

## Anamorph anthology

C.T. Ingold

*Biology of Conidial Fungi*, Vols 1 and 2. Edited by Garry T. Cole and Bryce Kendrick. Vol.1, pp.486, ISBN 0-12-179501-2; Vol.2, pp.660, ISBN 0-12-179502-0. (Academic: 1981.) Vol.1 \$49, £32.40; Vol.2 \$68.50, £45.40.

AN alternative title for this work might have been *All About Anamorphs*, yet ten years ago this would have meant nothing to a mycologist. Now we accept a whole terminology of "morphs", much to the fore in *Biology of Conidial Fungi*. "Morph" is sometimes used in all its nakedness, but more usually as a termination: the teleomorph is associated with sex and meiosis; the anamorph with the asexual, conidial stage; and the holomorph is the whole fungus. The holomorph ideally is a teleomorph together with its anamorph, but it may consist of a teleomorph only, or even solely of an anamorph.

The present work deals with conidial fungi which are anamorphs of Ascomycetes or Basidiomycetes, together with forms in which the "perfect" stage is not yet known or has, perhaps, been lost in the course of evolution. The conidial types in the "lower" fungi, notably Mucorales, are not considered.

During the past decade or so Bryce Kendrick has devoted much of his abundant energy to promoting the study of conidial fungi, especially by his organization of the original Kananaskis workshop summarized in *Taxonomy of Fungi Imperfecti* (University of Toronto Press, 1971), and of the second in the same place devoted to the linkage of conidial anamorphs with their teleomorphs. This gave birth to the two volumes of *The Whole Fungus* (National Museums of Canada, 1979). Now, together with Garry Cole, a distinguished student of the fine structure of fungi, he has persuaded 35 authors from all over the world to cooperate in writing 31 articles on various aspects of conidial fungi.

The articles are grouped in seven sections: history; systematics; distribution and ecology; conidial fungi and man; ultrastructure, development, physiology and biochemistry; genetics; and techniques for investigation.

The first section has but one article, written by Bryce Kendrick, who also provides the initial chapter of the section on

systematics. One might, perhaps, expect these contributions to be a trifle dull; but not so. All that he writes throbs with enthusiasm and makes them a joy to read. The systematics section is one of the longest (260 pages), involving discussion of Coelomycetes, conidial yeasts, dimorphism, pleomorphism, conidial fungi growing on other fungi and lichens, and relations between conidial anamorphs and their teleomorphs. Nag Raj, writing about Coelomycetes, hands down ten exacting commandments for those rash enough to tackle these difficult organisms. Hawksworth contributes over 60 pages on fungicolous fungi. Although this is somewhat of an inflated list, it directs attention to these organisms which are much in need of detailed study.

In the ecological section, the chapters by Webster and Descals on fungi from freshwater habitats, and by Lacey on aerobiology, are particularly noteworthy and call for special commendation.

There is wide coverage of the economic importance of conidial fungi in connection with parasitism of crop plants, derma-

tophytes attacking man, mycotoxins, food spoilage and food technology, and the possibility of using certain species in the biological control of various parasites and pests. Although the fungi that prey on nematodes may not have much potential in such control, Barron's chapter on this subject is delightful.

Ultrastructure has a good innings with an illuminating chapter by Garry Cole. Nuclear behaviour is treated by Robinow in his usual masterly way. There is an interesting article by Lemke on fungal viruses and a splendid contribution by Aronson on hyphal walls.

The only chapter in the genetics section is by Hastie. This is outstanding, a real gift to mycologists at all levels.

The whole work is a major contribution to mycology and, although inevitably lacking some coherence, should find a place in all institutions where fungi are studied. □

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## Beyond mechanics in human reproduction

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*Conception in the Human Female*. By Robert G. Edwards. Pp.1,087. ISBN 0-12-232450-1. (Academic: 1980.) £48.50, \$116.50.

DR Edwards is to be congratulated on having produced what may well turn out to be the most influential text in the field of obstetrics and gynaecology published this century. Hitherto, these specialities have been surgically orientated, and principally concerned with the mechanical difficulties of delivering babies, repairing prolapses and treating gynaecological cancers. This they have performed well, as attested in part by the maternal and perinatal mortality statistics.

Nonetheless the time has come for the profession to rise to a new challenge. Advances in our understanding of endocrinology, infertility, contraception and gamete biology have overtaken the surgical aspects of the subject, and one hopes this textbook will serve as a basis for the training of the obstetrician/gynaecologist of the future. He or she now needs to know more about endocrinology than those in general medicine, more about male reproduction than the urologist, and needs to develop a new understanding of genetics, reproductive biology, embryology, immunology and human sexuality. It is no accident that this excellent book was written by somebody who is not medically qualified; it is time for obstetricians and gynaecologists to rise to the challenge and develop their scientific understanding in parallel with their manual skills.

Dr Edwards has obviously chosen to discuss those topics that have been of greatest concern to him in the past 18 years in Cambridge, where in collaboration with Patrick Steptoe he pioneered the technique of human *in vitro* fertilization against open opposition from Nobel Laureates and masterly inactivity on the part of the Research Councils. Each chapter in the book is extensively referenced, and absolutely up-to-date at the time of going to press in early 1980. It is also particularly well illustrated, using key graphs, tables, diagrams and photographs taken from the work of others, duly acknowledged. The fact that Dr Edwards has been a stimulating teacher of undergraduates in Cambridge is reflected in the text — he knows what to discuss, and how to present it in the most exciting and informative manner.

It will be disappointing if the word "Human" in the title means that this book will be restricted to medical libraries, and the bookshelves of consultants who are able to afford it. It deserves a far wider readership. Although principally concerned with human beings, Edwards takes a broad approach, and is not inhibited from discussing the wider comparative aspects of the subject. The book is destined to become a "must" for anybody working in the general field of reproductive biology — a treasured possession. For it really is excellent. □

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Macmillan Reference Books, London (in North America, Facts on File) have recently published *The R.A.E. Table of Earth Satellites, 1957-1980*, compiled by D.G. King-Hele *et al.* at the Royal Aircraft Establishment. The *Table* contains a chronological list of 2,145 launches and mention of some 12,000 satellites and associated fragments, details being given as appropriate. Price is £30.