

# DOWNLOAD PDF ENCYCLOPEDIA OF FLORA AND FAUNA OF BANGLADESH

## Chapter 1 : Kaempferia parviflora Wall. ex Baker | Plants of the World Online | Kew Science

*The Encyclopedia of Flora and Fauna (ISBN ) is a multi-volume calendrierdelascience.com has been published by Asiatic Society of calendrierdelascience.com covers the biodiversity of Bangladesh.*

More than 6, plant species occur in Bangladesh, of which about are exotic and 8 are endemic. Of the total number of plant species are angiosperms flowering plants , and 7 are gymnosperms. Ninety-five vascular plants have been rated as threatened, of which 92 are angiosperms, and 3 gymnosperms. About species and varieties of algae have been recorded from freshwater habitats alone. There are many more in brackish water and seawater habitats. The fungal flora are about There are about species of bryophytes in the country. Of the species of pteridophytes, are ferns. Exploration Botanical explorations in Eastern India, including intensive collections from Sylhet, the sundarbans and Chittagong, were consolidated by Joseph Dalton Hooker and his companion Thomas Thomson. He undertook a long boat journey from Calcutta on 1st May passing through Pabna, Dhaka and through meghna upto Chhatak and Sylhet. He also traversed this region partly on foot and partly by boat through Sitakunda, Chittagong, Hatia, Sundarbans and Dhaka on his way back to Calcutta in January Hooker was also a pioneer in the study of the phytogeography of the Indian subcontinent, and suggested, for the first time, the floristic areas of the region. With the cooperation of a number of eminent botanists, he published his monumental Flora of British India in seven volumes. Sir George King , the first Director of the Botanical Survey of India, employed plant collectors from for the regions entirely to the east of bay of bengal. He also initiated a series of monographs on illustrated taxonomic research called Annals of the Royal Botanic Gardens, Calcutta. Charles Baron Clarke , a teacher of Mathematics at Presidency College, Calcutta , subsequently appointed as Inspector of Schools in Eastern Bengal, wandered two and a half years on boat and made more than botanic collections from Sylhet, Madhupur jungle and Comilla. When he was posted in Assam in , he travelled the whole of the province on foot and made extensive collections. Despite shortsightedness, he studied field weeds belonging to Commelinaceae, Cyperaceae and Scrophulariaceae, which resulted in the production of excellent monographs on these groups. Robert Lawrence Heinig arrived in India in and served as a forester at Chittagong and the Sundarbans. He collected vast information on the forest flora, which was ultimately incorporated in a working plan for the forests of the Sundarbans, and his compilation entitled, A List of Plants of the Chittagong Collectorate and Hill Tracts published in A year old gardener, John Gibson, was sent from England by the horticulturist Joseph Paxton in quest of seeds of Amherstia nobilis, a tree from lower Burma now Myanmar. After reaching Calcutta, he sailed on a boat through Mathabhangha to meet the Ganges, and then to Dhaka and through the Meghna and Surma rivers to Chhatak. From there he proceeded to Khasia hills where he collected a boatload of plants consisting chiefly of orchids. Instead of going to Burma to procure Amherstia he spent his time collecting more orchids as he was promised two saplings of Amherstia by Wallich from the Calcutta Garden itself. While Nathaniel Wallich was the Superintendent of the Calcutta Garden, a delegation under his charge including a botanist, William Griffith, and a soil expert, John McClelland made their visit to the Assam Plateau in to study the conditions under which the tea plants grew there in wild. The first consignment of the seeds was procured from Canton, and a site for a nursery near Sadiya was selected. Later, tea plantations were handed over to the newly established Assam Company. In , a tea garden was established in Chittagong. By , wild tea plants were also discovered at Chandkhani Hills of Sylhet in Bangladesh. The first commercial tea garden in Bangladesh was, however, established in at Malnicherra Tea Estate, two miles away from Sylhet town. During the latter part of the 18th century, freight vessels were built in Calcutta using Burma teak Tectona grandis brought from Burma. Robert Kyd, the Secretary to the Military Department of Inspection under the east india company , suggested in that a part of the Calcutta Garden by the side of the river Hughly near Calcutta be set apart for trial plantation of teak. The plantation of teak in the hilly areas of Kaptai and Chittagong was first started in with seeds brought from Burma; this was the first exotic tree species introduced in the forest. Contribution of

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surgeons and missionaries Plant explorations initiated By william roxburgh , a Scottish surgeon of East India Company, resulted in the publication of Hortus Bengalensis in A revised edition of his Flora Indica came out in Because of his contribution, he is rightly remembered as the father of Indian botany. William Carey, who arrived in Calcutta as a Danish Christian Missionary at the end of the eighteenth century, occupies a distinct position in the history of botanical and horticultural research in Bengal, and as a pioneer in paper manufacture and printing press. While working as an indigo planter in Malda, he mastered the Bengali language. He also started the Agri-horticultural Society of India. Nathaniel Wallich, the superintendent of Calcutta Garden , made a vast collection of plants of Eastern India and catalogued them himself through lithography. Another Scottish surgeon, Francis Hamilton who was posted at Pattuahat, 9 km north of Laksmipur in Feni district, studied the vegetation of the Sundarbans. His main botanical survey was carried out in in the eastern part of the river Meghna and he collected materials from Chittagong. His notes during the survey contained extensive historical, ethnological and geographical information, which was later published in the Edinburgh Journal of Science in When he was promoted to the post of a surveyor in , he was entrusted with the task of preparing a full topographical account. Accordingly, he described the climate, meteorology, history and antiquities of each district; the number and condition of the inhabitants, their food habits, and diseases; and the state of education. He commenced this stupendous task in with the district of Dinajpur and then the northeastern part of Rangpur. Robert Wight, yet another British surgeon who entered the medical service of the East India Company in , turned to the vegetable kingdom as a hobby. He learned the art of lithography and applied it in his Icones Plantarum Indiae Orientalis Illustrations of the plants of Eastern India which was published in six volumes in Hugh Cleghorn, a civil surgeon, was a pioneer in plant ecology in India. He studied ecology of different hedge plants and their use in various situations, and later published a paper on sand-binding plants. William Griffith , an assistant surgeon commenced his collecting trip on boat from Calcutta and arrived at Pabna on the 9th September , from where he passed through rivers and vast jheels and arrived in Sirajganj. From here he proceeded towards Jamalpur, and then down the brahmaputra to Mymensingh. Arriving at Habiganj, he entered the surma and reached Chhattak from where he left for Cheerapunji. During his boat journey, he recorded the marsh and aquatic vegetation of the jheels. He repeated the riverine cruise in , this time arriving at Faridpur, Dhaka, Narayanganj and Laksmipur. He made his journey through Surma up to Terryaghat towards Assam. During his botanical career of twelve and half years he spent a large part of his time in exploring, collecting, studying, and drawing floral specimens. He is the author of Bengal Plants and Flora of Sundribuns Tagar, Tabernaemontana coronaria Plant diversity The Bengal province, according to Hooker contained only two phytogeographical regions, ie i the Gangetic plain, and ii the littoral-forests of the Sundarbans. It has been estimated that there are about five thousand angiosperm flowering plants species in Bangladesh. Plainland plant diversity The Bangladesh plains are famous for their fertile alluvial soils which support extensive cultivation. Weed flora, both indigenous and exotic, thrive well in the marginal lands eg isles, passageways and waste places. Clerodendrum viscosum Bhat , Glycosmis arborea Dantmardan , Heliotropium indicum Hatishud , Xanthium strumarium Ghagra , Alternanthera sessiles Sechi , Lippia nudiflora Bhuiokda , and Croton bonplandianum Panimarich are frequently encountered in the region. Ghaghra, Xanthium strumarium Various water bodies and wetland ecosystems provide habitats for diverse kinds of aquatic plants hydrophytes , eg Potomageton Ghechu , Lemna duckweed , Pistia Topa pana , Hydrilla, Vallisneria dog grass , and various insectivorous plants including Utricularia Jhanji. Floating ferns like Salvinia and Azolla grow in profusion, particularly in ditches, canals and ponds. Almost throughout the country the introduced floating plant, water hyacinth Eichornia crassipes grows profusely and often becomes a troublesome weed in the agricultural land. The beautiful flowers of water lilies both white and blue and the sacred lotus Nelumbo nucifera depict a scenic beauty during the rainy season. Tall grasses like Erianthes rivenae Nal , Phragmites karka Khagda , Arundo domax and Saccharum spontaneum Kash , predominate in marshes, haors, baors and riverbanks. These are mixed up with varying proportions of Typha angustata Hogla , Imperata cylindrica Shon and various species of sedges Cyperaceae. Golpata, Nypa fruticans Forest plant

diversity Village homesteads, sparingly distributed all over the country, provide a green scenario amongst the network of rivers and rivulets and can be designated as village or homestead forests. These are characterized by banana *Musa* species and bamboo *Bambusa* species thickets, associated with a few other fruit yielding trees eg mango, wood apple, betel nut, coconut and palmyra palm , fuel eg barun, koroi, etc and timber-yielding eg koroi, debdaru, chhatim, etc tree species. Shaluk, *Nymphaea stellata* The littoral of Bangladesh, often known as the Sundarbans, lie in the southwestern parts of the country, in the confluences of Raimangal River and various other tributaries. Predominant species are sundari *Heritiera fomes* and Gewa *Excoecaria agallocha* , mixed with varying proportions of Kankra *Bruguiera gymnorhiza* , Baen *Avicennia* species , Possur *Carapa* species and keora *Sonnerata* species. Open places along the banks of rivers and creeks in less saline areas, a conspicuous feature of the forest, mark the gregarious occurrence of two palms eg *Golpata Nypa fruticans* and *Hetal Phoenix paludosa*. Mudbanks and creeks harbour clumps of thorny *Hargoza Alanthus ilicifolius* , while *Bhola Hibiscus tiliaceous* forms a dense mass of entangled growth on the forest floor. Although many grasses, epiphytic orchids, and ferns are quite common in this forest, absence of bamboos is a conspicuous feature of this mangrove ecosystem. The occurrence of tree fern *Cyathaea* species in the natural forests of Sylhet district is a notable phenomenon. Haor vegetation of this region represents typical freshwater swamp forests, characterized by *Hijal Barringtonia acutangula* , *Karanja Pongamia glabra* and innumerable free-floating submerged rooted, and rooted floating hydrophytes. This forest is dominated by *Sal Shorea robusta* trees, often admixed with other minor tree species like *Bahera Terminalia belerica* , *Haritaki T*. The undergrowths were once quite rich and diverse with *Zingibers* mostly *Curcuma zedoaria* , ground orchids, palms *Phoenix acaulis* , several grasses and other weedy species. Climbers are lofty, chief amongst them are *Spatholobus roxburghii*, *Bauhinia vahlii*, mixed with members of *Kumarika Smilax macrophylla* , *Chaprialu Diosorea spp* and species of *Vitaceae*. Gradual encroachments and manifold anthropogenic activities notably clear felling, leaf-litter collection and uncontrolled extraction are major threats resulting in depleting and vanishing plant resources of these forests. The forests of Chittagong and the Chittagong Hill Tracts are known to be evergreen and semievergreen types with a preponderance of deciduous species. Once famous for their storied nature, species richness and diversity, the forest resources are now depleting at an alarming rate, owing to illegal felling, cutting, shifting cultivation and other anthropogenic activities. Topmost storey consists of *Garjan Dipterocarpus* species. Lianas, epiphytes mostly of orchids, asclepiads, ferns and leafy mosses and herbaceous undergrowths are abundant. *Kassalong Reserve* is noteworthy for bamboo brakes in large areas, mainly occupied by *Melocana baccifera Muli* , *Bambusa tulda Mirtinga* and *Dendrocalanus longispathus Orah*. Savannah formations can be met within open places, along the banks of rivers and swamps with common tall grasses like *Saccharum spontaneum Kans* , *Imperata cylindrica Shon* and *Vetiveria zizanoides Bena*. The degree of genetic erosion, as a consequence of adoption of modern varieties and of monoculture practices and degradation of cultivable lands, has not yet been properly documented. The best known crop is rice, which is estimated to have about 10, different cultivars. On the other hand, the wild genetic resources, especially the wild relatives of the existing crop species of Bangladesh are not adequately known. Economic plant plant or plant products used in trade, commerce, or industry. The number of species of most economic plants in the world is estimated to be about 5, Of the flowering plants growing in Bangladesh, about plants are economically important. Of them crops are considered most economic. Among economic plants cereals such as, rice, wheat , barley and some millets are cultivated widely. After rice the most economic plants are jute, tea, and sugarcane. Jute and tea are major cash crops. The other economic crops are oil seeds, potato, sweet potato, tobacco , cotton and several pulses.

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## Chapter 2 : Wildlife of Bangladesh - Wikipedia

*The fauna of Bangladesh includes about 1, species of vertebrate fauna and about 1, species of invertebrate fauna based on incomplete records. The vertebrate fauna consists of roughly 22 species of amphibians, species of fish, species of reptiles, species of birds and species of mammals.*

Wildlife of Bangladesh and Encyclopedia of Flora and Fauna of Bangladesh The fauna of Bangladesh includes about 1, species of vertebrate fauna and about 1, species of invertebrate fauna based on incomplete records. The vertebrate fauna consists of roughly 22 species of amphibians , species of fish , species of reptiles , species of birds and species of mammals. Most of them are solitary bees consisting of 11 species. The rest include 4 of honeybees , 2 of bumblebees and the only stingless bee species, *Trigona fuscobaltiata*. The most common genus is *Onthophagus*. Another 30 species of leaf-eating scarabeids are also found. The ladybirds includes about 93 species, 80 of which are beneficial. The common outdoor flies include the black flies , the deer flies , the horse flies , the hover flies , the crane flies and some muscoids. The largest family is Araneidae , consisting of some 90 species. Most of the species dwell in the northeast and southeast regions of the country. The most commercially exploited species of the coastal area is *Scylla serrata* mud crab. There are at least two species of king crabs found in the coastal zone. Six species of lobsters are found to occur in the Bay of Bengal , *Panulirus polyphagus* and *Thenus orientalis* are the two most commercially important species. *Daphnia* is a common freshwater genus among the 20 copepod species. Two species of starfish have also been recorded. List of mammals of Bangladesh The vertebrate fauna includes about 1, species. Fishes hold the largest number of species among them. Of the species of fishes, are marine and the rests are of fresh and brackish waters. The marine fishes are split into 18 orders and families. Their species include 56 of cartilaginous fishes and of bony fishes. The species of inland fishes belong to 61 families, of which Cyprinidae is the largest, having 61 species. There are also 55 species of catfishes found in the fresh waters of Bangladesh. From the 22 amphibian species, 8 are recognized as threatened. From the inland reptiles, 2 are crocodilians , 21 turtles and tortoises , 18 lizards , and 67 snakes. The marine reptiles comprise 12 snakes and 5 turtles. Resident species total including passerines under 16 orders and 60 families, while the remaining species including passerines under 10 orders and 33 families are migratory. National Encyclopedia of Bangladesh Second ed. Asiatic Society of Bangladesh. Nishorgo Program, Bangladesh Forest Department.

## Chapter 3 : Fauna of Bangladesh - Wikipedia

*The Encyclopedia of Flora and Fauna of Bangladesh is the outcome of a long-felt need. Information on biodiversity has been recorded in this part of the subcontinent for centuries, but it occurs in diverse places and forms that are often difficult to retrieve.*

## Chapter 4 : Hemidesmus indicus (L.) calendrierdelascience.com | Plants of the World Online | Kew Science

*The Encyclopedia of Flora and Fauna of Bangladesh has been published in 28 volumes. [2] Among the volumes 11 are about flora, 14 volumes about fauna, one volume is about Bangladesh and there are two index volumes.*

## Chapter 5 : Flora - Banglapedia

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*Encyclopedia of Flora and Fauna of Bangladesh, Volume 23 (Freshwater Fishes) presents the first illustrated compendium of all the the freshwater fishes of Bangladesh. This book would be helpful to those specifically working for biodiversity conservation and to the teachers and students of the natural sciences, as well as to the general readers.*

### Chapter 7 : Encyclopedia of Flora and Fauna of Bangladesh | Awards | LibraryThing

*The Encyclopedia of Flora and Fauna of Bangladesh is the first illustrated compendium of all the life forms so far identified in Bangladesh. Volume 15 treats the.*

### Chapter 8 : Encyclopedia of Flora and Fauna of Bangladesh | Revolv

*FLORA AND FAUNA Bangladesh has the plant and animal life typical of a tropical and riverine swamp. The landscape, which for most of the year is lush green, is dotted with palms and flowering trees.*

### Chapter 9 : Biodiversity of hillstream fishes in Bangladesh | AHMED | Zootaxa

*Home > Vikram Jain > Encyclopedia of Flora and Fauna of Bangladesh: Volume 18, Part 2 Encyclopedia of Flora and Fauna of Bangladesh: Volume 18, Part 2: Anthropoda: Crustacea by Asiatic Society of Bangladesh.*