination and dispersal. Cantharophily is accepted as often of a low status, but not clearly as basic in evolution. The primacy of pollen as obstruction is recognised.

Some small remarks: the fruiting calyx of *Hernandia* serves chiropterochory, pollen dimorphy deserves more attention, especially in the Lecythidaceae described; the same applies to secondary pollen-presentation; the ways to dioecy are not discussed.

A further inconsistency is that when a member of the Gesneriaceae resembles an orchid this is seen as 'Gestalt', not as a parallel adaptation for pollination. The extensively discussed *Roscoea*, however, is considered as a melittophilous parallel to *Salvia*. I remark that flowers do use mimicry with other species, for practical reasons.

The fruit is characterized as 'the flower in the condition of seed-bearing', again the flower is seen as a primary expression, whereas, biologically, the flower does not exist for its own sake and the seed precedes historically the flower. Its own, older organs, sarcotesta and aril, are not mentioned. The fruit-system is almost ecological.

I wonder if this very German book is before its time or after it in its internal struggle. At any rate it is well executed and is interesting, rather like *Genesis*.  
L. van der Pijl, Den Haag

**McKinnell, R.G.; DiBerardino, M.A.; Blumenfeld, M.; Bergad, R.D. (eds.): Differentiation and Neoplasia. Results and Problems in Cell Differentiation, Vol. 11.** Berlin, Heidelberg, New York: Springer 1980. 310 pp., 77 figs., 33 tabs. Hard bound DM 129.-.

There are many theories to account for differentiation of normal cells as well as neoplastic cells. But there is no commonly accepted mechanism giving a conclusive explanation. The differences between cancer cells and normal cells are multiple, therefore it is very difficult to attribute them to a single basic change.

Recently numerous laboratories have analysed problems of carcinogenesis, especially the reversibility of the malignant state where in certain tumor cells give rise to normal cell progeny. The aim of the 3rd International Conference on Differentiation was to bring together developmental scientists and clinical scientists to collect evidence which supports the view that both normal cells and many cancer cells share common differentiative processes.

Nearly 40 papers in the present volume are concerned with this aspect. Many papers concern the induction of differentiation in Friend's erythroleukemic cells, teratocarcinoma, and neuroblastoma cells. For the characterization of these processes modern methods of genetics, biochemistry, and immunology were used. The suppression of cell differentiation by specific inhibitors and cell fusion remain important tools for the analysis of molecular and genetic bases of differentiative processes.

The present results give new detailed insights in this topic but a solution of the cancer issue is not in sight. Differentiation will remain a fascinating subject for scientists of different fields for a long time and an interdisciplinary approach to these problems is extremely useful. The present volume will be valuable for all scientists interested in problems of carcinogenesis and cell differentiation.  
H. Stäber, Berlin