



Botanical Survey of India

Industrial Section, Indian Museum



Ministry of Environment, Forest & Climate Change

Government of India



Visit

The Botanical Gallery

10:00 a.m. to 5:00 p.m.

(except Monday & National Holidays)



The Economic Botany Gallery, with an excellent effort and scheme of Sir George Watt was opened to public in the large hall of 2nd floor on 29th May, 1901 with 15,185 exhibits arranged scientifically in 8 Bays under different categories, viz.,

- i) Gum, Resin, Indian Rubber, Lac, Kino
- ii) Oils, Oilseeds, Oilcakes, Soaps & Waxes
- iii) Dyes and Tans etc.
- iv) Fibres, Silk, Cotton, Jute, Wool
- v) Medicinal produces and indigenous drugs
- vi) Narcotics, Opium, Indian hemp, Tobacco
- vii) Food substances, sugar, starch, cereals.
- viii) Indian Timbers.

Post Second World War, Mr. S. N. Bal served as Curator from 1942 to 1947, followed by Mr. K. S. Srinivasan who continued about two decades on the post and gave present shape to this Botanical Gallery.



Fibre section stores both conventional & unconventional sources of fibre



Entada rheedii (Mimosaceae)

Large woody liana found in South India, pods upto 2m in length. seeds useful in Jaundice and ulcer.



Food section displays tropical fruits, vegetables, pulses etc.



Oil section displaying different types of oils their sources and uses

Plant based economic products include common food products (varieties of paddy and wheat, common vegetables, fruits of tropical region), valuable drugs (crude drugs and their products, Cinchona and its products), plant related industrial materials (paper and paper materials, shola products, fibre, silk industry products, lacquer products), oils (essential and vegetable) depict an important insight on the varied uses of plants. The other attractions of Botanical Gallery are model of Goddess 'Durga' made of jute fibre, Coconut husk and bamboo handicrafts, wooden toys, crafts, narcotics & Opium products, Palm and Agave produces, etc.

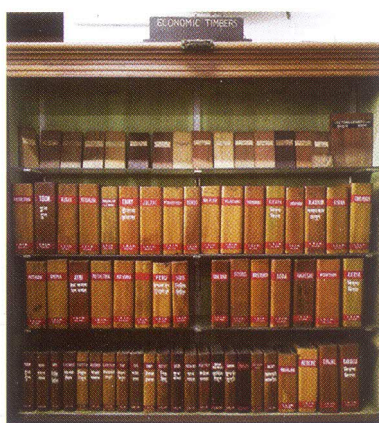
The Botanical Gallery also have some important displays such as 'Story of Paddy', 'Story of Arrow-root', 'Tea Story', 'Story of Sugar-cane', 'Story of Jute', 'Story of Cotton', 'Story of Indigo', 'Story of Lac', 'Match box story' which elaborates the stages involved 'from grower to consumer' or 'from field to factory'.



Goddess Durga made of jute



Model displaying the production of Indigo dye from *Indigofera tinctoria* (Fabaceae)



A glimpses of the economic timbers displayed based on the mode of uses



The Quinine tablet producing machine of the 19th Century; different quinine derivatives in form of pills & the Cinchona Bark

Lodoicea maldivica (Arecaceae) : A wonder of nature



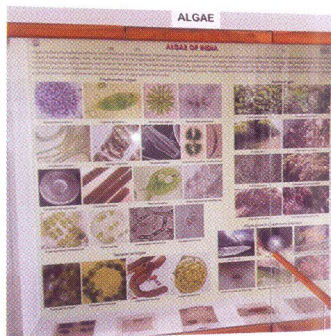
Lodoicea, commonly known as double coconut, an endemic species to the island of Praslin and Curieuse in Seyshelles. It is one of the most universally well known plant and holds 3 botanical records:

- *The largest fruit, weighs upto 42kg
- *The heaviest & largest seed, weighs upto 17.6 kg
- *The largest female flower of any palm

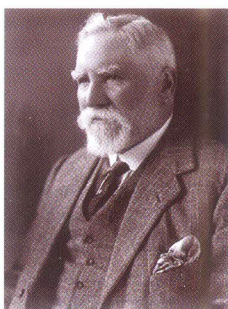
A new gallery was inaugurated on 1st October, 2016 on the third floor of ISIM building. This gallery is divided in the following sections:

1. Janaki Ammal and George Watt, with their contribution to Indian botany
2. History of Botany in India
3. Different plant groups
4. Rare holdings
5. Central Panel

Plant groups: A brief account of Algae, Fungi, Lichens, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms are depicted with their special features and usefulness.



Sir George Watt, as the scientific assistant-secretary to the Government of India assisting the preparation for an exhibition of the economic and industrial progress of India, called the Calcutta International Exhibition. The success of the exhibition convinced the Government of India for a more thorough study of the economic plants and was given the task of compiling his Dictionary of the Economic Products of India; furthermore he was appointed as the Commissioner for India Colonial Exhibition, London (1885-1886).



Sir George Watt



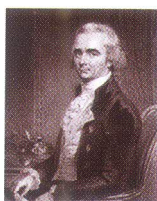
E.K. Janaki Ammal

Dr. E.K. Janaki Ammal, one of the pioneering botanists and plant cytologists made significant contributions towards chromosomal studies of cultivated plants especially on sugarcane and wheat. With C.D. Darlington, she co-authored the landmark publication of cytogenetics, '*The Chromosome Atlas of Cultivated Plants*' where studies of chromosomes of 10,000 useful plants and their wild relatives were included. In the post-independence phase, Botanical Survey of India was reorganized under her leadership. She also served in BSI in various capacities from time to time.

History of Botany in India: The vedic Period (1750-1500 BC) shows us the importance of plants. The principles of Ayurveda were enunciated probably around 1500 BC, and over centuries to different schools namely “*Charaka Samhita*” and “*Sushruta Samhita*” were evolved from Ayurveda for medicines and surgery respectively.



Robert Kyd



William Roxburgh



Nathaniel Wallich



Sir J. D. Hooker

Several Portuguese and Dutch settlers documented the Indian traditional medicinal knowledge by publishing several books. These became reference books for tropical botany and medicine for more than hundred years. Robert Kyd established an experimental garden at Shibpur (1787) for the purpose of identifying commercial plants of South and SE Asia. William Roxburgh was the first salaried superintendent of the garden and established the Central National Herbarium. His “*Flora Indica*” included drawings and description of Indian Plants. Nathaniel Wallich made several plant collections from different parts of India and SE Asia and contributed to Indian Botany through his several books like ‘*Flora Nepalensis* (1824)’ and ‘*Asiaticae Rariories* (1830)’. Sir J.D. Hooker, the greatest botanist and explorer who is still remembered for his monumental work “*The Flora of British India*”. The year 2017 marks the bicentenary of his birth and to commemorate it a temporary exhibition is held in this new gallery. Sir George King’s initiative led to the establishment of Botanical Survey of India as an Imperial Department in 1890 and served as the first ex-officio Director of the department.



George King

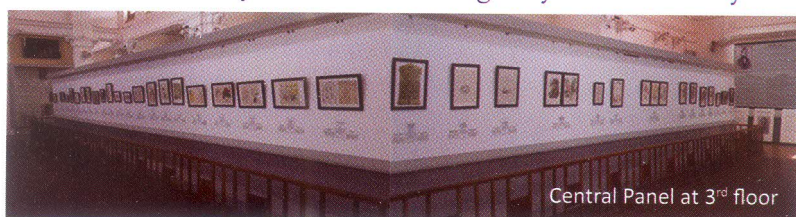


B. Sahani



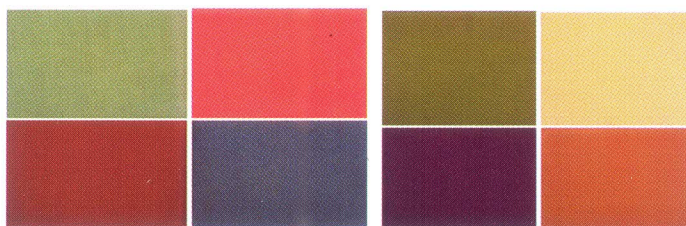
S. R. Kashyap

After independence M.O.P. Iyengar, S.R.Kashyap, B. Sahani, P. Maheshwari and many others contributed greatly to Indian botany.



Central Panel at 3rd floor

Rare Holdings: Some rare holdings of Botanical Gallery includes J. Forbes Watson's (1866 & 1874) 'Textile Fabrics of India' (18 vols.) and 'Textile manufacturers and embroideries' (14 vols.) in 2 series respectively; Thomas Wardle's (1876) 'Fabrics dyed with Indian dyes' (15 vols.) and the Watt's 'Agricultural Ledgers' which has been the data source of publication of Watt's 'Dictionary of Economic Products of India' (6 vols., 1889 - 1896) and its abridged 'The Commercial Products of India' (1 vol., 1908).



A glimpses of Thomas Wardle's book showing cloth samples dyed with Indigo, Turmeric & Cochineal and their different combinations



J. Forbe's Watson Embroidery collection Agricultural Ledger of Sir George Watt

Research: Research activities are carried out on Economic Botany, Ethnobotany and Taxonomy of Angiosperms. Several monographs, catalogues, reports and scientific papers have been published based on the research work undertaken in this section.

Library: An excellent, well catalogued Library catering various needs of researchers, students and teaching staffs from colleges and universities and other institutions can also avail library facilities. The facilities are also extended to public to a limited extend.



Economic Herbarium



A Herbarium on Economic plants of India (BSIS) was initiated by Sir George Watt and his associates in 1893 with c. 5000 plant specimens collected from various phyto-geographical regions of India. The herbarium presently contains above 70,000 plant specimens (including , 'Type' specimens). Besides, some Indian marine algae collection one also maintained in the herbarium.



Herbarium collection



Moss collection



Macrofungi collection

Rare holding samples of textile designs, natural dyes herbarium specimens, correspondence and manuscripts are digitized under the e-governance programme of MoEF & CC, Govt. of India and available on website (www.bsi.gov.in) for study.



The Botanical Gallery, earlier known as the Economic Gallery was opened to the public in the brick-red three-storied building at 1, Sudder Street, Kolkata (adjacent to Indian Museum, 27, Jawahar Lal Nehru Road) on 29th May 1901 with effort of Sir George Watt, the then Reporter on Economic Products, Govt. of India. Later the Botanical Gallery came under the control of Botanical Survey of India Industrial Section, Indian Museum in January, 1911



The Botanical Gallery, on the second floor towards east end of the Zoological gallery can be approached by the general public. The researchers may visit the scientist in-charge (ISIM) for the consultation of herbarium, archival materials, rare holdings and library through the Sudder Street gate of Indian Museum.

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