

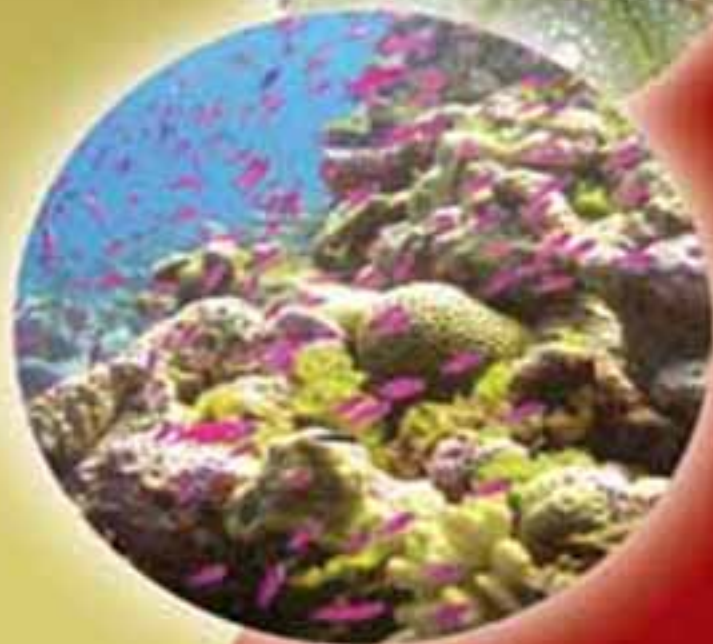
Revised Edition

Invertebrate Zoology

For B.Sc. and B.Sc. (Hons.) Students
of all Indian Universities &
also as per UGC Model Curriculum

E.L. JORDAN
Dr. P.S. VERMA

S. CHAND



First Multicolour Edition

Invertebrate Zoology

For B.Sc. and B.Sc. (Hons.) classes of all Indian Universities
& also as per UGC Model Curriculum

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DEDICATED
to
My Parents
Who could not see
the fruits of
this labour

P.S. Verma

PREFACE TO THE MULTICOLOUR EDITION

The multicolour edition of **Invertebrate Zoology** is the outcome of sincere and combined efforts of the author and editorial team namely Mr. Shishir Bhatnagar, Dr. Swati Lohani and Mr. Pradeep Joshi (of DTP unit) of S.Chand & Co. Ltd. The editorial team have provided relevant natural coloured photographs of invertebrates to exhibit the animals in natural environment. Multicoloured figures and natural photographs of this edition would be quite useful to our target readers to understand and fully appreciate the subject matter. Author and editorial team have been quite sincere and vigilant in selecting the authentic photographs and figures for the text of this book. Due to these photographs and multicoloured figures our target readers would be highly benefited. In this multicolour edition, the subject matter have been thoroughly reviewed, revised and corrected. To enhance the utility of the book, four types of important questions : long answer, short answer, very short answer and multiple choice questions, which are now-a-days asked in various university examinations, have been added in all the chapters.

The present book is prepared for the students of B.Sc., B.Sc. (Hons.) and M.Sc. classes of Zoology. Students preparing for medical entrance examinations, I.F.S., P.C.S. and I.A.S., etc., would also be immensely benefited by this book.

I wish to express my sincere thanks to Mrs. Nirmala Gupta, Chairperson and Managing Director, Mr. Himanshu Gupta, Director and Mr. Navin Joshi, Vice-President (Publishing) of S.Chand and Company Ltd., Ram Nagar, New Delhi for their wholehearted cooperation to bring out the multicolour edition of this book a pleasant surprise to the readers.

“PREETI”

P. S. VERMA

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PREFACE TO THE FOURTEENTH EDITION

The dimensions of biology are fast increasing with more and more emphasis on cell biology, molecular biology, genetics, biochemistry, physiology, electron microscopy and biotechnology, etc. Many Indian Universities have already introduced some topics of these disciplines in their under-graduate syllabi. The importance of basic zoology, however, cannot be ignored; most teachers and researchers rightly feel the need for a strong base in general zoology as a prerequisite for all fields of specialisations. Jordan's "Invertebrate Zoology" has served a great deal towards the fulfilment of this aim. It has been a national best seller for more than three decades. It was, therefore, found necessary to bring out the same book in a more useful and enlarged form. The book has been thoroughly revised and enlarged in this edition. In this New Edition, I have retained all that was judged good and useful in the previous edition. However, a number of changes have been made in this edition. Subject matter have been updated in the light of recent researches and new topics have been added at appropriate places keeping in view the changes in the syllabi of various Indian Universities.

New chapters which have been added in this edition are : General Principles of Systematics and Animal Classification, *Polystoma*, *Ancylostoma* (The hookworm), *Wuchereria* (The filaria worm), Helminths and Diseases, *Bombyx* (The silkworm), *Cimex* (The bedbug), Termites (The white ants), *Peripatus* and Glossary. Comparative account of certain selected systems of Phylum Mollusca and Phylum Annelida is an additional feature of this edition. In addition to this, general topics, which are usually asked in the examinations, have been thoroughly revised and some new topics have also been added in all the phyla.

The examination oriented text is written for all the students, even for those who do not have a good background in the subject. The language is simple, explanations are clear, and presentation is very systematic. To improve scientific accuracy, about 900 well-labelled diagrams have been included at appropriate places. Important words are given in bold face and definitions in italics. Subject matter is error-free.

Thanks are due to Dr. P.C. Srivastava, K.K. College, Etawah for his help in the revision of this book. Thanks are also due to Shri Ravindra K. Gupta, Director and Shri T.N. Goel, M/s. S. Chand and Company Ltd., New Delhi for their wholehearted cooperation during the preparation and publication of this book.

Constructive suggestions for further improvement of the book will be always welcomed and entertained wholeheartedly.

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PREFACE TO THE FIRST EDITION

Invertebrate Zoology has been written to meet the requirements of B.Sc. students. It is intended for those who have already completed an elementary course in Zoology. The book covers the courses laid down in the Universities of the Punjab, Delhi, U.P., Madhya Pradesh and Rajasthan. There are many books in the market which are used in these Universities, but the majority of these books are either out of date and often erroneous, or they do not deal with the selected types of animals.

Tremendous researches have been made in Zoology in the last few years; this book includes material from all recent researches and investigations in describing one to several animal types from each major phylum, keeping in mind not only the anatomy and physiology of animals, but also the relationship of structure to functional requirements of the environment. Besides the precise and up-to-date descriptions of selected types this book has three special features : 1. It deals with fair detail the animals included in the practical courses. 2. Illustrations have been used profusely with labels printed on the diagrams, so that they not only supplement the descriptions, but make it easier for the student to clearly grasp the text. 3. In each phylum several important topics are discussed which are difficult to find in one place or in any single book. With these features it is hoped that the book will be a complete guide in meeting the needs of the students.

E.L. JORDAN

**Lucknow,
1st January, 1963**

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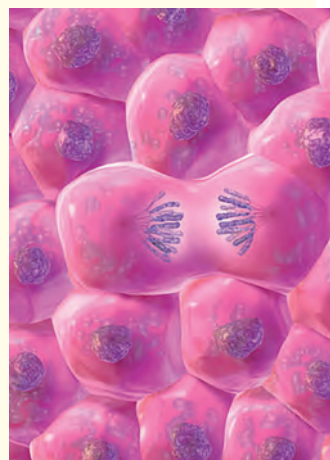
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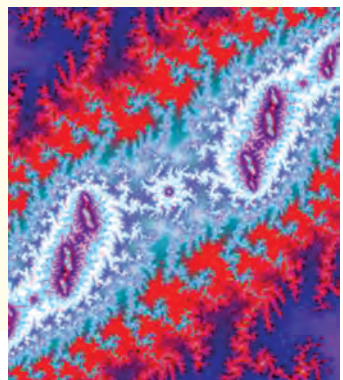
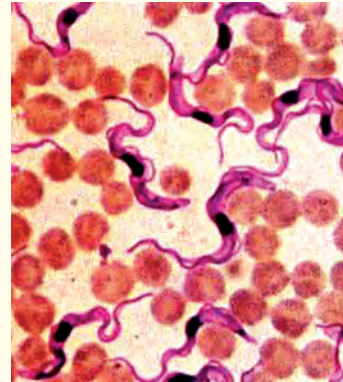
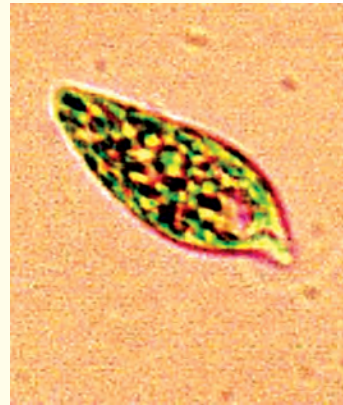
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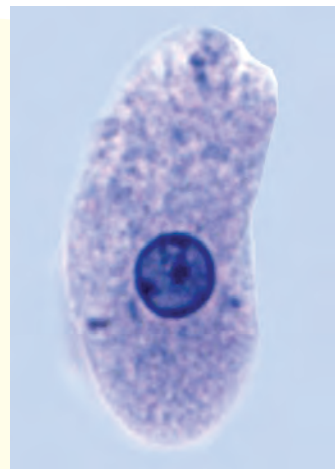
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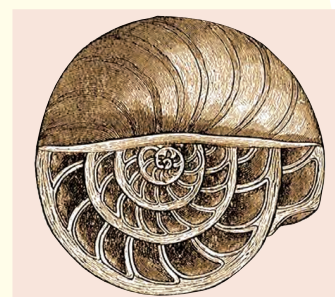
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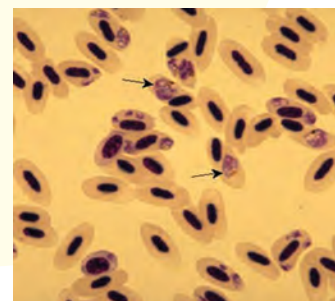


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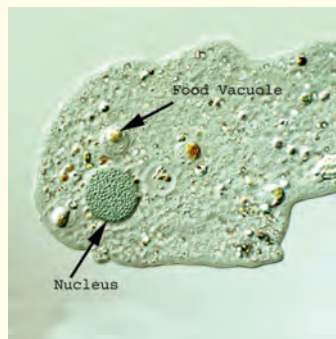
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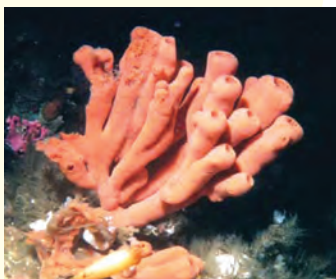
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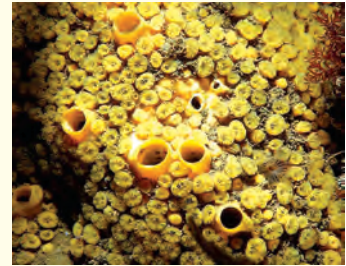
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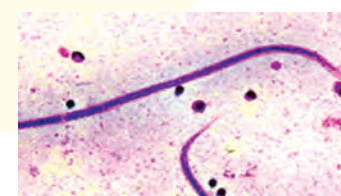
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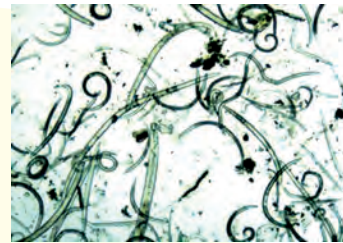
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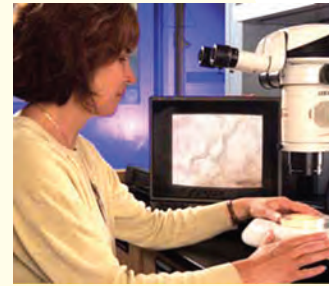
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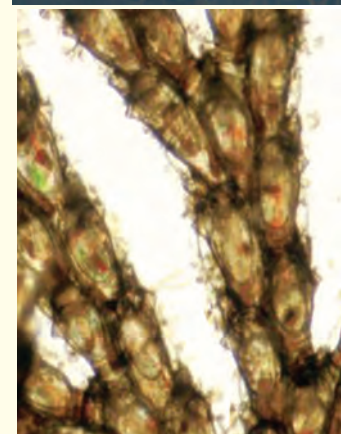
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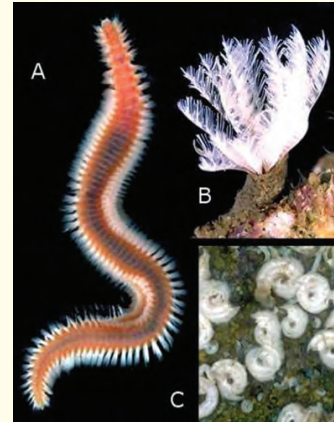
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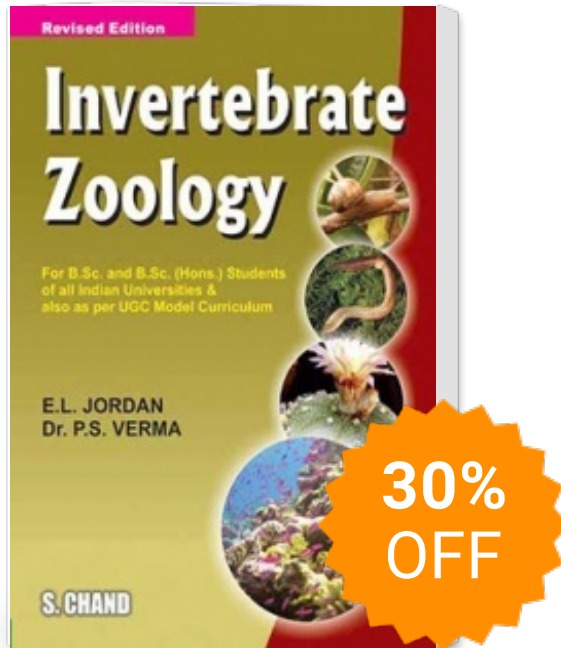


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