



K. Bhatia.

## **KALIPADA BISWAS**

**(1899–1969)**

**Elected F.N.A. 1950**

### **EARLY LIFE AND EDUCATION**

**KALIPADA BISWAS**, a renowned botanist of India, came from a respectable family of Burdwan District in West Bengal. He was born on December 3, 1899 in Calcutta and was the second son of the late Shri and Smt. S. P. Biswas. He spent his childhood at Beltala in Bhowanipur in Calcutta. In School, he was good in Sanskrit and secured the highest marks in his class. Biswas passed the Matriculation Examination in 1916 from the Mitra Institution, Bhowanipur Branch and was a contemporary of the late Dr Shyama Prasad Mukherjee. He was in the first batch of students of Bangabasi College. He passed the Intermediate Examination in 1918 with Botany as one of his subjects. In 1920, he graduated from Bangabasi College. Biswas was a student of Drs S. P. Agharkar, S N. Bal, S. C. Banerjee and G. C. Bose.

### **RESEARCH AND CAREER**

In 1922, Dr Biswas took his M.A. Degree in Botany, securing first class first from the University College of Science and Technology, where his classmates were Professor I. Banerjee, Professor A. C. Dutta, Shri S. C. Nag, the first two later became well-known teachers of Botany. At this period, he came in contact with Professor Paul Johannes Brühl, who developed in him an interest in algae. His first paper was on algae of Bengal filter-beds (1922). From 1923 onwards till 1932, he published several papers on algae, such as Algal Flora of Chilka Lake, the Road Slimes of Calcutta, Flora of Salt Lake, Calcutta, etc. During the years 1923–26, he worked as a research scholar in a scheme sponsored by the Government of Bengal, but continued to work in several disciplines of systematic botany, especially on algae. The year 1927 was significant, when he was appointed Curator of the Herbarium of the Royal Botanic Gardens, Calcutta. In 1936, Biswas went to England and as a result of his extensive studies in the Kew Gardens, in the British Museum and in Edinburgh under the guidance of Sir W. W. Smith, F.R.S., he was conferred the D.Sc. degree of the Edinburgh University in 1937. In 1937, he became the first Indian Superintendent of the Gardens. In addition, a part of the responsibilities of the Director of the Botanical Survey of India was assigned to him. He made a thorough survey of the algal flora of the Salt Lake in Calcutta and of the Chilka Lake in Orissa. He also studied the vegetation of



Burma and various parts of Eastern Himalayas for a period of 25 years. Dr Biswas was the first Indian who worked and published original findings on Indian diatoms and Iron bacteria (1937).

### BISWAS AND THE BOTANIC GARDENS

Dr Biswas remained Superintendent of the Botanic Gardens for 17 years. He strove all through this period to maintain high academic and administrative standards. His ambition was to see that the Gardens attain the same status as the other well-known botanical gardens of the world.

He made extensive collections of plants from India and neighbouring countries; these resulted in the publication, "The distribution of wild conifers in the Indian Empire" (1933), "Glimpses of vegetation of south Burma" (1933), "Some foreign weeds and their distribution in India and Burma" (1934), "Studies in ferns and fern-allies in Burma" (1935), "Handbook of common water and marsh plants of India and Burma" (1937), and "Systematic position of a common tree fern of the eastern Himalayas with a note on the genus *Cyathea*" (1943).

The valuable specimens collected by him from Nagaland, Tripura, Manipur, Orissa, Bihar and Sikkim and also from South Burma are housed in the Central National Herbarium (Calcutta). He had a special interest in the plants of Sikkim Himalayas, a region which he explored extensively. These have been recorded in his "Common plants of Northern Sikkim" (1936), "Common medicinal plants of Darjeeling and the Sikkim Himalayas" (1956), and in a voluminous work entitled "Plants of Darjeeling and the Sikkim Himalayas" (1966). Dr Biswas was also among the pioneers in botanizing Tripura.

### DIRECTOR, MEDICINAL PLANTS SCHEME, WEST BENGAL

After his retirement from the Indian Botanic Gardens, Howrah, in 1955, Dr Biswas was appointed Director, Medicinal Plants Scheme, Government of West Bengal. At that time, the cultivation of the medicinal plants, *Rauwolfia* and *Ipecac*, had just begun and Dr Biswas remarked : "*In the applied aspect, I had the chance of developing cultivation of medicinal and aromatic plants and in fact, developed Ipecac plantation which proved to be the largest in the world. The roots produced are now meeting not only our internal consumption but also earning foreign exchange.*" Detailed accounts of the cultivation of these two plants were published in 1956 and 1958 respectively.

### AS EMERITUS SCIENTIST OF THE CSIR

Dr Biswas retired in December, 1964 from the Office of the Director, Medicinal Plants and continued his researches as Emeritus Scientist of the Council of Scientific and Industrial Research in the Botany Department, University College of Science and Technology, Calcutta, till the last day of his life. Since 1940, he was Honorary Lecturer in the same Department. He used to teach Algae to the Post-Graduate Classes. His lectures were very interesting.



In a lecture, Dr Biswas remarked : “As a student and teacher I am, therefore, in a position to advise the younger generation that they should be true to themselves and devote whole-heartedly to the subject of study in which they are interested. If a student acquires sufficient sound knowledge in a particular subject and follows the righteous path, he will undoubtedly be able to stand on his feet by the blessings of God. Therefore, work devoted with Heart within and God overhead.”

### HONOURS

As a teacher of repute, Dr Biswas earned the esteem and affection of his students and colleagues. He received wide appreciation of his life-long and devoted research in several branches of Botany. Several institutions awarded him medals and prizes. He received the ‘Coronation Medal’ in 1937 for meritorious public services. He was twice awarded the ‘Elliot Gold Medal’ and a cash prize. He was also awarded the ‘Paul Johannes Brühl Memorial Medal’ in 1952 by the Asiatic Society and in the same year he received (jointly with Shri Akkari Ghosh) the ‘Rabindra Prize’ in science for the work entitled ‘Bharatiya Banaushadhi’ (3 Volumes).

Dr Biswas was President of the Section of Botany, Indian Science Congress, in 1943. His Presidential address, ‘Systematic and taxonomic studies on the Flora of India and Burma’ remained the main source of information on the taxonomy and plant geography of India for a long time. He was elected Life Member of the Asiatic Society of Bengal on August 1, 1923. He was President of Botanical Society of Bengal during 1948–50, 1960–62 and 1969 and President of the Indian Botanical Society in 1952. He was elected Fellow of the Royal Society, Edinburgh, National Institute of Sciences of India (1950) and Society de Botanik of Paris.

Dr Biswas was connected with various other educational and scientific organisations in India, like the Indian Council of Agricultural Research, Central Indian Medicinal Plants Organization, Organon (India) Ltd., Bhabha Atomic Research Centre and National Botanic Gardens.

In 1954, Dr Biswas was selected as one of the four delegates of the Government of India to represent India at the Agricultural Exhibition in Moscow. In the same year, he visited several Botanical and Agricultural Institutions in Europe. Dr Biswas took a leading role in the revival and reorganisation of Botanical Survey of India.

Dr Biswas died on December 29, 1969 at his Ballygunge residence in Calcutta, after a prolonged illness. He left behind his wife, two sons, Professor Sanat Biswas (Bengal Engineering College, Howrah) and Dr Sanjib Kumar Biswas (Oil and Natural Gas Commission) and a daughter. One daughter predeceased him.

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## BIBLIOGRAPHY

1922. (With BRÜHL, P.) Algae of Bengal filter-beds. *J. Dept. Sci. Calcutta Univ.*, **4**, 2-17.  
 — (With BRÜHL, P.) On a new species of *Cylindrospermum* from Bengal, *C. doryphorum* Brühl et Biswas. *J. Proc. asiat. Soc. Bengal*, N.S. **10**, 577-580.
1923. (With BRÜHL, P.) Commentations Algologicae-III. On a species of *Compsopogon* growing in Bengal. *J. Dept. Sci. Calcutta Univ.*, **5**, 1-6 (Botany).
1924. The subaerial algae of Barkuda Island in the Chilka Lake, Ganjam District, Madras Presidency. *J. Proc. asiat. Soc. Bengal*, N. S. **20**, 359-365.
1925. Road-slimes of Calcutta. *J. Dept. Sci. Calcutta Univ.*, **7**, 1-10.
1927. Flora of the Salt Lakes, Calcutta. *J. Dept. Sci. Calcutta Univ.*, **8**, 1-48.  
 — (With BRÜHL, P.) Commentations Algologicae-IV. *Compsopogon lividus* (Hook). De Toni. *J. Dept. Sci. Calcutta Univ.*, **8**, 1-3.  
 — Aquatic vegetation of Bengal in relation to supply of oxygen to the water. *J. Dept. Sci. Calcutta Univ.*, **8**, 49-56.
1929. Papers on Malayan Aquatic Biology. XI. Fresh water algae with Addendum. *J. Fed. Malay St. Mus.*, **14**, 404-435.  
 — (With BRÜHL, P.) Algae of the Loktak lake. *Mem. asiat. Soc. Bengal*, **8**, 257-315.
1930. Contributions to our knowledge of the freshwater Algae of Manipur, Assam (4 Pls). *J. Bombay nat. Hist. Soc.*, **34**, 180-192.  
 — Notes on the organisms in the filtered water of Calcutta. *J. Proc. asiat. Soc. Bengal*, N.S. **26**, 533-540.
1931. Preliminary note on the vegetation of the tropical evergreen rain forests of the cinchona reserve, Tenasserim, Mergui, South Burma. *Proc. Indian Sci. Congr. (Botany)*, III, 22-23.
1932. Algal Flora of Chilka Lake. *Mem. asiat. Soc. Bengal*, **5**, 165-198.  
 — Bud mutation in *Ficus*. *Nature*, **130**, 780.  
 — The role of Aerophilous Algae in producing colour-effect on the bark of *Oreodoxa regia* of the *Oreodoxa* avenue in the Royal Botanic Garden, Calcutta. *Hedwigia*, **72**, 31-41.  
 — Living Conifers of the Indian Empire. *J. Proc. asiat. Soc. Bengal N.S.*, **28**, 357-379; t. 18-23.  
 — Census of Indian algae, scope of algological studies in India. Pt. I. *Revue algol.*, **6**, 197-201.
1933. Glimpses of the Vegetation of South Burma. *J. Bombay nat. Hist. Soc.*, **36**, 285-287.  
 — The role of aquatic vegetation in the biology of Indian waters. *Sir P. C. Ray Memorial Volume*, 315-342, Calcutta.  
 — The distribution of Wild Conifers in the Indian Empire. *J. Indian bot. Soc.*, **12**, 24-47, map, t. 1-2.
1934. Observations on the algal collections from Khasi and Jaintia Hills, Assam, India. *Hedwigia*, **74**, 1-28.  
 — The vegetation of the neighbouring areas of the Raniganj and Jharia Coal Fields. *Trans. Min. geol. metal. Inst. India*, **29**, 61-63.  
 — *Eurya japonica* Thunb. var. *nitida* Korth. forma *kanjilali* Debb. ex Biswas. Ternstroemiaceae. Tribus Ternstroemieae. *Assam Forest Rec.*, **1**, 3, Pl. 2.  
 — *Sterculia khasiana* Debb. ex Biswas. Sterculiaceae. Tribus Sterculieae. *Assam Forest Rec.*, **1**, 5, Pl. 3.  
 — *Chirita mishmiensis* Debb. ex Biswas. *Assam Forest Rec.*, **1**, 21-22, Pl. 9.  
 — *Strobilanthes furcatus* Biswas. Acanthaceae. Tribus Ruellieae. *Assam Forest Rec.*, **1**, 23, Pl.10.  
 — A comparative study of Indian species of *Avicennia*. *Notes R. bot. Gdn. Edinb.*, **18**, 159-166, t., 243-246.  
 — Some foreign weeds and their distribution in India and Burma. *Curr. Sci.*, **2**, 422-425.  
 — Observations on some plant abnormalities in Bengal. *Curr. Sci.*, **3**, 189-193.  
 — Progress of algological studies in India. *Curr. Sci.*, **3**, 237-241.



1935. Observations on the systematic position of *Ficus krishnae* growing at the Royal Botanic Garden, Calcutta. *Curr. Sci.*, **4**, 424-425.
- Jute and allies fibres. *Curr. Sci.*, **4**, 571-572.
  - Studies in Ferns and fern-allies in Burma. *Proc. Indian Sci. Congr.*, **2**, 255.
  - The vegetation of Tundi and neighbouring areas of the Hazaribagh District, Bihar, India. *Trans. Min. geol. metal. Inst. India*, **30**, 59-64.
  - Our Garden Sansevierias. *Sci. Cult.*, **1**, 96-98.
  - Calcutta Filter Works and organic growth. *Sci. Cult.*, **1**, 139-141.
  - Dr P. Brühl (Obituary note). *Sci. Cult.*, **1**, 339-340.
  - Notes on the systematic position of *Sansevieria* growing in India with special reference to *S. laurentii* Wildeman. *J. Bombay nat. Hist. Soc.*, **38**, 154-157.
1936. Common diatoms of the Loktak Lake, Manipur, Assam. *J. asiat. Soc. Bengal*, **2**, 171-176.
- Iodine from seaweeds. *Sci. Cult.*, **2**, 477-478.
  - Resume of the literature of Indian medicinal plants. *Curr. Sci.*, **5**, 173-174.
  - (With TOWNSEND, H. P. V.) Common plants of northern Sikkim. *Proc. Indian Sci. Congr.*, **3**, 291.
1937. Studies on Indian iron bacteria—on the occasion of 80th Birthday of Professor Hans Molisch. *Biologia Gen.*, **13**, 421-434.
- Two new flowering plants. *J. Indian bot. Soc.*, **16**, 57-61.
  - (With CALDER, C. C.) *Handbooks of Common Fresh Water and Marsh Plants of India and Burma*. *Hlth. Bull.*, **24**.
1938. A new nanandrous *Oedocladium* from India. *Revue algol.*, **10** 341-345.
- *Species Novae Descriptae*. *Hooker's Icones Plantarum* t. 3358-3359. London.
  - Two new ferns from India. *Kew Bull.*, **5**, 237-241.
1939. Peculiar behaviour of a banana plant grown at the Royal Botanic Garden, Calcutta. *Sci. Cult.*, **5**, 493-494.
1940. The Royal Botanic Garden, Calcutta. *Sci. Cult.*, **6**, 26-33.
- The Royal Botanic Garden, Calcutta. *150th Ann. Vol. R. bot. Gdn.* 1-12.
  - The role of common algal communities of the river Hughly on the drinking water of Calcutta. *Yr. bk asiat. Soc. Bengal*, **5**, 170-171.
  - Plants of the Lloyd Botanic Garden, Darjeeling. *Rec. bot. Surv. India*, **55**, 369-478.
  - Limnological investigation and improvement of villages. *Sci. Cult.*, **6**, 327-330.
1941. The flora of the Aka hills. *Indian Forest Rec. (N.S.), Bot.*, **3**, 1-62.
- The role of foreign plants in the economic life of Bengal. *Sci. Cult.*, **7**, 279-284.
1942. Algal flora and Mosquito Larvae. *Sci. Cult.*, **8**, 189-196.
- Notes on the occurrence of a cosmopolitan blue-green algae in the hot springs at Wairaki in the thermal region of the North Island of New Zealand. *J. asiat. Soc. Bengal*, **8**, 1-4.
  - Introduction to acclimatisation and prospects of cultivation on commercial scale of the Tung-oil yielding trees in India. *Yr. bk. asiat. Soc. Bengal*, **8**, 160-161.
1943. Systematic and taxonomic studies of the Flora of India and Burma. *Proc. Indian Sci. Congr.*, **II**, 101-152; t., 1-11.
- Systematic position of a common tree fern of the eastern Himalayas with a note on the genus *Cyathea*. *J. asiat. Soc. Bengal*, **9**, 43-47; t., 1.
1944. The Herbarium. *Sci. Cult.*, **10**, 151-154.
- Sir David Prain. Obituary (1857-1944). *Sci. Cult.*, **10**, 34-35.
1945. A general review of the marine algae of the western coast of India. *J. Bombay nat. Hist. Soc.*, **45**, 516-530.
- Cultivation and systematic study of the Tung-oil yielding plants in India. *J. scient. ind. Res.*, **4**, 260-272.
1946. Prospect of cultivation and systematic study of the Tung-oil yielding trees of India. *J. asiat. Soc. Bengal*, **12**, 77-114; t., 1-6.
1947. The Lichen flora of India. *J. asiat. Soc. Bengal*, **13**, 75-114.



1948. (With AWASTHI, D. D.) Distribution of Indian Lichens. *Proc. Indian Sci. Congr. (Bot.)*, III, 216.  
 — (With AWASTHI, D. D.) Cryptogamic collection of the Royal Botanic Garden, Calcutta. *Proc. Indian Sci. Congr.*, III, 217.
1949. Botanical Survey of India—past, present and future. *Proc. 13th ann. Sess. bot. Soc. Bengal*, 1–23.  
 — Botanical notes on the Satpura theory. *Proc. natn. Inst. Sci. India*, 15, 365–367.
1950. The original correspondence of Sir Joseph Banks relating to the foundation of the Royal Botanic Gardens, Calcutta, and the Summary of the 150th Anniversary Volume of the Royal Botanic Gardens, Calcutta. *R. asiat. Soc. Bengal Monog.*, 9, 1–62.  
 — Note on the Cactus plants of India. *Poona Orient.*, 15, 143–145.  
 — Study of the flora of South Calcutta with special reference to the flora of the University College of Science Compound, Ballygunge, Calcutta. *Bull. bot. Soc. Bengal*, Sp. Pub. 1–40.  
 — (With KUMARAN, S.) Indian Dioscoreas and their role in dietary. *J. asiat. Soc. Bengal*, 16, 99–114.  
 — (With SHARMA, A. K.) Sargassa of Indian seas. *J. asiat. Soc. Bengal*, 16, 79–97.  
 — *Bharatiya Banaushadhi*, Calcutta. XXVII–641 P. (in Bengali) [Rev. Edn. 1973, Ashima Chatterjee, Vol. 5].
1951. (With RAO, R. S.) Observations on the vegetation and the new records of the Vindhya Ranges and Panchmarhi Plateau. *Proc. Indian Sci. Congr. (Bot.)*, III, 148–149.
1952. Desert vegetation. *Bull. natn. Inst. Sci. India*, No. 1, 247.  
 — Observations on the vegetation of Eastern Sikkim. *Yr. bk asiat. Soc. Bengal*, 18, 146.
1953. (With RAO, R. S.) Rajputana desert vegetation. *Proc. natn. Inst. Sci. India*, 19, 411. f. 1, t., 1.
1955. (With CHAUDHURI, S. K.) Observations on the strand vegetation of some parts of Bengal, Orissa and Madras. *J. asiat. Soc. Bengal*, 21, 39–54.
1956. Vegetable drugs in the treatment of Leucoderma. *J. asiat. Soc. Bengal*, 22, 61–66.  
 — Cultivation of *Rauwolfia* in West Bengal. *Indian J. Pharm*, 18, 227–232.  
 — (With CHOPRA, R. N.) *Common medicinal plants of Darjeeling and the Sikkim Himalayas*. VI + 157.
1958. *Ipecac Cultivation in India*. New Delhi 44 p.  
 — Vegetable resources of Tripura State. *Amrit. Baz. Patr. Puja Ann.*, 167–170.
1961. Symposium on *Cinchona* cultivation in India—its past, present and future. *J. asiat. Soc. Bengal*, 3, 63–68.
1966. *Plants of Darjeeling and the Sikkim Himalayas* : XXVIII + 540. Calcutta.
1967. Change of plant names. *Sci. Cult.*, 33, 102–104.
1969. Presidential Address of 26th Annual Re-Union. *27th Re-union Souvenir*, 12, 1970 (Posthumous).

