

solved easily. The other advantage is that it allows more agrobiodiversity, as more number of cereal crops could be grown and revived.

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Devaluing classic Indian literature on science

Scientific literature of the past/present is an asset to the scientific community. In biological sciences monographs/floras are key books and high value documents emerging from hard and painstaking systematic work of scientists, and important to those who are deeply involved in inventorying and mapping of biodiversity. These 'works' are always highly priced^{1–3} and there are rare ones costing even more. Below I cite an example of our negligence to the classic work done by our scientists in the past.

Recently, I came across some publications which were on sale at the ICAR Headquarters at a discounted (40%) price. There was an era of writing monographs which was initiated in 1950s and several excellent works appeared on algae (the present known algal diversity is based on these classic monographs), fungi and agriculture. A few examples are given below.

Algae

Ulotrichales by K. R. Ramanathan, 1964, p. 183, with 52 plates on glossy paper and hard bound, price Rs 21.10 and discounted price Rs 13.00, ICAR, New Delhi. This monograph includes introduction, classification and delimitation of orders, description of families (3), genera (18), species, bibliography and index.

Vaucheriaceae by G. S. Venkataraman, 1961, p. 112, with 72 figures on glossy paper and hard bound, price Rs 17.00 and discounted price Rs 10.00, ICAR, New Delhi. The book contains an historical account, classification and affinities, occurrence and distribution, structure of thallus, reproduction, generic differentiation and species description, bibliography, index to authors, genera and species.

Oedogoniales by Ella A. Gonzalves, 1981, p. 757, with more than 600 figures

(profusely illustrated), hard bound, price Rs 56.25 and discounted price Rs 34.00, ICAR, New Delhi. The monograph contains two parts. Part I – Introduction, occurrence, and distribution, ecology and physiology, morphology and cytology, vegetative and asexual reproduction, dispersal and periodicity, status and relationship. Part II – Taxonomic account of order and species of the three genera, bibliography, addenda and index.

Volvocales by M. O. P. Iyengar and T. V. Desikachary, 1981, p. 532, with 275 line drawings and 44 TEM plates, price Rs 90.00, discounted price Rs 54.00, ICAR, New Delhi. Part I – Structure and reproduction and Part II – Systematics: families (15), genera (116) with descriptions of species, additions to Indian volvocales with 52 taxa new to science along with their Latin diagnosis.

Charophyta by B. P. Pal, B. C. Kundu, V. S. Sundarlingham and G. S. Venkataraman, 1962, p. 130, with 296 figures, price Rs 15.00, ICAR, New Delhi. This publication is now out of print. It includes classification, distribution and ecology, general morphology, vegetative structure and reproduction, cytology, economic importance, fossil charophytes, living charophytes, characters used in the identification of species of Nitelleae and Chareae, bibliography, recent additions and index to genera and species.

Zygnemaceae by M. S. Randhawa, 1959, p. 478, with 521 figures, hard bound, price Rs 90, ICAR, New Delhi. This publication is now out of print. It includes introduction, classification, families, subfamilies, genera, evolution and affinities, family Zygnemaceae, occurrence and distribution, structure of the cell, reproduction, characters used in the identification of species of 13 genera, bibliography, index to genera and species.

These monographs contain a wealth of information on diversity and give an

authoritative account of discovered or known taxa of our country. These monographs give at first instance, the diversity known in this country and a lot of work needs to be done on the useful compounds (metabolites) for human beings. Apart from this, the monographs are an inspiration/source to 'infant' monographers, and those interested in algal diversity and the origin and survival of Protists since Eocene. These are a good source to understand biology as a subject – lifecycle pattern, cytological events and reproduction in these tiny, photosynthetic plants. These algae are surviving since 500 My and are a food source for aquatic animals.

Fungi

The Myxomycetes of India by K. S. Thind, 1977, p. 452, with 165 figures, hard bound, price Rs 40.25 and discounted price Rs 24.00, ICAR, New Delhi. The monographs include: Part I: General – Economic importance, morphology and terminology, reproduction, cytology, cultivation in laboratory, geographical distribution, collection and preservation, systematic position and general taxonomy. Part II: Systematic account of the Indian myxomycetes, references and index.

Hyphomycetes by C. V. Subramanian, 1971, p. 930 with 475 figures, hard bound, price Rs 50, IARI, New Delhi. The monograph includes: Part I – General account inclusive of introduction, structure and reproduction, habitats, importance as plant pathogens, importance in industry, pure cultures, heterokaryosis, classification, relationship to perfect states, nomenclature, Indian work and bibliography. Part II – Systematic account, key to genera, description of genera and species recorded from India and those of

the type species of each genus, list of host genera and substrata and index.

The Clavariaceae of India by K. S. Thind, 1961, p. 197, with 60 figures, glossy paper, hard bound, price Rs 20.00, ICAR, New Delhi. The monograph includes: Introduction (historical, economic importance, morphology and terminology, fructification, life history, sexuality, cultural behaviour, geographical distribution, collection and preservation, identification and simplified key to 15 genera of Clavariaceae recorded from India and their species), discussion, appendix, bibliography, glossary, index to genera, species and synonyms.

Indian Cercosporae by R. S. Vasudeva, 1963, p. 245, with 168 figures, glossy paper, hard bound, price Rs 23.00, ICAR, New Delhi. The monograph contains key to species, description of species, discussion, appendices, selected reference and index (host index with *Cercospora* species).

Agriculture

A History of Agriculture in India by M. S. Randhawa, 1980, vol. I, beginning with the 12th century, p. 541, price Rs 50.00;

1982, vol. II, 8th–18th century, p. 358, price Rs 37.00; 1983, vol. III, 1757–1947, p. 422, price Rs 45.00; vol. IV, 1947–1981, p. 716, price Rs 85.00. The price of all four volumes is Rs 237.00 and discounted price is Rs 142.00, all published by ICAR, New Delhi.

These volumes contain a wealth of information and are sufficient to run a programme in future for graduates and postgraduates pursuing a course on agriculture in ancient India. Randhawa has not left untouched any aspect of agriculture. They deal with agriculture traced from 8th century till the present day. The historical account is given by the rulers and encompasses their activities in agriculture, dairy, poultry, environment and forestry. A lucid account of culture, village life, crop cultivation, horticulture, spices, tools, soil type, water conservation, marketing, including crops and fruits introduced from the West is also given.

The reason for mentioning in detail the contents of these monographs is to acquaint the readers with the comprehensiveness of these authoritative works and compare them with those published currently by Indian workers, although undoubtedly there are exceptions.

The purpose of this correspondence is to highlight the wealth of information given in these monographs/books. Let us not devalue our scientific literature. No book is priced less than Rs 1000–3000 in the Indian market and is even more in the international market. Secondly, these books can be the starting point in monographing our biodiversity. Thirdly, as mentioned above, the volumes by Randhawa can be used as a reference book to run a course on 'Agriculture in ancient India'.

1. Kalman, V., *European Smut Fungi*, Gustav Fischer Verlag, Stuttgart, 1994, p. 570.
2. Braun, U., *A Monograph of the Erysiphales (Powdery Mildews)*, J. Cramer, Berlin, 1987, p. 700.
3. Sutton, B. C., *The Coelomycetes*, Commonwealth Mycological Institute, Kew, Surrey, 1980, p. 696.

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Ramro Korang Lake needs studies on fish diversity and water quality analysis for aquaculture

Arunachal Pradesh, once described as the 'Hidden Land' by virtue of its geographical position, climatic conditions and altitudinal variations, is a biodiversity-rich region in Northeast India. The geography of the state is varied, with variation of mountainous ranges. It is a land of lush-green forests, deep river valleys, plateaus, numerous wetlands, lakes, rivers and full streams.

The East Siang District with its headquarter at Pasighat, is located between 27°43'N and 29°20'N lat., 94°40'E and 95°35'E long. The altitude of the district varies from 13 to 273 m from the sea level. With regard to information available about lakes/beels/wetlands, Nath and Dey¹ reported that 2500 ha of lakes and wetlands exist in Arunachal Pradesh. Raina² also reported 2500 ha of beels/lakes present in the state which have vast un-

tapped potential for enhancement of fish yield and harbour a variety of commercially important cultivatable fish germplasm resources. Das *et al.*³ reported 27 lakes in Arunachal Pradesh; however, the Ramro Korang Lake in East Siang District, Arunachal Pradesh was not reported.

This lake is situated near the National Highway 52A between the place named 2 mile and 5 mile of Pasighat–Ruksin Road, East Siang District. The lake is natural and private. It is about 3 km in length in the north–south direction and the width varies from 50 to 200 m (Figure 1). The depth of water varies from 2 to 10 ft in winter and the early rainy season, whereas in the rainy season it varies from 10 to 20 ft. The lake water is mostly covered by hydrilla, eichhornia and other aquatic plants. The eastern side of the lake is covered by deep forests contain-

ing bamboo, big trees and grasslands, whereas the western side of the lake is mostly covered with bamboos, herbs, shrubs and other trees. The source of water is natural. During the rainy season, water from the Siang river enters the lake from the northern side, when the water level in the river is high.



Figure 1. North view of Ramro Korang Lake.