

### Know Your Botanist:

#### David Prain

**S**ir David Prain (1857-1944), a renowned Botanist and former Director of Botanical Survey of India and Kew Gardens, England, was born in Fattercairn, Kincardineshire, Scotland. After obtaining M.A. degree (1878) in natural science from the University of Aberdeen, he also obtained his degree of medicine from the University of Edinburgh in 1882. He then joined in 'Indian Medical Service' (1884-87) as a physician/Botanist and served in military hospitals at Allahabad, Lucknow and Gorakhpur. During this time, he also provided his valuable services as Curator of Herbarium, Royal Botanic Garden, Calcutta for few months. In 1887, Prain was officially appointed as Curator of Royal Botanic Garden, Calcutta. After retirement of the Director, Sir George King in 1898, Prain was promoted to the post of Director, Royal Botanic Garden, Calcutta as well as Botanical Survey of India, and Superintendent of Cinchona cultivation in Bengal till his retirement in 1905. From 1898-



1905, he also served as a professor of Botany at the medical college. Calcutta in 1905, Prain became the Director of Royal Botanic Gardens, Kew and retired in 1922. He also became the President of the Linnaean Society (1916-1919) and vice present of Royal Horticultural Society. In 1905, Prain was elected as 'Fellow of the royal Society' and became a member of the 'Royal Swedish Academy of Sciences' in 1907. He was awarded the 'Victoria Medal of Honor' in 1912. Sir David Prain died at Whyteleafe, Surrey, England in 16 March, 1944.

During his tenure in India, David Prain collected plant specimens from Burma (Myanmar), Ceylon (Sri Land) and Andaman and Nicobar Islands. In 1903, he joined Sir Francis Young expedition to the Sikkim Tibet boundary, collections plants on the Tibetan plateau. His collections are available in the herbaria CAL, A, A, B, BM, DBN, Dd, E, HK, G-DC, L, LE, P, U, US, W, WU, etc. He published 'Bengal Plants' (1903) in two volumes describing nearly 3000 species covering the areas of the then East Bengal (Bangladesh), whole of West Bengal excluding Darjeeling hills, parts of Bihar and Orissa. The book 'Bengal Plants' is still being largely used by botany students for plant identification. His other important publications are *Flora of Sundribans* (1903), *Diseases of Cultivated Trees and Plants* (1914), *Science Discipline* (1930). He also authored numerous publications on the genera *Argemone*, *Dioscorea* in the East (with I.H. Burkill), *Cannabis*, *Dalbergia* of Southeast Asia, *Pedicularis* of Indian Empire, *Quinine*, a list of Laccadive plants, etc. and also on tropical African flora.

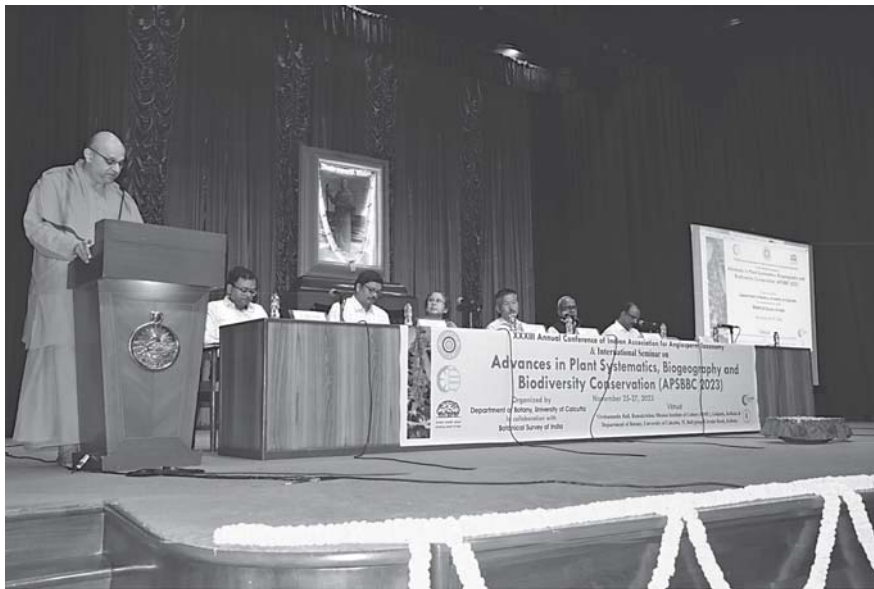
In his honour, George King and J.D. Hooker published a new genus *Prainea* King ex Hook.f. (Moraceae) in 1888 and Hiroyoshi Ohashi and Kazuaki Ohashi also published a genus *Daprainia* H. Ohashi & K. Ohashi (Fabaceae) in 2019. □

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## **A Report on XXXIII Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Seminar on "Advances in Plant Systematics, Biogeography and Biodiversity Conservation"**

The 33rd Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Seminar on "Advances in Plant Systematics, Biogeography and Biodiversity Conservation" was organized by the



Department of Botany, University of Calcutta in collaboration with Botanical Survey of India at the Department of Botany, University of Calcutta, Kolkata between 25th to 27th November, 2023. The inaugural ceremony was held in the auditorium of Ramakrishna Mission Institute of Culture, Gol Park, Kolkata. It began with a Vedic chant of the last part of Brigu Valli of the Taittiriya Upanishad by Swami Tadvratnanda, Ramakrishna Mission Institute of Culture, Gol Park.

The session was graced by the presence of Dr. Kausik Bal, Development and Planning Officer, University of Calcutta, Prof. Rita Kundu, Head and Convener, Department of Botany, University of Calcutta, Dr. A.A. Mao, Director, Botanical Survey of India, Kolkata, Prof. M.K. Janarthanam, President, IAAT, Prof. Santhosh Nampy, Secretary, IAAT and Dr. Debabrata Maity, Associate Professor, Department of Botany, University of

Calcutta, and the Organizing Secretary of the Conference-cum-Seminar on the dais, and the delegates were felicitated by the Organizing Secretary. The abstract book of the seminar and the three-volume "Flora of Sikkim" authored/edited by Dr. Debabrata Maity and his team were released by the delegates on the dais. Subsequently, Prof. Rita Kundu welcomed the delegates and the participants, followed by Prof. Santhosh Nampy, Secretary, IAAT highlighted the objectives and functioning of IAAT in his speech. Later, a two-minute silence was observed to remember the two IAAT Life members, Prof. N.D. Paria and Prof. M.A. Wadood Khan, who died this year.

The Chief Guest of the programme Dr. A.A. Mao, Director, BSI congratulated the Department of Botany, University of Calcutta for organizing the IAAT Annual Conference-cum-Seminar and also said that there would be a high demand for Indian classical taxonomists in future across the world. Prof. M.K. Janarthanam, President, IAAT delivered a brief presidential address. Senior IAAT Life Members, Prof. A.K. Pandey and Prof. Shoban Kumar Mukherjee were felicitated for completing 70 years of age. Followed by, the recorded audio messages of

Prof. Debasis Das, Registrar, University of Calcutta and Prof. Salil Kumar Biswas, Dean, Faculty Council for Post-Graduate Studies in Science, University of Calcutta were played. The inaugural ceremony was concluded by vote of thanks proposed by Dr. Debabrata Maity.

The first technical session of the conference began with the keynote lecture by Prof. Hanno Schaefer, Technical University of Munich, Germany. In his lecture on the "Phylogenomics of Cucurbitaceae", he emphasized the lack



of ecological knowledge, including distribution data and information on pollinators and seed dispersal agents for many cucurbits. Subsequently, Prof. D.S. Pokle delivered Prof. Y.D. Tiagi Gold Medal lecture on the topic “My pleasure journey into the taxonomy”, Prof. V.V. Sivarajan Gold Medal lecture was delivered by Prof. Vinay M. Raole on “Kachchh: A semiarid paradise of India”, and Prof. Rajesh Tandon delivered Prof. Kameswara Rao Endowment Lecture on “Experimental studies on eco-evo-developmental dynamics of floral nectaries”. Professor Sudhendu Mandal, Former UGC Professor and Head, Department of Botany, Visva-Bharati and Director, National Library (Govt. of India), presently Editor-in-Chief, *Science and Culture* Journal, Indian Science News Association, Kolkata, attended the conference and chaired the Technical Session-1 in the morning session of second day (26.11.2023) and delivered address in the auditorium of Ramkrishna Mission Institute of Culture and felicitated by the Organizing Secretary, Dr. Debabrata Maity.

Over 350 delegates from different parts of the country and from abroad participated in the IAAT Conference-cum-Seminar. Around 200 oral and poster research papers were presented during the seminar in parallel sessions under six different themes, such as (1) Floristics, Plant Diversity and Conservation; (2) Biosystematics and Phylogeny; (3) Nomenclature, Revision and Monograph; (4) Phytogeography, Endemism, Climate Change and Plant-Animal Interaction; (5) Indigenous Traditional Knowledge and Bioprospection, and (6) Digitization and Database. Every technical session began with one or two invited lectures, followed by oral presentations by the participants both for awards and general paper presentation.

The Executive Committee (EC) meeting of IAAT was held at the Department of Botany, University of Calcutta on 25.11.2023, and the General Body meeting on 26.11.2023 was held at the Department of Jute and Fibre Technology, Kolkata. On the last day of the seminar, a panel discussion on issues related to eponyms, typification of plant names and frequent changes in plant names was held. The valedictory session began after the panel discussion. The participants acknowledged and appreciated the excellent and efficient organization of the three-day conference-cum-seminar. Prof. Santhosh Nampy announced the winners of the ten different awards on ten different themes selected by a panel of judges, and were distributed to the awardees by the dignitaries on the dais.

Finally, Dr. Debabrata Maity, Organizing Secretary of the Conference-cum-Seminar proposed the vote of thanks. This IAAT Annual Conference-cum-International Seminar was sponsored by the National Biodiversity Authority

(NBA), Science and Engineering Research Board (SERB) and the University of Calcutta. □

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### **Report on 6<sup>th</sup> Regional Science & Technology Congress (Region-3) of Government of West Bengal**

The Regional Science & Technology Congress (Region-3) of Government of West Bengal was successfully held in Durgapur Government College on January 9<sup>th</sup> and 10<sup>th</sup> with a significant active involvement of participants comprising districts of Birbhum, Hooghly, Paschim Bardhaman and Purba Bardhaman. The Congress was jointly organized by Durgapur Government College and Department of Science & Technology and Biotechnology (DSTBT), Government of West Bengal.

Durgapur Government College was academically excellent having NAAC with “A” Grade in 2017. The College is also the recipient of the DST-FIST Scheme of Department of Science and Technology, Govt. of India, Rashtriya Uchchar Shiksha Abhiyan (RUSA) and the prestigious DBT STAR COLLEGE SCHEME of Department of Biotechnology, Govt. of India in September 2022.

The objective of this congress was to amalgamate, spread and exchange research findings around the world by bringing eminent scientists, faculty members, promising researchers, bonafide scholars and industry experts all together in one platform. The congress comprehensively included work in major areas of Science, Engineering and Technology. The subjects under different disciplines were Science and technology for disaster management, Agricultural sciences including veterinary sciences, Biotechnology, Chemical sciences, Earth sciences including geoinformatics and hydrogeology, Engineering and technology, Mathematical sciences, statistics, Physical sciences, Physiology and medical sciences including, Forensic sciences, Botany, Environmental sciences including climate change and Zoology.

The 2-day long conference begun with the engrossing and enlightening lecture by the chairperson of 6<sup>th</sup> Regional Science and Technology Congress (Region -

3). Prof. Debnath Palit, Principal of Durgapur Government College, Paschim Bardhaman welcomed the diligent and esteemed scientists for their active involvement throughout the congress and appreciated all the participants whose contributions made the congress a success. Shri Aroop Biswas, Hon'ble Minister of Science, Technology and Biotechnology, Govt. of West Bengal inaugurated the programme and Shri Moloy Ghatak, Hon'ble Minister addressed the gathering as Guest of Honour.

After inauguration the next session commenced with 'Prof. Prasanta Chandra Mahalanobis Memorial Lecture' delivered by distinguished scientist Professor Sabyasachi Bhattacharya, Ecological Statistics Unit, ISI, Kolkata. His topic of lecture was "Satisfied Ecology: A New Paradigm" where he explored the growing significance of statistics, modeling and simulation frameworks in gauging the likelihood of species extinction based on extensive data from four major taxonomic groups: birds, mammals, insects, and bony fish.

Professor Shyamal Kumar Bhadra, Former Emeritus Scientist, Indian Association for the Cultivation of Science (IACS), Kolkata delivered 'Sir C.V. Raman Memorial Lecture'. His topic of deliberation was 'Advances in Quantum Optics in Guided Wave Devices', where he demonstrated the basic principle of quantum optics which relates to the quantum electromagnetic field in the unfolding different aspects of light and material interactions.

The congress was divided into twelve technical sessions which started after the memorial lectures. Day one consisted of nine technical sessions which included the following disciplines:

The invited speaker of the discipline 'Science and Technology for Disaster Management' was Professor Narayan Chandra Jana of Department of Geography of The University of Burdwan. His topic of presentation was 'Climate Change, Disaster Risk and Human Resilience: Policy Perspectives'. Through his talk, he lucidly explained how climate change affects disaster risks through the increase in weather and climate hazards that effects sea-level rise and the increases in vulnerability of communities to natural hazards resulting from ecosystem degradation. Disaster risks have been increased over recent decades due to more extreme weather conditions and likely to increase the number and scale of disasters in future. The present study focused on the climate change induced disaster risks, building human resilience and policy perspectives for sustainable development.

Professor Pabitra Kumar Biswas of department of Soil and Agricultural Sciences of Visva-Bharati (A Central

University) was the invited speaker of the discipline 'Agricultural Sciences including Veterinary Sciences' whose topic of deliberation was 'Overview of Biofertilizer and their role for improving Soil Health in Sustainable Agriculture'. Bio-fertilizer is an organic product that works best in irrigated areas and can also be used in dry land farming. Bio-fertilizers are typically utilised in organic farming and enhancement of soil health. Biofertilizer can aid in boosting nutrient turnover.

I presented my paper entitled 'Vertical Distribution of different Zinc fractions in relation to soil properties of rice growing red acidic soil of West Bengal, India' in the after lunch session of the day one in the discipline of Agricultural Sciences including Veterinary Sciences. In my presentation I invoked the problem of Zinc (Zn) deficiency that appears as a major threat to human population resulting in severe health and socio economic complications. Rice eaters are more prone to Zn deficiency, which can be solved by improving nutritional quality of dietary foods especially rice. Soil or foliar Zn fertilization are the conventional methods by which Zn deficiency can be corrected. Most of the added Zn fertilizers to soil get converted into different Zn fractions resulting in soil Zn deficiency, ultimately causing limited plant growth. The study aims to give idea about the contributions of different Zn fractions towards DTPA-Zn content as this fraction is important for plant nutrition.

Biotechnology session was chaired by Professor Anupam Basu of Department of Zoology of The University of Burdwan. He delivered talk on the topic 'let's hope for secure future – invest to alternative banking!' Through his lecture he discussed about the depositing of body parts i.e. blood, DNA, and others. Biobanking is the cornerstone of future precision medicine. Professor Pranesh Choudhury of Department of Chemistry of Visva-Bharati delivered lecture on 'Metal Guided Photoswitching: Experiments, Understanding and Prospects'. 'Earth Sciences Including Geoinformatics and Hydrogeology' session was chaired by Professor Pulak Sengupta of Department of Geology Sciences of Jadavpur University. His topic of deliberation was 'Formation and Disintegration of Supercontinents Through Time: Perspective of Metamorphic Petrology.' Dr. Rajib Banerjee of Dr. B. C. Roy Engineering College gave lecture on the topic 'IoT an Era of Technological Revolution' in the discipline 'Engineering and Technology Including Emerging Technologies' where he discussed that IoT (Internet of things) is one the most popular technology in the 21<sup>st</sup> century with its technological penetration in Industry and our daily lives. Dr. Lakshmi Kanta Dey, Department of



Prof. Dr. Sudhendu Mandal is being felicitated by 6th Regional Science Congress Organizing Committee

Mathematics of NIT Durgapur was the invited speaker of the discipline 'Mathematical Sciences, and Its Applications and Statistics' whose Topic of Deliberation was "Development of Riemann Integration of Banach Space Valued Functions and The Property of Lebesgue", where he discussed about the Riemann integrability of a real valued function defined on  $[a, b]$ . 'Science, Engineering and Technology in Quantum Domain' was the topic of lecture of Professor Sourangshu Mukhopadhyay, Professor of Physics of The University of Burdwan who spoke on in the fields of cosmology, high energy particle physics, electronics, communications, laser physics, plasmonics, spintronics, materials science, nano technology. Dr. Sankar Kumar Nath, an Eminent Oncologist, invited speaker of the discipline 'Physiology and Medical Sciences Including Forensic Sciences' delivered on 'Food Habit and Cancer Prevention'. The first day ended with Cultural Programme followed by Dinner as arranged by the organizers.

The second day of the congress started with the 'Acharya J.C. Bose Memorial Lecture' delivered by Professor Sudhendu Mandal, Former UGC Professor of Botany of Visva-Bharati (A Central University) and Ex-Director of The National Library (Govt. of India), Kolkata and presently Editor-in-Chief, *Science and Culture* Journal of ISNA. Through his enlightening talk 'Acharya Jagadish Chandra Bose – Celebrated Pioneer Scientist of India', Prof. Mandal focused Sir J.C. Bose's life and works. Acharya Jagadish Chandra belonged to the Jewel scientist of British India period. First Indian Celebrated Scientist & Father of Biophysics, Acharya Jagadish Chandra Bose is regarded as the first scientist to produce, transmit and receive millimetre waves which are used for much of today's mass communication. He anticipated the first semiconductor, the seed of today's computer and electronic revolution, proved by experimentation that both animals and plants share much in common. He demonstrated that plants are also

sensitive to heat, cold, light, noise and various other external stimuli. It is pertinent to mention that Acharya Bose should be remembered and focused in a befitting way following the ethos and culture of India in the context of its progressive development for the present society.

The first invited speaker of day two was Professor Sudip Chattopadhyay of NIIT, Durgapur who spoke 'The Concerted Role of CAM7 and HY5 in Arabidopsis Seedling Development' in the discipline 'Botany'. In his presentation, he talked about the genetic relationships between *Arabidopsis thaliana* CALMODULIN7

(CAM7) and HYPOCOTYL5 (HY5) bZIP protein in light-mediated seedling development. Dr. Apurba Ratan Ghosh, Professor and Head of the Department of Environmental Science of The University of Burdwan delivered lecture on 'Menace of Microplastic' in the discipline 'Environmental Sciences including Climate Change' where he invoked the serious concerns arising out of the Microplastics (MPs), the small, barely visible tiny pieces of plastics generated through environmental degradation of larger plastics in course of time, becoming a size ranging from 5 millimeter to 100 nanometer. Prof. (Dr.) Ashis Kumar Panigrahi, Pro-Vice-Chancellor of The University of Burdwan, West Bengal was the invited speaker of the discipline 'Zoology' who delivered lecture on the topic 'Pollution of Riverine Environment: Causes, Action and Revival for a better tomorrow'.

The second day closes with the formal vote of thanks proposed by congress chairperson Prof. Debnath Palit. He heartily thanked the chairpersons, invited speakers, distinguished participants for their active participation throughout the two day long programme. The congress came to an end with the valedictory address of the chairperson and honourable dignitaries present on the dais.

The congress embarked to be a resourceful event having about 500 participants including researchers, faculty members and prestigious speakers by establishing good network collaborations, joint projects and better relationships among countries by mutual sharing of knowledge and experiences. □

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