
BOOK REVIEWS

Topics in Expert System Design: Methodologies and Tools, (ed.) G. Guida and C. Tasso (Published by North-Holland Elsevier Science Publishers BV, Amsterdam, the Netherlands), 1989, pp. 442, Price: US\$97.25/Dfl. 185.00.

This book has tried to bring out the potential applications of expert system technology and artificial intelligence in decision making, planning, design, control, supervision and diagnosis. The editors have tried to address the fact that the lack of a sound reliable design methodology is responsible for the limited industrial impact of expert system designs. The book examines important emerging topics, advances in methodology and applications to specific practical problems. It consists of the following contributions: life cycle; domain evaluation; design techniques; development tools; knowledge acquisition and modelling; and validation and evaluation.

The book has covered in a lucid manner the major design aspects of expert system design and I am sure that it will make vital reading material for professionals. The book offers concrete guidelines to designers of expert systems and promotes basic and applied research on methodologies and tools. The collection also includes results of research carried out in the USA and Europe in expert system design.

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Laboratory Techniques in Cytogenetics and Plant Breeding, by S. S. Choudhary and Prabha Choudhary, (Published by Kalyani Publishers, 1/1 Rajender Nagar, Ludhiana 141 008, India), 1989, pp. 58, Price: Rs. 35.

This is a concise book on the practical aspects of experimental work in the field of cytogenetics and plant breeding. It meets the requirements of undergraduate and graduate students interested in pursuing cytogenetics in their career. The book serves especially

as a ready reference for making cytological preparations. However, plant breeding, including mutation breeding, is dealt with very briefly. In the chapter on biostatistics, F test should also have been included since it is commonly used in yield evaluation experiments. The photographs of cytological preparations are of very poor quality and there is need for improvement. There are too many errors of spelling etc. which should be corrected in future editions.

I hope the authors' aim to encourage and stimulate experimental work in classical cytogenetics by the younger generation will be realized by this book. Present-day students aspire to work in the newly emerging areas of molecular biology and biotechnology. However, we will always require people willing to work in the classical fields of cytogenetics and plant breeding in order to continue our efforts to make further genetic improvements of crop plants and farm animals. From this viewpoint, the present book provides basic techniques required by students and researchers in the field of cytogenetics and plant breeding.

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Zoosporic Fungi of India, by R. Dayal and Usha Kiran, (Published by Inter-India Publications, D-17, Raja Garden Extension, New Delhi 110 015), 1988, pp. 297, Price: Rs. 250.

Zoosporic fungi have not been popular objects of research, particularly with Indian mycologists. A book on zoosporic fungi highlighting the research that has been carried out in India has therefore been long overdue. The authors should be praised for attempting this. The zoosporic fungi have been dealt with in two sections, on uniflagellate and biflagellate fungi. In each section the important morphological characters have been outlined. The detailed descriptions would have been more useful if complemented by figures. The methodology part has been dealt with extensively and reflects the experience of the authors. The chapters on the work done in India,

however, have turned out to be disappointing, merely presenting summaries of papers in chronological order. An analysis of the directions this field of research has followed in this country, along with current trends and prospects, could have been attempted. Editorial mistakes are rampant. Reference to nineteenth century literature is made while citing twentieth century references (p. 22). 'Present evidence' is claimed to state an ascending order from Phycomycetes to Ascomycetes and Basidiomycetes (p. 108), while the former is now actually well accepted as being phylogenetically heterogeneous. Elsewhere fungi are referred to as a separate kingdom of the Plant 'kingdom'. I would have expected this book to be of ready value in identifying Indian zoosporic fungi. Although lists of Indian zoosporic fungi and keys to families are presented, one will still have to refer to the original publications and to monographs such as that on Indian chytrids by Karling for identification. On the whole, the book could have been edited to make reading less laborious. In spite of these drawbacks the book is a useful one, for it brings together the literature on this subject in India and draws the attention of mycologists to this group of interesting fungi.

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Thrips and Gall Dynamics, by T. N. Ananthkrishnan and A. Raman, (Published by Oxford & IBH Publishing Co. Pvt. Ltd, 66 Janpath, New Delhi 110 001), 1989, pp. 120, Price not mentioned.

This book is a timely addition to the literature on thrips, written by two well-known personalities, one a renowned entomologist and the other a botanist. Dr Ananthkrishnan has made so many contributions to the taxonomy and bioecology of Indian thrips that he should be rightly called the father of thrips research in India.

The book gives a vivid account of the economically important thrips species and their impact on host plants. The bioecological account of thrips species is extremely well documented. The information in this book will be of great help in the management of economically important thrips species. The account of the life cycle of thrips in total synchrony with the formation of galls has been beautifully presented from the viewpoint of their co-evolution. Good photographs and illustrations, with clear explanations, add to the quality and usefulness of this book. There is also a long table showing thrips species, their hosts and world-wide distribution. This book should prove very useful to zoologists, entomologists and botanists.

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