

**TAXONOMIC AND PHYTOCHEMICAL STUDY OF THE
MEDICINALLY KNOWN SPECIES OF *GLOCHIDION* J.R. FORST.
& G.FORST. (PHYLLANTHACEAE) OF ASSAM**

**A THESIS SUBMITTED TO
THE DEPARTMENT OF BOTANY, BODOLAND UNIVERSITY
FOR THE AWARD OF
DEGREE OF DOCTOR OF PHILOSOPHY IN BOTANY
UNDER
FACULTY OF SCIENCE AND TECHNOLOGY**



***SUBMITTED BY*
PRIYANKA BRAHMA
ENROLLMENT NO.: PHDBOT19D002
PH.D. REGISTRATION NO.: BOT00322 OF 2019-2020
DEPARTMENT OF BOTANY, BODOLAND UNIVERSITY
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**BODOLAND UNIVERSITY
DEPARTMENT OF BOTANY**

**Debargaon, P.O. Rangalikhata
Kokrajhar-783370, BTR, Assam, India**

*Dr. Sanjib Baruah
Assistant Professor*

*Contact No: +91 8638755491
Email: sanjibbaruah9@gmail.com*


Dated: 21/02/2025

CERTIFICATE

I am pleased to forward this Ph.D. thesis entitled "**TAXONOMIC AND PHYTOCHEMICAL STUDY OF THE MEDICINALLY KNOWN SPECIES OF *GLOCHIDION* J.R. FORST. & G.FORST. (PHYLLANTHACEAE) OF ASSAM**" by Miss Priyanka Brahma, submitted for the award of the Degree of Doctor of Philosophy (Ph.D.) in Botany in the faculty of Science and Technology.

Miss Priyanka Brahma has carried out this work under my supervision and fulfils all the requirements under the Ph.D. Regulations of Bodoland University. She has been registered under Bodoland University with Final Registration No. BOT00322 of 2019-2020.

I further certify that the thesis is entirely original and her own investigation and no part of the thesis have been submitted to any other university or anywhere for the award of any degree.


21/02/2025
Signature

Dr. Sanjib Baruah
Assistant Professor
Dept. of Botany
Bodoland University
Kokrajhar-783370

DECLARATION

I, Priyanka Brahma, hereby declare that the thesis entitled **“TAXONOMIC AND PHYTOCHEMICAL STUDY OF THE MEDICINALLY KNOWN SPECIES OF *GLOCHIDION* J.R. FORST. & G.FORST. (PHYLLANTHACEAE) OF ASSAM”**, is a bonafide Ph.D. work done by me under the supervision of Dr. Sanjib Baruah, Assistant Professor, Department of Botany, Bodoland University. This thesis is submitted to Bodoland University for the award of a degree for Doctor of Philosophy (Ph.D.) at Bodoland University bearing Ph.D. Enrollment No. PHDBOT19D002 and the Final Registration No. BOT00322 of 2019-2020. The thesis is the result of my own investigation and is original, and has not been previously submitted for the award of any degree or other research works.

Priyanka Brahma
(Priyanka Brahma)

Place: Kokrajhar

Dated: 21st February, 2025

Department of Botany
Bodoland University

I would like to dedicate this thesis to my late father, my beloved mother, sisters and brother.

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Abbreviation used

ARUN = Arunachal Pradesh Regional Centre, Itanagar

ASSAM = Botanical Survey of India, Eastern Regional Centre

Aug. = August

BM = The Natural History Museum, London

BSI = Botanical Survey of India

BUBH = Bodoland University Botanical Herbarium

°C = Degree Celsius

ca. = circa

CAL = Central National Herbarium, Howrah

cm = centimetre

Co = Cobalt

CSIR-IIIM = Council of Scientific & Industrial Research-Indian Institute of Integrative Medicine

Dec. = December

DF = Degrees of freedom

DPX = Dibutylphthalate Polystyrene Xylene

et al. = et alia/and others

eV = electron volts

FD = Frontier Division

Feb. = February

FeCl₃ = Ferric chloride

g = gram

GAE = Gallic Acid Equivalent

GBIF = Global Biodiversity Information Facility

GPS = Global Positioning System

H₂SO₄ = Sulphuric acid

HCL = Hydrochloric acid

IC₅₀ = Half-maximal inhibitory concentration

IPNI = International Plant Names Index

Jan. = January

K = The Royal Botanic Garden, Kew

L = Naturalis Biodiversity Center, Netherlands

LS = Longitudinal Section

LWG = CSIR-National Botanical Research Institute, Lucknow

µg = microgram

µL = microlitre

µm = Micrometre

m = metre

M = Molarity

mg = milligram

min. = minute

mL= millilitre

mM = millimolar

NBRI = National Botanical Research Institute

NEFA = The North East Frontier Agency

NIST = National Institute of Standards and Technology

nm = nanometre

no.= number

NY = The New York Botanical Garden

POWO = Plants of the World Online

ppm = parts per million

P value = Probability value

RRLH = CSIR -IIM's Janaki Ammal Herbarium, Jammu

Sept. = September

TAE = Tannic Acid Equivalent

UV = Ultra Violet

var. = variety

Vis = Visible

viz. = videlicet

WFO = World Flora Online