

Techniques in plant taxonomy*

In view of a dire need for good taxonomists, a three-day practical workshop was organized on techniques in plant taxonomy to conduct training on the collection, identification and documentation aspects of the flora. Plant taxonomy is the oldest branch of botany that deals with classification and nomenclature, and supports other fields such as biochemistry and molecular biology. In her welcome address, Emma Maria, Carmel College expressed the need for more trained plant taxonomists considering the vast accumulation of unexplored flora and limited knowledge of plant diversity. In his keynote address, D. J. Bhat, Botany Department, Goa University mentioned that botany has come of age considering that this year is the 'International Year of Potato', wherein scientists world over have assembled to sequence the potato genes. With its centre of origin in Peru, the underground tuber has come to be known as the staple food around the world. World biology should be documented and maintained for the future and he felt that this task can be accomplished by plant taxonomists. Hailing the Western Ghats as a reserve of plants, Bhat called upon the botanists to unravel its plant wealth.

The need for taxonomists to collectively address the current plight of taxonomy and reach the science to the layman was highlighted by R. Ganesan (Ashoka Trust for Research in Ecology and the Environment, Bangalore). While

speaking on herbarium that is often addressed as 'a breeding centre for scientists blamed for rattling Latinized names', he mentioned it is a storehouse of dried plants on wild genetic resources. More than 5 million herbarium specimen collections exist in India for 17,000 flowering plants, with collections dating back to 1663. Crediting the erstwhile 'botanical imperialists' Carl Van Linnæus and Sir Joseph Banks for popularizing botany, he cited instances of poor resource management that have led to loss of species like *Phyllanthus indofischeri*, endemic to the Deccan plateau. On the other hand, initiatives taken by the Tropical Botanical Garden and Research Institute and Kottakal Aryavaidya Sala in Kerala, that linked plant taxonomy with society through ethnobotany, were lauded. He gave detailed information on the preparation of herbarium as well as importance of e-herbarium – an electronic gateway to the collections – for the benefit of end-users.

Collection of the specimen, implements required as well as the importance of field observations of plant characteristics were demonstrated with the help of a video by K. Ravikumar (Foundation for Revitalization of Local Health Traditions, Bangalore). Theory was complemented by practicals and this was validated by field trip in the forested campus of the college. Types of flora and guidelines to writing a flora were specified by D. Narasimhan (Madras Christian College, Chennai). He also accentuated the need for accurate scientific writing.

A peep into the world of classical as well as contemporary botanical and taxonomic literature was offered by M. Sabu (Calicut University) followed by inputs on illustrations. On-line facilities and

options for deciphering the taxonomic abbreviations and plant name indices were revealed. Lesser-known errors in nomenclature that hitherto escaped the eyes of teachers and professionals were shown with rectifications by M. K. Janarthanam (Department of Botany, Goa University). ICBN rules as well as certain terminologies were simplified to reach the audience. On-line facilities offered for taxonomic knowledge by the Indian Association for Angiosperm Taxonomy were propounded for the benefit of all. An effective way to manage information by maintaining the database was demonstrated by Aditya Kakodkar (National Institute of Oceanography, Goa). Applications of biodiversity databases as well as guidelines on constructing a database for storage of biological information were disseminated.

Collection of plant specimen, identification of plants with floras, preparation of herbarium, writing keys, illustration session and an assessment of scientific abstracts formed the practical aspects of the workshop.

Since the workshop was well attended by teachers, resource persons offered views on making plant studies interesting, to attract students towards plant taxonomy. The 'personalized aspect' of the workshop that enabled the participants to partake in field work, draw and prepare floral keys was particularly appreciated. Gurcharan Singh's *Plant Systematics* was presented to the participants as a memento that reflected the theme of the workshop.

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