

STUDY ON THE PTERIDOPHYTIC FLORA OF NAGALAND

By

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Submitted in fulfilment of the requirement of the
DEGREE OF DOCTOR OF PHILOSOPHY



To



NORTH-EASTERN HILL UNIVERSITY
SHILLONG

JUNE 1982

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CERTIFICATE

I certify that the thesis entitled 'STUDY ON THE PTERIDOPHYTIC FLORA OF NAGALAND' submitted by N. Sakutemsu Jamir for the degree of DOCTOR OF PHILOSOPHY of the North-Eastern Hill University embodies the record of the original investigation carried out by him under my supervision. He has been duly registered, and the thesis presented is worthy of being considered for the award of the Ph.D. Degree. This work has not been submitted for any degree of any other University.

R. Raghavendra Rao

Dated: 30/6/82
Shillong

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ACKNOWLEDGEMENTS

The success of completion of this voluminous work goes to a number of persons who have helped me in various capacities during the course of this work.

This gives me a great pleasure to place on record my deep sense of gratitude to Dr. R. Raghavendra Rao, Reader, Department of Botany, North-Eastern Hill University, Shillong for suggesting this problem and for his kind supervision, continual encouragement, useful suggestions, and untiring guidance throughout the course of this investigation.

I am also thankful to Prof. R.R.Mishra, Head of the Department of Botany and Prof. P.S. Ramakrishnan, former Head of the Department for facilities.

The Herbarium of Botanical Survey of India, Shillong was so frequently consulted that almost it formed a second laboratory for my work. Part of the identification work was also done in Central National Herbarium, Calcutta (CAL.). Therefore, I would be failing in my duties if I do not mention a special word of thanks to Dr. S.K. Jain, Director Botanical Survey of India, Howrah; and Dr. J. Joseph, Deputy Director, Botanical Survey of India, Shillong, for extending the herbarium and library facilities whenever I approached them for these

I am also thankful to Prof. S.S. Bir, F.N.A., Head of the Department of Botany, Punjabi University, Patiala for his valuable suggestions and help in identifications of some fern specimens; and also for Herbarium and library facilities extended during my visit to Patiala in connection with the present study.

My grateful thanks are also due to the authorities of Forest Department of Nagaland for their help during field work in Nagaland.

I am also thankful to Dr. S. Myrthong for his help in typing of the thesis and also for his help in various ways during the course of ~~this~~ investigation. Mr. Bijoy Das of this Department has greatly helped me in the photographic work and has thus earned my grateful thanks.

Lastly, my sincere thanks are also due to my colleagues in this Herbarium, Mr. K. Haridasan, Y. Kumar, M. Satpute and Dr. Bhaskar Neogi for their cooperation and help during the course of this work.

INTRODUCTION

Pteridophyta, the first group of spore-bearing vascular plants, include the fern-allies (Lycopodium, Selaginella, Equisetum) and the true ferns. The latter constitute a major group of living pteridophytes, which are adapted to a wide variety of habitats. Pteridophytic flora of northeast India is specially quite rich, on account of the favourable climate and plentiful moisture, and form a conspicuous feature of the vegetation and landscape. But unfortunately, this group of plants has not received due attention by plant explorers and flora writers, mainly because of the difficulty involved in their identification.

Nagaland, one of the hill states in northeast India supports a very rich and luxuriant vegetation. This state, which came into existence on 1st December, 1963, formed a part of earlier Assam, which is considered to be one of the richest and interesting 'Botanical Provinces' of the Indian subcontinent. But still, there is no comprehensive flora of this state, though Nagaland along with the neighbouring regions once formed a famous hunting ground for a number of British botanists from time to time (Buchnan-Hamilton, 1820; Roxburgh, 1820-24; Griffith, 1837; Masters, 1844; Hooker, 1855, 1872 - 1897; Hooker and Thomson, 1851; Clarke, 1880, 1889; Bor, 1940, 1942). Masters's (1844) remarks on the flora of Naga Hills "I presume it would occupy an experienced Botanist 10 years to explore the whole of Naga Hills, from the Booreediing to the Dhunsiri in a satisfactory manner,

none of them having been hitherto visited by any Botanist" partly holds good even today.

The only regional account of the flora is that of Kanjilal *et al.*, (1934-40), which deals only with dicotyledonous species (except for Poaceae by N.L.Bor, 1940). Pteridophytes plants are totally excluded in this work. Further, subsequent to the publication of this regional flora (Kanjilal *et al.*, 1934-40) there has been a large scale alteration in the native flora of the state, owing to the practise of the so called 'jhuming' or shifting agriculture (Rao, 1978). It is therefore, not only essential but worth recording the plant species of the state before we are left with many barren grass-covered hills, devoid of any luxuriant vegetation. Besides, basic information about plant species is highly essential for fuller exploitation of our plant resources, and this is particularly so for a state like Nagaland, which along with other states in northeast India is on the threshold of numerous intensive programmes of development.

After the reorganisation of Botanical Survey of India and with the establishment of a separate regional circle at Shillong in 1956, some significant collections have been made from Nagaland but with a bias towards flowering plants. Further, these collections are mostly centred around Kohima and Mokokchung districts. The only existing fragmentary accounts of Pteridophytic plants of the earlier Assam (including the present Nagaland) are those of Panigrahi (1960) and Kachroo (1953, 1975), and these again are based

on insufficient collections.

Thus, there exists a conspicuous gap in our knowledge of the flora of Nagaland, and as a prelude towards achieving a full flora of the state, the present account 'Pteridophytic flora of Nagaland' is attempted here, based on extensive collections and first hand field informations gathered during 1978 - 82.

LOCATION AND AREA

The state of Nagaland lies between $25^{\circ}6'$ - $27^{\circ}4'$ N and $93^{\circ}20'$ - $95^{\circ}15'$ E in north-east India and has an area of 16527 km^2 . It is bordered on the north by Arunachal Pradesh, on the west and north west by Assam on the south by Manipur and on the east by Burma (Fig. 1). The altitude varies from 194 m to 3048 m, with the highest peak lying in Saramati hills in the Tuensang district on the Burma border.

Present Nagaland which includes Naga Hills district of Assam (established in 1881) and the Tuensang division of North-East Frontier Agency (NEFA) is divided into 7 administrative units or districts, viz., Kohima, Phek, Mokokchung, Wokha, Zunheboto, Tuensang and Mon; each district being inhabited by a distinct subtribe of the Nagas.

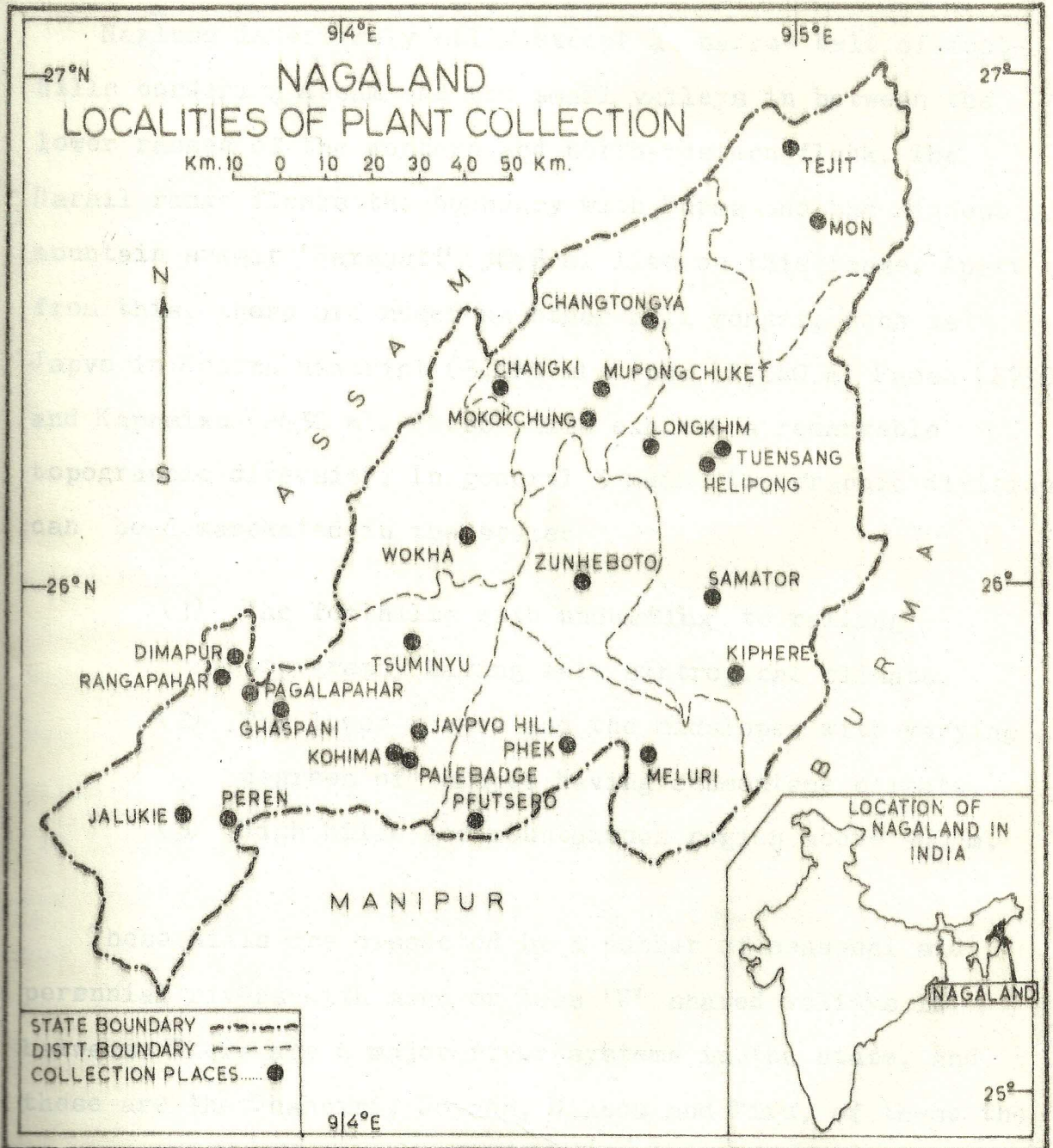


Fig. 1