KNOWING PTERIDOPHYTES

A Complete Hand Book on Ferns & Allies based on APG System

Dr. Jithesh Krishnan R.


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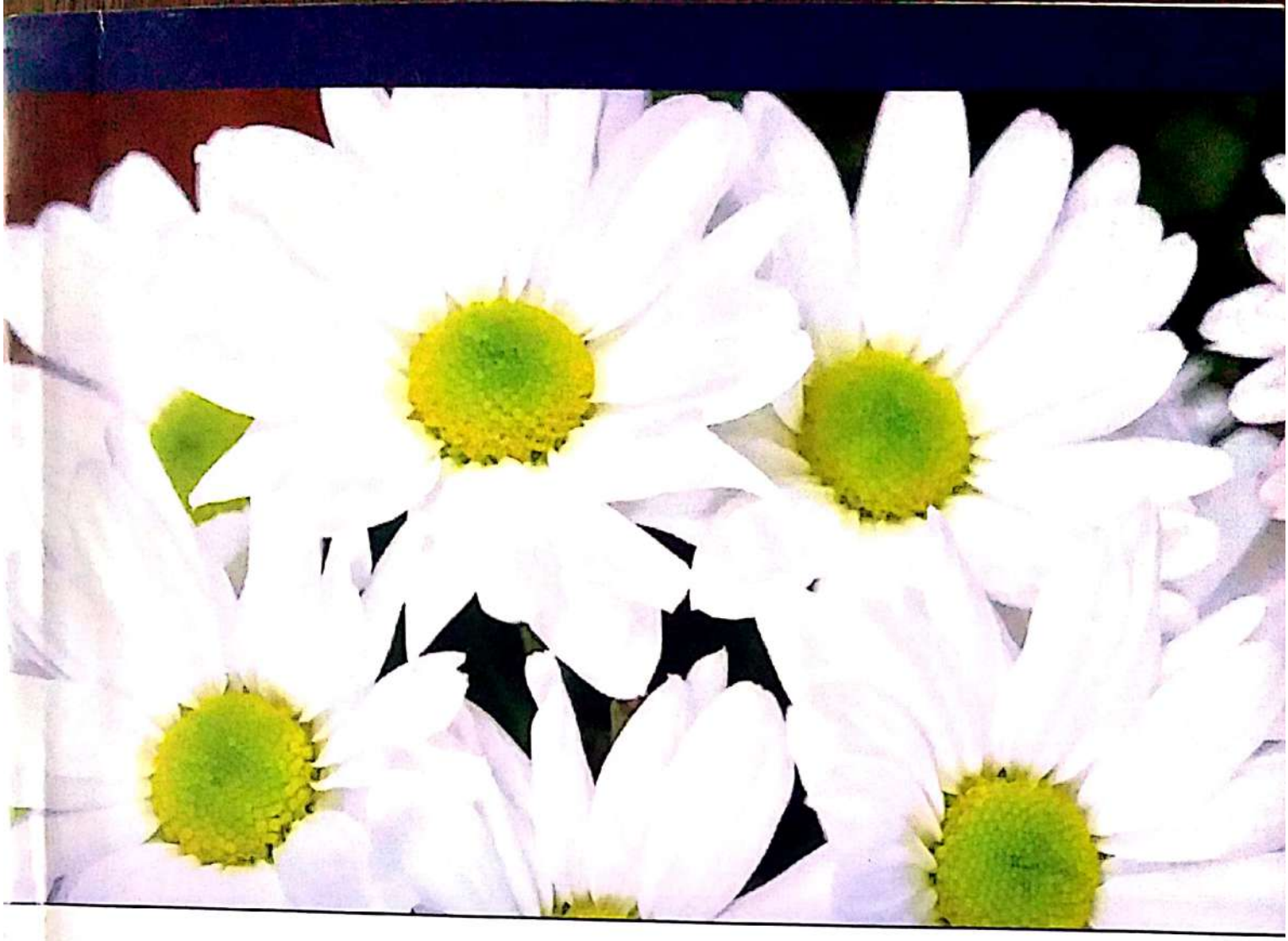

T. S. Swapna
Pradeesh S.

In vitro studies and phytochemical evaluation of Bidens biternata

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Bidens biternata (Lour.) Merr. & Sheriff, belongs to the family Asteraceae, is used as a leafy vegetable by tribes of Waynadu Districts in Kerala and also to cure hepatitis, cold, cough, dysentery, asthma etc. Since current practices of harvesting are unsustainable micro propagation was tried in B. biternata. Nutritional, antinutritional and antioxidant factors were analyzed and medicinal properties like antiinflammatory, hepatoprotective and anticancer activity were also evaluated. This book focus on evaluation of nutritional factors and identification, structural elucidation, in vitro production, as well as elicitation of the bioactive molecule that might be responsible for the medicinal properties of B. biternata, since the plant possess a tremendous antioxidant, antiinflammatory, hepatoprotective and anticancer potential which may help the people around the globe to overcome nutritional deficiency problems and fight the deadly diseases of modern society.

Dr. T. S. Swapna, Associate Professor of Botany, University of Kerala, Thiruvananthapuram, India did her doctoral research in CUSAT, Kerala, India and Post Doctoral research in University of Paul Cezanne, Marseille, France. She has 22 years of Teaching and Research experience with 66 research publications and 96 presentations in Conferences

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The genus Cleome belongs to the family Cleomaceae. Most of the species of the genus are considered as weeds but some are reported to possess nutritional and medicinal properties. The present investigation deals with two abundantly available, but less utilized species of Cleome, C. viscosa and C. burmanni. Pharmacognostic studies included the determination of organoleptic, physico-chemical (21 parameters), proximate (21 parameters), mineral (six macro- and 14 microelements) and anti-nutritional (seven parameters) factors of the dried plant powder. The powder of both species exhibited several desirable attributes so that the samples could be subsequently used in the form of a drug. Organoleptic analysis revealed the characteristic color, taste, odor and nature of the powder of C. viscosa and C. burmanni. The physico-chemical parameters play an important role in detecting adulteration or improper handling of drugs. Proximate and elemental quantification revealed the nutritive value of these species. The anti-nutrients were in low amount which adds to the nutritional worth of these species.

Dr.Lakshmi Pillai
Dr.Bindu Nair (Ed.)

Pharmacognostic standardization in two underutilised species of Cleome

The author is a post-graduate in Botany and has completed her M. Phil, Ph.D from University of Kerala. Her areas of research includes Phytochemistry, Molecular Biology, Bioinformatics and Microbiology. She is an Assistant Professor in in one of the reputed colleges in Kerala. She has many publications in peer-reviewed journals.

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Consolidation of data pertaining to the extent and diversity of mangroves is a pre requisite for the selection of strategies for the conservation of existing and the introduction of newer population. In this direction, the present study has been carried out to assess the extent and diversity of mangroves confining to 10 districts of Kerala. The present survey estimated the total extent of mangroves in Kerala to be 19.531 km2. It has also been highlighted that out of 10 districts studied, Kannur occupied highest mangrove cover (38.22 %), followed by Ernakulam (31.5%), Kozhikode (6.18 %), Kasaragod (5.65 %), Alleppey (5.32 %), Kottayam (5.04 %), Kollam (2.71 %), Thrissur (2.08 %), Malappuram (1.88 %) and Trivandrum (1.41%). Diversity studies revealed the existence of 15 true mangrove species falling under 9 genera and 6 families. The study concluded that, though there is technical increases in the extent of mangroves, most of the major mangrove growing areas are under drastic pressure. Since the survival of this eco system is inevitable for ensuring coastal balance, intensive and extensive conservation and ecosystem reinstatement programmes should be undertaken without delay.

The author has MSc, BEd and PhD (Botany). She acquired her academic and research qualifications from various reputed institutions. She has a number of publications in international and national research journals.

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Dr. Neethu G. Pillai
Dr. C. C. Harilal (Ed.)

Extent and Diversity of Kerala Mangroves

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