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**Book Reviews**


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**Scudder, G.G.E.; Reveal, J.L., (eds.): Evolution Today.** Pittsburgh: Hunt Inst. for Botanical Documentation 1981. iv+486 pp., several figs., several tabs. Soft bound \$ 18.00.

This book contains the proceedings of the 2nd International Congress of Systematic and Evolutionary Biology (ICSEB) held 1980 in Vancouver where nearly 1000 botanists, zoologists, geneticists, ecologists, geologists and palaeobiologists sharing a common interest in evolution and diversity of organisms met to discuss the progress in these fields since the 1st conference 1973 in Boulder. ICSEB now has been institutionalized with by-laws and committees and will act in future as a section of IUBS.

More than 450 contributions were delivered at the congress, 37 of them (a part of the invited papers) are included in the volume. The papers – introduced by the stimulating lecture of J.M. Smith on “Evolutionary games” – are concentrated on several topics (Evolution of arctic and North Pacific marine biota; evolution of reproductive strategies; evolutionary epigenetics; molecular mechanisms in the evolution of eukaryotic cells; allozymes and evolution; comparative study of DNA; colonizing species; palaeobiology of the Pacific rim). Of special interest to readers of TAG are the papers relating to “Maintenance of gene pools” with contributions by O.H. Frankel (mainly concerned with discussing the book of Mooney, in this context a little bit misplaced), L.W. Kannenberg (describing a hierarchical open-ended breeding system for maize which allows the utilization of a broad array of genetic diversity), W.T. Adam (analysis of the genetic structure of NW-Pacific conifer populations and management and maintenance of their variability), and O.A. Ryder et al. (genetic variation of zoo populations of Przewalski’s horse, milu and Arabian oryx, implications for captive strategies). – The common discussions between representatives of such diverse disciplines as mentioned above have apparently been extremely encouraging and provided the base for multi-disciplinary approaches of problems of evolution. Thus it is

regrettable that the present volume reflects only a vague picture of the activities of the congress.

P. Hanelt, Gatersleben

**Johri, B.M. (ed.): Experimental Embryology of Vascular Plants.** Berlin, Heidelberg, New York: Springer 1982. 273 pp., 81 figs. Hard bound DM 98,-/\$ 43.60.

Experimental Embryology of Vascular Plants is a well-written book edited by B. M. Johri and published by Springer. It is mainly restricted to the tissue culture or the in vitro technique of vascular plants. In the different chapters most Indian authors contribute a detailed description on the state of in vitro culture up until about 1978. Some chapters, however, end with concluding remarks, often followed by additional references until about 1980.

The book offers, in order, chapters about the experimental embryology of the Pteridophytes (DeMaggio), the Gymnosperms (Norstog), the flower (Konar and Kitchleu), the anther (Narayanaswamy and George), the ovary, ovule and nucellus (Rangan), the endosperm (Srivastava), the embryo (Raghavan and Srivastava) and of protoplasts (Rao). All these chapters review data about culture, media, conditions, effects, results and application. Some general information about reproduction aspects are offered as in the chapter about the Pteridophytes and in the interesting chapter about pollen pistil interaction (Shivanna), in which the recent data on this topic followed by some experimental data on overcoming incompatibility, intra-ovarian pollination and test tube pollination.

The book, dedicated to the well-known embryologist Prof. Maheswari, contains a lot of information about vascular plant tissue culture and is suitable for students, scientists and breeders. The book offers a good data collection concerning the “floral plants in vitro culture”, perhaps a better indication of the contents than the rather general present title.

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