

phing the splendid flowers of the park and surrounding areas like Hemkund, Badrinath, Neelkant base, Mana village and Vasundhara.

The book is well researched and accurate in its scientific content, providing valuable information on 287 species of plants belonging to 190 genera and 63 families. As can be expected, the photographs, which are primarily meant for identification, though pleasing to the eye, do not reflect the ethereal beauty of the flowers in all cases. The description of 10 important landmarks in the valley along with details on topography, and what to expect in terms of plants is useful. The places of interest around the Valley of Flowers, the history of the Bhyundar Valley, along with reference to Hindu mythology, and the explorations conducted by eminent botanists of the past are succinctly written. The strength of this book is that it serves not only as a field guide, but is also a scholarly piece of work that could serve the purpose of a reference book.

To further enhance the merit of the book, the author may consider the following points while publishing the next edition. To begin with, the exclusive and endemic nature of the flowers described in the book, and also the 'must see' flowers for a nature lover may be mentioned in detail in the Foreword. The Foreword may also include the author's insight into the conservation aspects of the park and recommendations towards better management of this World Heritage Site, so that the alpine meadows and the surrounding mountains continue to sustain the myriad plants that produce beautiful and elegant flowers.

The book, by its sheer excellence, reiterates the megadiverse status of India. However, it is a pity that despite the literary merit of the book and the quality of photographs, the author has had to invest his resources to publish this book. In his introduction to the author, M. Sanjappa, Director, Botanical Survey of India informs us that Keshava Murthy has spent his own money for travelling, stay and documentation, without financial assistance from the Government or any NGO.

It is not endearing for an academician to invest money in publication, involve oneself in the nitty-gritty of printing, and take on the onerous task of selling one's own book. The occasional news in the media about authors getting astronomical sums as advance for a literary

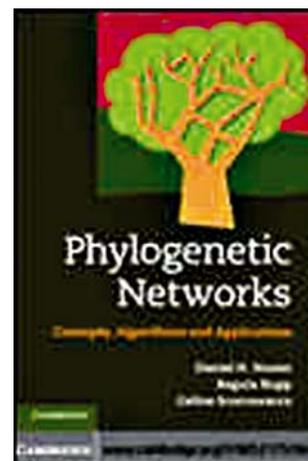
work might make us believe that there has been an overwhelming change in the business of book publishing in India, but it does not seem to be the case, at least not in the field of biological sciences. I have friends who have authored several books on ecology, ornithology, nature, wildlife biology, etc., published by international publishing houses, but as authors they have not made much money. Worse still, it is difficult to convince the established publishing house about the merits of one's book, and hence it is impossible for a new author to gain entry into the exalted portals of such publishing houses.

It is futile to criticize, appeal, or extol the publishing houses to encourage new authors or part with greater portions of their profit to the authors, as people in the business of making money know what sells, and shall continue to have the prerogative of whom to encourage or promote. In the present case, the Ministry of Environment and Forests, Government of India, or the Wildlife Wing of the Forest Department, Government of Uttaranchal may consider publishing the second edition on the book, as it serves their purpose of conservation and also ecotourism.

There are several autonomous bodies in India under the aegis of State and Central Governments, many of which have made a name for themselves. In the field of biological sciences, the Bombay Natural History Society and the Wildlife Institute of India, are among a few such institutions. However, by counting the number of books that these reputed institutions have published over the years, one realizes that they are too conservative in publishing books. These reputed institutions should seek out authors, publish quality books, and ensure that the authors are given their due, and thus create an environment for people like Keshava Murthy to channelize their energies in bringing out more number of such useful books.

V. RAMAKANTHA

*Chief Conservator of Forests and
Liaison Officer,
Government of Manipur,
Manipur Liaison Office, Bangalore,
#2, Kaveri, Goodwill Apartments,
Chandra Layout, Vijayanagara,
Bangalore 560 040, India
e-mail: v_ramakantha@hotmail.com*



Phylogenetic Networks: Concepts, Algorithms and Applications. Daniel H. Huson, Regula Rupp and Celine Scornavacca. Cambridge University Press, 2011. 376 pp. Price: £ 35.

Evolutionary relationships among organisms are illustrated by means of a phylogenetic tree. Although several evolutionary processes such as horizontal gene transfer and recombination do not fit in complete agreement with the phylogenetic tree hypothesis, they can be treated in a biologically meaningful way by using phylogenetic or evolutionary networks.

The book under review is the most comprehensive one on the subject of computational phylogenetic networks. Each chapter describes the related aspects of phylogenetic networks in a connected manner. The text deals with phylogenetic networks through independent but connected sub-topics such as models of evolution concerned with molecular evolution, and splits and clusters concerned with statistical techniques. This is the main strength of the book and would help a novice easily understand the subject.

Another important aspect of this book is the treatment of mathematical and computational models and methods for phylogenetic networks. One of the chapters (chapter 4) describes myriad phylogenetic networks and throws light on the current state of affairs in these networks. Also focused in some chapters are the various mathematical and statistical techniques and their computable relevance to phylogenetic networks. Several graph-theoretic algorithms are also described.

An interesting feature is the inclusion of some old techniques in phylogenetic

networks with recent updates and upgraded treatments. Elaboration of various theories such as T-theory and simulation as neighbour networks, T-rex and split networks is one of the prominent aspects of the book and will certainly be enjoyed by the readers. Insertion of many illustrations and numerical examples is a key facet of this book and will help the scientific community understand the contents.

The meticulous inclusion of gold standard evolutionary and phylogenetic methods ranging from neighbour-joining, minimum evolution through UPGMA, maximum parsimony, Bayesian analysis to maximum likelihood is to be commended. This serves as a revision for the

readers and also helps to compare these methods with the recent and upcoming methods of phylogenetic network reconstruction.

Another useful point about the book is its content variability, which indirectly helps readers from various backgrounds; it will help biologists, bioinformaticians, computer scientists and evolutionary researchers to deal with this emerging but established area of molecular evolution. It will be of explicit interest to the biologists and bioinformaticians who need new and advanced methods for the development and analysis of phylogenetic networks. On the other hand, it will also give an insight into the area of molecular

evolution to computer scientists, mathematicians and statisticians.

In summary, the book under review is enjoyable and will benefit a majority of the scientific community in the concerned area. This book, with three distinct but related segments and fourteen comprehensive chapters, is an asset to the area of computational evolutionary biology.

TIRATHA RAJ SINGH

*Department of Biotechnology and
Bioinformatics,
Jaypee University of Information
Technology,
Waknaghat 173 234, India
e-mail: tiratharaj@gmail.com*
