
BOOK REVIEWS

Methods for Assessing the Effects of Chemicals on Reproductive Functions by V. B. Vouk, P. J. Sheehan (John Wiley & Sons Ltd., Baffins Lane, West Sussex, England PO191UD) 1983, pp. 541, Price \$29.50

Man made chemicals have been polluting our physical environment ever since industrialisation began. Consumed inadvertently, these chemicals have become the cause for physiological imbalances and genetic disorders in many animal and plant species. Some of these undesirable effects have assumed epidemiological proportions and have even led to ecological disturbances in certain geographical areas. A systematic evaluation of these deleterious effects of pollutants on the reproductive processes and hence performance of a wide range of plants, animals and microbes require guidelines regarding test systems, parameters of metabolic change and a choice of specific and standardised methods. This book provides these. Prepared by the Scientific Group on Methodologies for Safety Evaluation of Chemicals (SGOMSEC), this volume is twentieth in the excellent series published on behalf the Scientific Committee on Problems of the Environment (SCOPE) set up by the International Council of Scientific Unions (ICSU). This activity is supported by the World Health Organization (WHO), the International Labour Organisation (ILO) and the United Nations Environment Programme (UNEP) through the International Programme on Chemical Safety (IPCS).

The book is divided into two parts. Part A represents the critical assessment of the available methods by different working groups and from that, general conclusions, recommendations and guidelines regarding desirable approaches. In the case of mammals, for example, methods have been described for multigeneration analyses, checking embryotoxicity, probing gametogenesis, assessment of gestation and lactational status etc. Similar recommendations have been given for other vertebrates like fish, amphibians, reptiles and birds, invertebrates like molluscs, insects etc. A noteworthy feature of this volume is that equal emphasis has been laid on methods involving higher plants, algae and microbes. This is especially important in cases where an ambitious programme for eradication of one organism leads to drug induced damage to non-target organisms. Part B of the book consists of contributed chapters by working scientists on the

technical details of each of the methods including actual experimental results, either in the laboratory or in a field study. Methods for epidemiological survey are as important as laboratory tests on individual animals.

National agencies, governments and laboratories should benefit from these guidelines and from experience gained as a result of enforcing them, they can take, hopefully, correct decisions regarding sound management of our environment.

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Marine Fishes—Chemical composition and Processing Properties by V. P. Bykov, (Amerind Publishing Co, Pvt. Ltd, 66, Janpath, New Delhi 110 001) 1983, pp. 322, Price not known.

This is an unusual book, being neither a text book in the conventional sense, nor a treatise, but a very useful informative monograph based on a large volume of experimental data, collected till 1970, by the various research institutes of the Ministry of Fisheries of the USSR. The strength of the book is in the scope of its subject matter, that it is a compendium meant mainly for fish processing technologists. It is aptly presented therefore in the form of a handbook, describing, with adequate illustrations, 452 species of fish, both well known and less known, belonging to 91 families, along with their common names, commercial importance, distribution range, size parameters, chemical composition of meat and other parts, and a brief assessment of the organoleptic properties of the fish body, together with recommendations for processing and consumption. The industrial value of each constituent fish, in a fishery, has thus been brought out very well. Quality of fish meat, like colour, taste, smell and consistency of the processed products have also been included wherever possible.

The handbook consists of two sections, the first one on cartilaginous fish and the second on bony fish. The fishing industry has to become familiar with many species of fish in the catches and for this, information on their chemical and processing properties and

peculiarities must be available to evaluate these fish as raw materials for processing. From this view point, the handbook successfully presents data for the first time on many useful practical aspects. Actually, such a handbook is a must for every country to make full use of its fishery resources and also to provide authentic information on nutritive values and meat quality of many species of edible marine fish. It is pleasing to note that for convenience of using this handbook, an alphabetical index of the scientific as well as the common names of fish is given separately. This handbook is a translation from Russian, that too admirably done. Added to this, the book has been printed excellently without errors.

The book should be particularly valuable to fish processing technologists and to the research scientists alike, since it contains an encyclopedic summary of much useful data, covering all aspects of fishery and fish processing.

This rich handbook is a valuable contribution to the literature and it is an excellent, comprehensive compendium on the present state of our knowledge. This may be useful as an adjunct text in advanced courses and as a source book in all research laboratories interested in fishery science.

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Himalayan Shears, by P. S. Saklani, (Himalayan Books, New Delhi 110 001, Distributed by The English Book Stores, 17-L, Connaught Circus, New Delhi 110 001) 1983, pp. 113. Price Rs. 250/-

The geology of the Himalaya has precipitated much controversy and raised many speculations. In recent years there has been an increase in the geological research in the Himalaya and a spurt in the publication of papers and books. Himalayan Shears is one such book with a difference that it proposed to deal with a specific topic of shear and thrust zones.

The book is a compilation of nine papers, not all of them however dealing with the proposed specific topic. Apart from thrusts discussed in three papers other papers deal with tectonic stratigraphy, deformation sequence, metamorphism, strain analysis, and one paper with uranium mineralisation. Except for a paper each dealing with Arunachal Pradesh and Ladakh, the rest is concerned with U.P. Himalaya.

The Himalayan Main Central Thrust (MCT), a significant dislocation zone studied in some detail in recent years is controversial in many respects, particularly in its location in the nappe stack, its correlation and its relation to Himalayan inverted metamorphism. All these problems are not directly dealt with in the three papers on MCT. Nonetheless, these papers give an idea of the tectonics of the MCT in the U.P. Himalaya. P. S. Saklani and V. K. Bahuguna described the MCT around Chhatera area, Garhwal Himalaya, and concluded that the MCT is a thrust imbrication zone. The *schuppen* character of the MCT in the U.P. Himalaya is demonstrated by U. C. Pati and P. N. Rao who presented details of tectonostratigraphy of important sections. V. C. Thakur and B. K. Chaudhury identified structures of multiple deformation and evidence of polymetamorphism in the central crystalline rocks within the MCT imbrication zone of Kumaun Himalaya.

The problem of classification and correlation of unfossiliferous rock sequence of the Lesser Himalaya is well known. G. Fuchs tried to simplify the problem and generalised that this rock sequence can be grouped under the Chail Nappe System and correlated all along the Himalaya.

Repeated deformation characters and moderate to highly strained state of the Himalayan rocks are established in different sectors of the Himalaya. These aspects are dealt with in three papers. P. S. Saklani and Satendra described the fold chronology and mesoscopic tectonic structures of a part of the Krol belt in Narendra Nagar area, Garhwal Himalaya. The axial ratios of strain ellipsoid of deformed Blaini conglomerate are obtained by R_f/ϕ method, although the data points show a wide scatter which the reviewer suspects may be due to superposed deformation and an initial grain shape and orientation anisotropy. V. K. Gairola and H. B. Srivastava have presented the result of strain analysis of a deformed conglomerate of the Garhwal Group in Marora area, Pauri Garhwal, U.P., and concluded that the bulk strain was plane with 170% stretching in X which is related to shearing during the third deformation. The data probably give the finite strain values. S. Singh and G. Malhotra have described the tectonic succession, lithologic distribution and deformational chronology of rocks of the eastern part of the syntaxis in Yang Sang *chu* valley, West Siang, Arunachal Pradesh.

The Indus suture is a continental collision zone containing obducted ophiolite, but interestingly I. Reuber, P. Nehlig and G. Reibel related three phases of ductile shearing of the peridotites of the Spong tang

Nappe of Ladakh with the tectonics of oceanic ridge. As a deviation of the main topic, Y. C. Sharma, G. S. Bhatnagar and G. R. Narayan Das have reported a method of detecting concealed shear zones using Solid State Nuclear Track Detector Technique.

In this well printed and colour-jacketed book, the editor has successfully compiled papers on various topics, especially on structure and stratigraphy of thrust zones of the U.P. Himalaya. A wider geographic coverage and a few more papers on specific topics related to the title would have increased the value of the book. A subject index and authors' affiliation/address could have been included. The book has added to the growing knowledge of the Himalayan geology, and workers on Himalayan structures will find it quite useful.

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Cultivated Edible Mushrooms by T. N. Kaul (CSIR, Regional Research Laboratory, Jammu, Srinagar 190 005) 1983, pp. 56, Price not known.

Mushrooms are known to be a delicacy from ancient times and they possess a distinct food value, being good sources of several vitamins (thiamin, niacin, and riboflavin) and protein. The protein is of good quality, containing many of the essential amino acids and is readily digested. There is world wide shortage of protein and search is going on for un-

conventional sources of protein. Mushrooms could become an important source of protein. Because of their availability in plenty, either canned or fresh, in Western countries mushrooms are no longer considered a luxury and have assumed the role of vegetables. But in India the situation is entirely different. The total annual production of mushrooms in India is insignificant when compared with that of other developed and developing countries. Hence, the book 'Cultivated edible mushrooms' by Dr. T. N. Kaul is timely and most welcome. Dr. Kaul is eminently suitable to write this book as he has been engaged in mushroom research for well over three decades. The author has dealt in detail the various aspects of cultivation of the commonly cultivated edible mushrooms such as *Agaricus bisporus*, *Volvariella volvacea* and *Pleurotus* species. Post harvest technology and marketing and the economics of mushroom cultivation are also dealt with in the later part of the book. Research work on mushroom cultivation in India, even though fragmentary, has been highlighted in the various chapters. The author has presented a vast amount of information which will be useful for both amateur mushroom growers and professionals, working in this field. The book is well produced and free from typographical errors. The price is not stated in the book, but I hope it is inexpensive so that all those interested in mushroom cultivation can afford to buy this useful publication.

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NEWS

WILL DRINKING-WATER TRIHALOMETHANES [THMs] BECOME A THING OF THE PAST?

Robert Hoehn and his colleagues at the Virginia Water Resources Research Centre (Blacksburg) point out that not only humic acids, but other organic materials in water may act as THM precursors. They refer to laboratory tests which have shown that optimizing clarification processes can reduce THM

precursors by as much as 75%. Hoehn hopes to use the Newport News, Va., water works as a demonstration project. He believes that proper planning and new technologies will one day help to make THMs "a buzzword of the past." (*Environ. Sci. Technol. Vol. 17 No. 11, 1983, p. 513A*).