

FLORA OF ASSAM



KANJILAL & BOR

FLORA OF ASSAM

U. N. KANJILAL, F.L.S.



VOL. I. (PART I)
RANUNCULACE Æ TO ELÆOCARPACE Æ

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PREFACE

The first volume of the "Flora of Assam" is presented to the public. A considerable time has elapsed since the first conception of publishing a comprehensive account of the Flora of the province as a botanical unit and an apology is necessary for the delay, but for a large work of this nature it was inevitable. The death of Rai Bahadur U. N. Kanjilal, who originally undertook this work, caused the first interruption and then his son Mr. P. C. Kanjilal, I.F.S., B.Sc., of U.P. who agreed to continue the task from a sense of filial duty, had to return to his province before publication of this work could be taken up. The present writer, who succeeded Mr. P. C. Kanjilal, had to face great difficulties with the selected Press, which proved both highly unsatisfactory and dilatory, so much so that new publishers have had to be found. It is now hoped that the publication of succeeding volumes up to Coniferae will not present any further difficulties.

Monocotyledons will, it is presumed, be an entirely separate publication.

Shillong,

A. Das

INTRODUCTION

Assam Flora is by no means an untrodden ground. Wallich and Griffith explored parts of the province and Sir Joseph Hooker himself paid a visit to the Khasi Hills. Many enthusiastic collectors namely Klien of Cachar, De Silva of Sylhet, Peal of Sibsagar and Commissioner Jenkins of the Brahmaputra Valley contributed large numbers of specimens to the Sibpur herbarium. In recent times perhaps the most energetic worker in this field was Mr. C. B. Clarke, who traversed the whole province several times on foot and made a very extensive collection. Mr. Gustav Mann (the first Conservator of Forests in Assam) has left for his successors a fairly large collection of specimens besides generally contributing to the Sibpur herbarium. Mr. Burkill visited parts of the Khasi Hills and N.E. F. Tract.

Parties of the Botanical Survey of India have, from time to time, been sent out from Sibpur to collect specimen in selected localities.

What was wanting was that no one collected with any idea of presenting to the public a comprehensive 'Flora of Assam' as a botanical unit. This idea was first conceived by Chief Commissioner Sir Archdale Earle, an ardent lover of plants and a keen amateur botanist, and under his patronage the late Rai Bahadur U. N. Kanjilal began working on the compilation of a 'Flora of Assam'. Unfortunately his death before the publication of even the first volume retarded the progress of the work, but his monumental collection, elaborate field notes and drafts have been invaluable to his successors. In subsequent years the collections of Mrs. N. E. Parry in the Garo and Lushai Hills and that of Dr. N. L. Bor, D.Sc., I.F.S., in the Naga Hills and Aka Hills have been a great asset to the province. Mr. P. C. Kanjilal, I.F.S., B.Sc., whose services were obtained on loan from U. P. on the death of his father and who had to return to his province was concerned chiefly in the determination of species, in replenishing the herbarium

and inaugurating a proper herbarium for Assam out of the material available.

He completed the final draft upto Calyciflors and described a few families of Apetalæ before leaving Assam. Thanks are due to him for his absorbing interest in this work and labour of love, so much so that he ungrudgingly devoted his entire leave (nearly 10 months) making progress in his work. It fell to the lot of the writer to complete the work up to Coniferæ, to replenish the herbarium and see it through the Press.

Thanks to the combined labour of many workers, the Assam Flora is fairly well represented in the herbarium of the Royal Botanic Garden at Sibpur through which,—Kew and many other herbaria have received contributions. It may also be mentioned here that the Assam Herbarium has also contributed to the herbaria at Sibpur, Dehra Dun, Gauhati and other places.

The arrangement of the families have been based mainly on Betham and Hooker's *Genera Plantarum* which has been hitherto generally followed in this country. A few modifications have been made in conformity with modern conceptions where necessary and the termination of *aceæ* has been adopted for all families according to present conventions.

Some herbaceous plants have been included, which are beyond the real scope of this work and also a few, that are properly speaking not indigenous to the province. Their economic value and botanical importance warranted this step.

As far as practicable forest characters have been given for the identification of the important forest species *in situ*.

Many new species have in recent years been recorded from the province in different publications of which there are no specimens in Indian herbaria. As far as practicable these have been included.

A new Magnoliaceæ was discovered by the writer in Digboi Reserve in Lakhimpur District, but as he was then engaged in Divisional Forest work, the investigation of the species could not be taken up by him in time.

At the request of Mr. Dandy of the British Museum, complete specimens were forwarded to him who described the plant as *Pachylarnax pleiocarpa*, Dandy. (*Journal of Botany*, November, 1933.)

The following species, new to science, have recently been described and published (The Assam Forest Records Vol. I, 1934)—

- Eurya japonica* var. *nitida* forma *Kanjilali*. (Ternstroemiaceae.)
Sterculia khasiana. (Sterculiaceae.)
Gymnocladus assamicus (Leguminosae-Caesalpinieae.)
Lagerstromia minuticarpa. (Lythraceae.)
Agapetes Kanjilali. (Vacciniaceae.)
Maba cacharensis. (Ebenaceae.)
Symplocos Pealii. (Styraceae.)
Chirita mishmiensis. (Gesneraceae.)
Strobilanthes furcatus. (Acanthaceae.)

A new Myrtaceae (*Eugenia*) and some Lauraceae are under investigation and revision of the Assam *Phoebes* has also been undertaken by the writer and it is hoped that the results of these investigations will be included in the Flora.

The following annexures are given :—

- (1) An Ecological Sketch of the Botany of the Province by the late Rai Bahadur Upendra Nath Kanjilali.
- (2) A Note on the Geology of Assam by Mr. Evans, Geologist to the Burmah Oil Company Limited.
- (3) A Note on Climatology.
- (4) Bibliography.
- (5) Synopsis of Families.
- (6) Glossary of Botanic Terms.
- (7) List of Abbreviations and Signs.

It now remains to acknowledge indebtedness to all those who have rendered assistance in the compilation of this voluminous work.

- (i) Director of Royal Botanic Garden Sibpur; Directors of Kew and the late Mr. J. S. Gamble contributed enormous help in determination of the species and scrutinising dubia sheets.
- (ii) Most of the Forest Officers of the province have contributed by supplying good collections of specimens and furnishing vernacular names which enabled me to make it comprehensive.
- (iii) Mr. Evans has contributed a most interesting Geological note of the province and the Director

Meteorological Department, Poona, has supplied details of records of humidity and temperature of the different stations in the province.

I am personally grateful to Messrs C. C. Calder, Superintendent, Royal Botanic Garden, Sibpur, K. Biswas, M.A., Curator, Sibpur Herbarium, and C. E. Parkinson, Forest Botanist, Forest Research Institute and College, for their ungrudging help in all possible directions, to Mr. C. Purkayastha for going through the proofs and also to the authorities in Assam for their encouragement without which it would not have been practicable for me to complete and publish this voluminous work.

Shillong,

A. DAS.