



A criticism of the book A TEXT BOOK ON DNA BARCODING

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Recently Professor Dr. Sankar Kumar Ghosh has written a book on DNA Barcoding. The book was published by the Books Space, Kolkata, India. As claimed by the publisher, this is the first attempt to publish such a book on DNA barcoding.

DNA barcoding, similar to the barcoding of the commercial products, is a new concept and idea launched by Prof. Paul Habert of Guelph University, Canada in 2003. Since then, DNA barcoding concept has attracted attention of the scientists of diverse fields of knowledge. It is the short DNA-sequence data presented in colourful barcode-like structure of some selective or marker areas of specific DNA strand present universally in all organisms. To promote the system a consortium of about 50 countries has been formed to develop the subject in wider aspects of human life as quickly as possible. By this time about 1,50,000 species of life have been barcoded and by 2020 all the species of the world have been targeted to give DNA-barcode-ID. In this decade this new window of activities will turn into mega-vision for the near future.

Realizing this profound impact on life and development many scientists, entrepreneurs and policy makers are involving countries, mostly in the developed world.

Professor Ghosh has realized the impact of DNA-barcoding since its very inception. His long molecular background knowledge has quickly turned him into DNA-barcoding scientist. The book on DNA-barcoding constitutes 7 Chapters with references in 184 pages. The 1st chapter *Biodiversity : Inventorying and Monitoring* deals with the background knowledge on biodiversity and taxonomic aspects of life. The 2nd chapter is *Fundamentals of DNA barcoding* deals with the molecular and DNA related aspects of life, barcoding principles and techniques followed, global initiatives and its application. The 3rd chapter is *Sampling and*

Vouchering, that deals with the collection, cataloging and vouchering of the biodiversity materials. The 4th chapter, *Molecular Biology in DNA-barcoding* deals with the different aspects of the unique genetic features of DNA and some modern DNA-barcode technology like electrophoresis, PCR and sequencing. The 5th chapter is *Bioinformatics in Barcoding*. This chapter deals with database system and management, gene banking and phylogenetic analysis of the product of DNA sequencing. The 6th chapter is *Individual DNA barcoding : Promises and Challenges*, deals with the wide spectrum application of DNA-barcoding and on some important concerned issues already raised. The last (7th) chapter is on *DNA passport of Indian Flora and Fauna*, concerned with the research work already done or in progress from his newly organized department in India.

This is a handy textbook, understandable to both beginners as well as serious researchers. The book is suitable to design new curriculum on the subject at different levels of education also, but it lacks an index at the end, which is very important for a textbook. Practical procedures on barcoding and bioinformatics with some case studies or problems to be solved at the end of the book could enrich and could be more attractive to the beginners and hands-on practical classes.

In the beginning, the author has given emphasis mostly on the animal world, related to mitochondrial DNA, then the Plantae, Protists and Fungi. Prokaryotic world is more or less absent in the book. These could be of much attractive to microbiologists, plant scientists and mycologists as well. Despite some typesetting mistakes, a few anomalies, lack of synchronization of some sub-chapters and repetition about mitochondrial DNA matters, the book is unique and will be attractive to new generation students and beginners from diverse field workers.