undertaken and will go a long way in solving chronic shortage of water in cities. Chennai has set an example in this respect by amending building laws to make it obligatory for all new constructions in the city to have rainfall harvesting structures to store water. Such stored water could be used for flushing toilets, washing and gardening.

Chapter 5 outlines technology available for water harvesting such as remote sensing and geographic information system, groundwater recharge designs, computer databases and waste-water recycling. Significant advances in these fields are possible provided the scientific community applies its mind to effect improvements in traditional technology.

The need to make water everybody’s business is emphasized in a group of papers assembled in Chapter 6. Reasons for decline in traditional technologies are analysed. Official preoccupation with mega projects implemented with borrowed money and neglect of tanks has resulted in too much centralization and the consequent neglect of traditional technologies based on self-reliance. Another glaring factor is the lack of interest shown by research institutes in tackling problems of the poor in rural areas.

CSE and particularly its leader Anil Agarwal are to be congratulated for having rendered great service by forewarning the people of the bad days looming ahead – the spectre of water famine – threatening to overtake them and suggesting measures for combating the menace.

The attractive part of this educative book under review are the numerous photographs in colour and the large number of line drawings specially drawn to convey its message to everyone. Scientists in our research institutes must take note of this publication and help in organizing sanctuaries within their campus, where models can be created and the effectiveness of the technologies aimed at rainwater harvesting and pollution control are demonstrated.

On 9 May 2001, India lost an eminent botanist, an excellent teacher, a distinguished visionary, researcher and a fearless critic in the demise of Divya Darshan Pant. Pant was the founder of a strong school of research in palaeobotany and morphology of plants in the Department of Botany, Allahabad University. Beginning his career as a lecturer in 1945, he became Professor and Head of the Department of Botany in 1966. When he was at the helm of affairs from 1966 to 1981, the department achieved international fame for both teaching and research.

Divya Darshan Pant was born on 18 October 1919 in the pine-dotted picturesque surrounding of Ranikhet in Kumaon Himalaya. His father Ambika Dutt Pant was a highly respected Ayurvedic physician and Editor and Publisher of a magazine, Himalaya. After his early school education in Ranikhet and Nainital, he moved to Lucknow where he graduated and later received his post graduation and research training under Birbal Sahni. In 1946, he married Radha Pant, a biochemist who later headed the Department of Biochemistry and Home Science in Allahabad University.

The blending of interest in living and fossil plants and combination of facts with interpretative ideas were Pant’s main distinctions. His work enables us to peer into the plant world of Gondwana and Pre-Gondwana times through the modern window. On the basis of his important research contributions on the reconstruction of plants of glossopterids, diversity of the floristic elements and reproductive biology, he was recognized as an authority on Glossopteris flora. His interpretation of the compressed organs of Glossopteris and related genera, including their vegetative parts and fructifications have been vividly confirmed by the subsequent findings of permineralized fossils. He was the first to propose the existence of mycorrhizic gametophytes in Rhynie Chert by his interpretation of gametophytic and mycorrhizic nature of Rhynia gwynnevaughanii and strongly advocated it against criticisms throughout his life. However, this work induced others to discover various gametophytes in Rhynie Chert like Lyonophyton and Sciadophyton.

On the basis of his work Pant established that the members of the Glossopteris flora had very diverse woods, megaspores, fructifications and seeds. His work on Gondwana conifers, particularly Buriadia heterophylla suggested that these could either be regarded as coneless prepinnophytes or may be altogether assigned to new group of plants. His work also shed light on Lower Gondwana structurally preserved pteridophytes. Apart from the peninsular part of India, he had extended his studies on extra-peninsular Lower Gondwana and Pre-Gondwana (Lower Carboniferous) flora of Punjab–Kashmir Himalayas, where he found an admixture of Cathaysian and

State water is heavily subsidized and thus under-priced leading to adoption of wasteful practices and squandering of a precious resource. We have more wealth in water than Arabia in oil. This resource therefore, has to be conserved and used with great care if future crises are to be avoided. Our scientists should develop technologies aimed at converting our water resources into real wealth through efficient conservation and use and thus build a future based on the enduring past of India. The book under review is a step in that direction and deserves to be closely studied by our administrators, scientists, the intelligent public and all those concerned with public welfare.

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BOOK REVIEWS

PERSONAL NEWS

A link with the past: Divya Darshan Pant (1919–2001)

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Gondwana elements along with evidences of insect-plant relationship. His work on Dicroidium flora of India showed that the arrangement of lateral organs in Pterochus was spiral. He discovered regionalism in the worldwide Lepidodendropsis flora of Lower Carboniferous time with special reference to the Gondwana area.

Further, he was able to show that Diphyllopteris was a vertically compressed seedling of Glossopteris and that the Glossopteris flora was dominated by tall and deciduous trees of glossopterids and also that the Lower Gondwana coal was autochthonous. By his studies of the carbonaceous pulls of compressions of Trizygia speciosa, he concluded that these fossils in all likelihood belong to Sphenophyllum and he also found diverse sphenophylls in the Glossopteris flora. He elucidated the structural features of Ranjanjia bengalensis and Phyllotheca indica which indicated that they were different from northern Umbellaphyllites. He established certain new genera of fertile ferns like Damudopteris, Damudosorus, Asansolia and Trithecopteris which were assignable to two families, Damudopteridaceae and Asterothecaceae. On the basis of the annulus of their sporangia, Pant pointed out that the phylletic slide of annulus in ferns could have had alternative courses other than those suggested by F. O. Bower.

In horizontal dimension, Pant’s researches extended into morphotaxy, anatomy, reproductive biology, pollination ecology, palynology from bryophytes through pteridophytes and gymnosperms to angiosperms. His classification of stomata based on their ontogeny is now classic, on the importance of which W. Von Cotthem had written a full length paper. Pant also contributed to the classification of gymnosperms and fossil spores and pollen. He contributed ideas on the evolution of nodal anatomy, conduplicate carpel, morphotaxy of Isoetes, gametophytes of Ophioglossaceae, anisospory in bryophytes and the function obligate unions of spores and angiosperm pollen.

Pant earned worldwide high encomium due to his comprehensive and authoritative work on the living and fossils cycads. He was a distinguished cycadologist as well. Besides original research on modern cycads, he had reviewed modern cycads with a retrospection of their fossil history. In addition, he had reported two cycadophylls, Chiquitos mamalensis (fossil counterpart of modern Chiquia) and Cycladites meyenii from the Permian strata of Kashmir. The revised version of his first comprehensive monograph ‘Cycas and Cycadales’ entitled Introduction to Gymnosperms, Cycas and Cycadales, is being published by Birbal Sahni Institute of Palaeobotany.

Pant had more than three hundred publications, including research papers, reviews, monographs, popular articles, etc., in addition to three books and two edited volumes. He guided twenty-two research students for doctoral degrees. In his honour and as a mark of recognition of his versatile academic status, seven taxa have been named after him so far, viz. Pantopteris Chandra & Rigby, a pteridophyll; Pantophyllum Rigby, a noeggerathiospid leaf; Isoetes pantii Goswami & Arya, an extant lycopod; Hepaticites pantii Bose & Pal, a fossil bryophyte; Brachyphyllum pantii Nautiyal & Srivastava, a fossil conifer; Glossopteris pantii Chandra & Surange, a pteridoplain.