ORCHID FLORA OF MAKALU-BARUN NATIONAL PARK, EASTERN NEPAL

A DISSERTATION SUBMITTED FOR THE PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTERS DEGREE OF SCIENCE IN BOTANY

SUBMITTED BY
DAMBAR BAHADUR KARKEE
2055 / 56
T. U. Regd. No. 469- 87
Roll No. - 0050
CENTRAL DEPARTMENT OF BOTANY
TRIBHUWAN UNIVERSITY
KATHMANDU, NEPAL
2008

Kirtipur, Kathmandu, Nepal

Recommendation

This is to certify that Mr. Dambar Bahadur Karkee carried out the dissertation work entitled 'Orchid Flora of Makalu-Barun National Park, Eastern Nepal' under my supervision. The results have not been submitted for any other academic degree.

I, therefore, recommend this dissertation to be accepted for the partial fulfillment of Masters of Science in Botany.

Date…….....

Prof. Dr. R. P. Chaudhary
Central Department of Botany
Tribhuvan University
Kathmandu, Nepal.

Expert Committee

Tribhuvan University
Central Department of Botany
Kirtipur, Kathmandu, Nepal.

This dissertation entitled 'Orchid Flora of Makalu-Barun National Park, Eastern Nepal' submitted by Dambar Kahadur Karkee has been accepted as partial fulfillment of the requirement of the M. Sc. Botany.

Examination Committee

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Prof. Dr. K. K. Shrestha	Prof. Dr. R. P. Chaudhary
Head of Department	Supervisor

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Dr. L. R. Shakya	Dr. D. M. Bajracharya	Dr. S. Ghimire
Co- supervisor	External Examiner	Internal Examiner

Acknowledgements

I am deeply indebted to my supervisor Prof. Dr. R. P. Chaudhary, Central Department of Botany for his valuable guidance and encouragement in the completion of this dissertation.

I am grateful to Dr. L. R. Shakya, Lecturer, Amrit Science Campus, for co-supervision and providing constant guidance for illustration and completion of dissertation.

I cordially express my gratitude to Prof. Dr. K. K. Shrestha, Head of the Central Department of Botany for providing me facilities. I am grateful to Prof. Dr. Sanu Devi Joshi, Former Head of the Department of Botany for providing me the opportunity to conduct the dissertation.

1 am grateful to Norwegian Council for Development Research and Education (NUFU) for providing financial support to visit study area.

Sincere gratitude goes to Prof. Dr. V. N. P. Gupta and Dr. H. D. Lekhak, Central Department of Botany for valuable suggestions during field visit and my dissertation work.

I would like to thank my colleagues and staffs of National Herbarium and Plant Laboratories, Godawari for providing me facilities to study herbarium specimens and various helps during this work.

I am grateful to my mother and family for their support and encouragement.

Date……

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Dambar Bahadur Karkee

Abstract

This dissertation documented the list and their distribution of orchid species in Makalu-Barun National Park, which exhibited rich diversity of orchid flora. Two visits were made in 1998-1999 to the field to collect plant from different localities. Altogether 107 species of orchids belonging to 47 genera were recorded. Among them 74 were epiphyte, 31 were terrestrial, 2 were lithophytes and 1 species was saprophyte. It was observed that most of the epiphytic species were growing on trunk and bark of the trees.

The maximum number of species represented by genera *Dendrobium* (9 species) followed by *Coelogyne & Eria* (each 8 species). *Calanthe* represented (6 species), *Bulbophyllum, Cymbidium, Oberonia* & *Liparis* represented (each 5 species), *Gastrochilus* represented (4 species), *Habenaria, Malaxis, Pholidota* & *Otochilus* represented (each 3 species), *Cleisostoma, Goodyera, Platanthera, Geodorum, Pleione, & Satyrium* represented (each 2 species). The genera represented by single species are *Acampe, Aerides, Agrostophyllum, Anthogoium, Arundina, Chusua, Cryptochilus, Diphylax, Epigenium, Galearis, Galeola, Herminium, Ione, Luisia, Ornithochilus, Panisea, Pecteilis, Phalaenopsis, Pteroceras, Rynchostylis, Smitinandia, Stereochilus, Spiranthes, Thelasis, Tainia, Thunia, Vanda, Vandopsis* and *Zeuxine.*

Tropical region (350-1000m) comprised of 32 species among them 25 were epiphyte and 7 species were terrestrial. Subtropical region included 14 localities and comprised of 71 species, among them 57 species were epiphytes, 14 species were terrestrials and few were lithophytes. Temperate region (2000-3000m) included 6 localities and comprised of 36 species among these 13 species are terrestrial. Sub alpine region (3000-3500m) comprised of 7 terrestrial species.

Among 31 terrestrial species, Chepuwa sector comprised of 11 species and Num & Tumlingtar sectors comprised of 7 species each. Subtropical region comprised of 14 species and temperate region comprised of 13 species.

Chichila forest comprised of 31 species and Tashigown forest comprised of 24 species. 29 species belong to 19 genera were recorded as medicinal orchids, 9 species belong to 7 genera found rarely and only 8 species were recorded as very common species in the studied area. *Oberonia parvula* subsp. *arunense* is new taxon *and Tainia minor* is new record for Nepal.

Contents

Abbreviations

DMP	Department of Medicinal Plants
DOM	Department of Hydrology and Meteorology
DPR	Department of Plant Resources
KATH	National Herbarium & Plant Laboratories
MBNP	Makalu Barun National Park
RONAST	Royal Nepal Academy of Science and Technology
RBG	Royal Botanical Garden, Godawari.
TUCH	Tribhuvan University Central Herbarium, Kirtipur
T. U.	Tribhuvan University

LIST OF THE FIGURE