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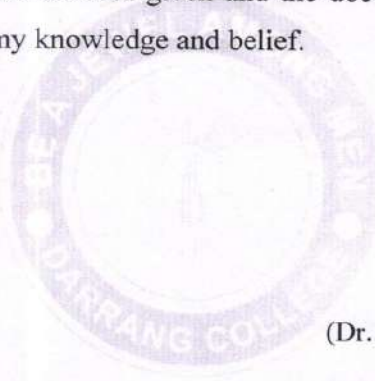
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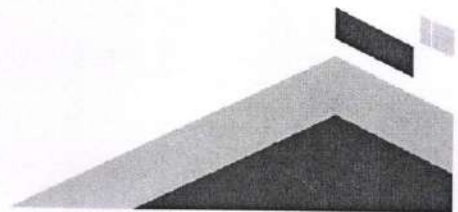
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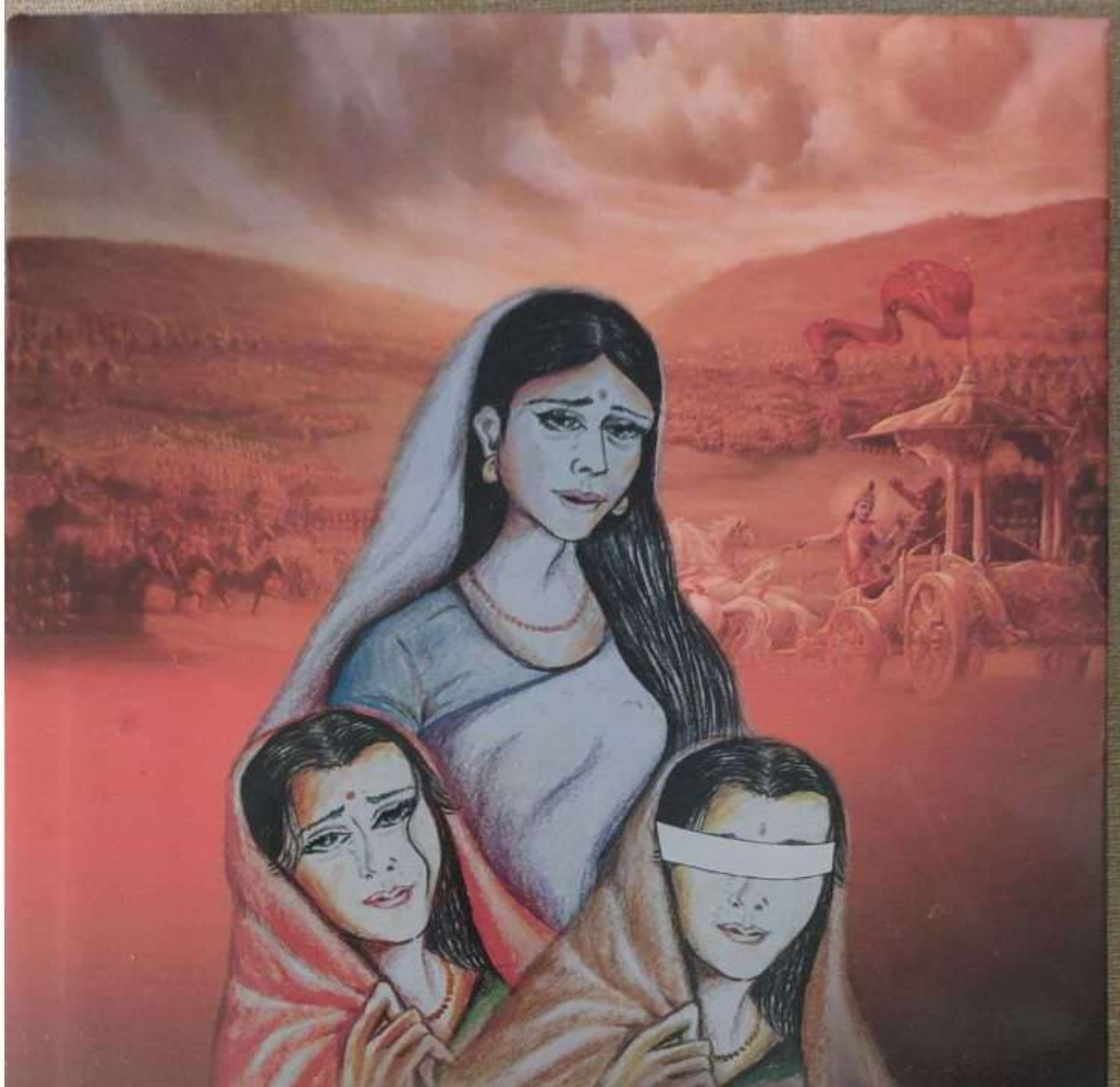
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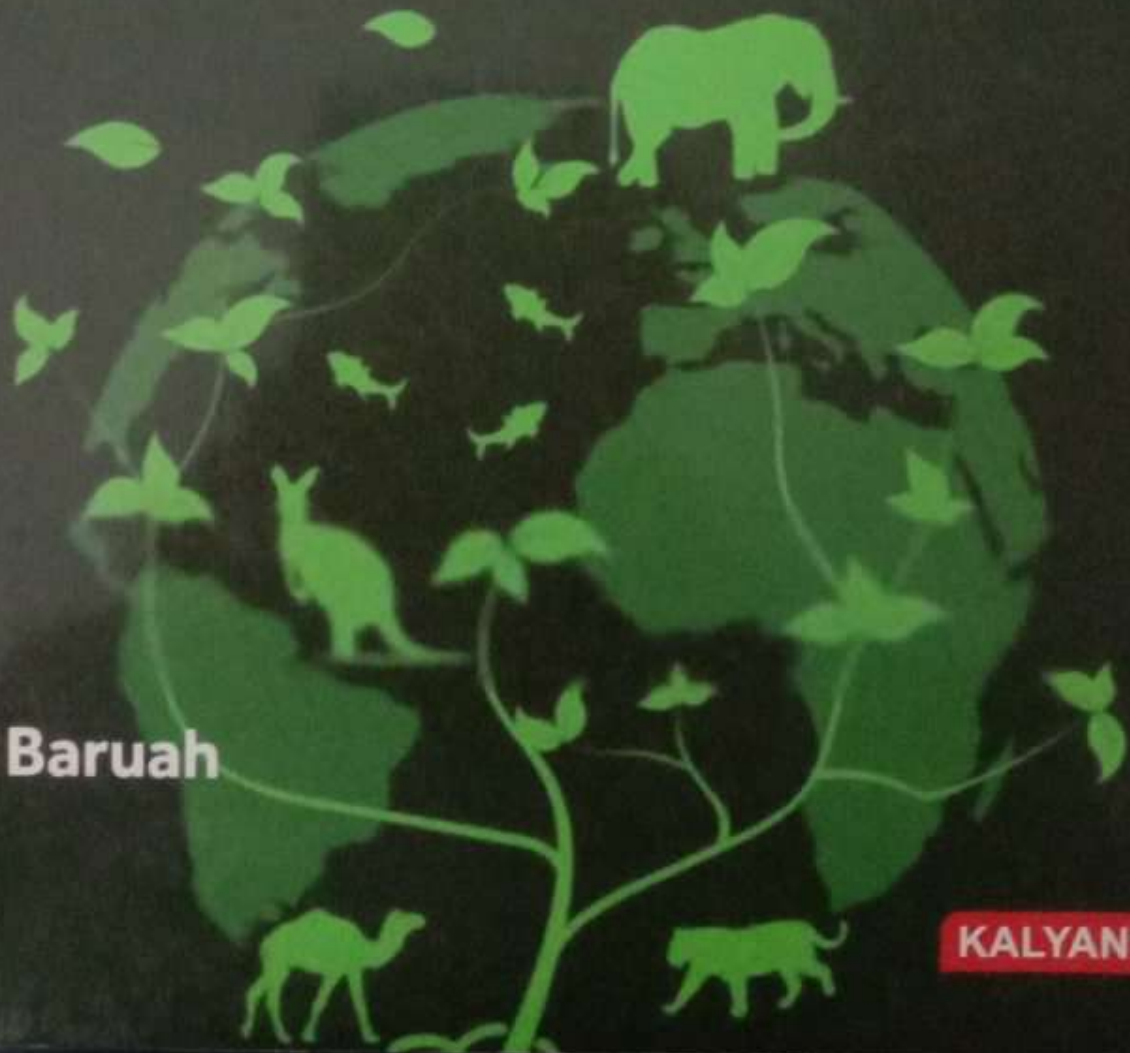
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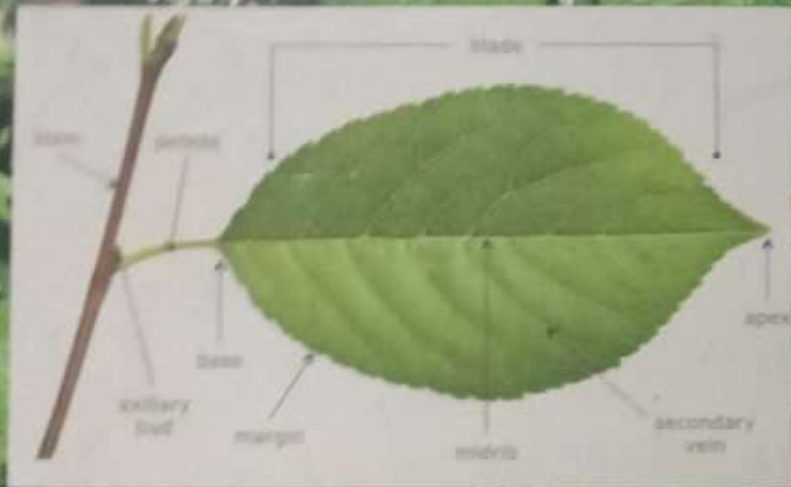
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Dr. Nath is presently working as Assistant Professor in the Department of Agricultural Biotechnology, Assam Agricultural University, Jorhat. He is so far credited with one US patent, one Indian patent, 12 research papers, one Review articles, 5 book chapters, 3 laboratory manuals, 10 seminar presented papers, 2 talks as resource person, 3 Ph. D. students and 12 M.Sc. Students successfully completed post-graduation under his supervision. Presently, he is guiding one Ph. D. students and 4 M.Sc. students.



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Dr. Akhil Baruah

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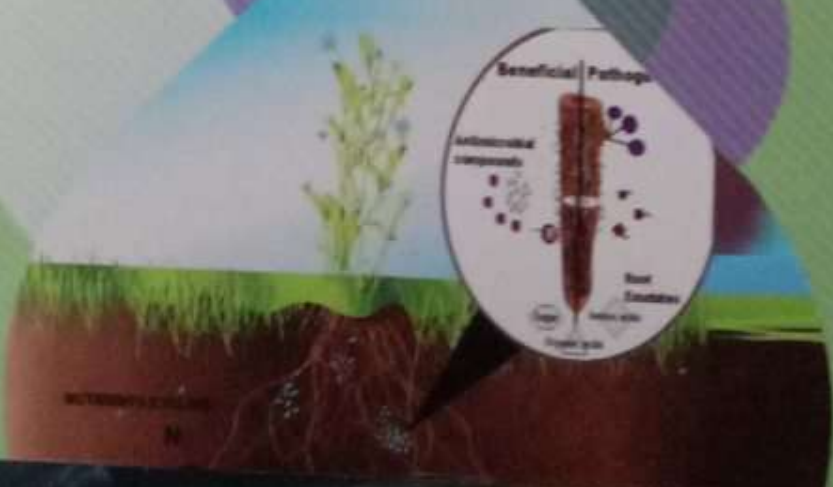
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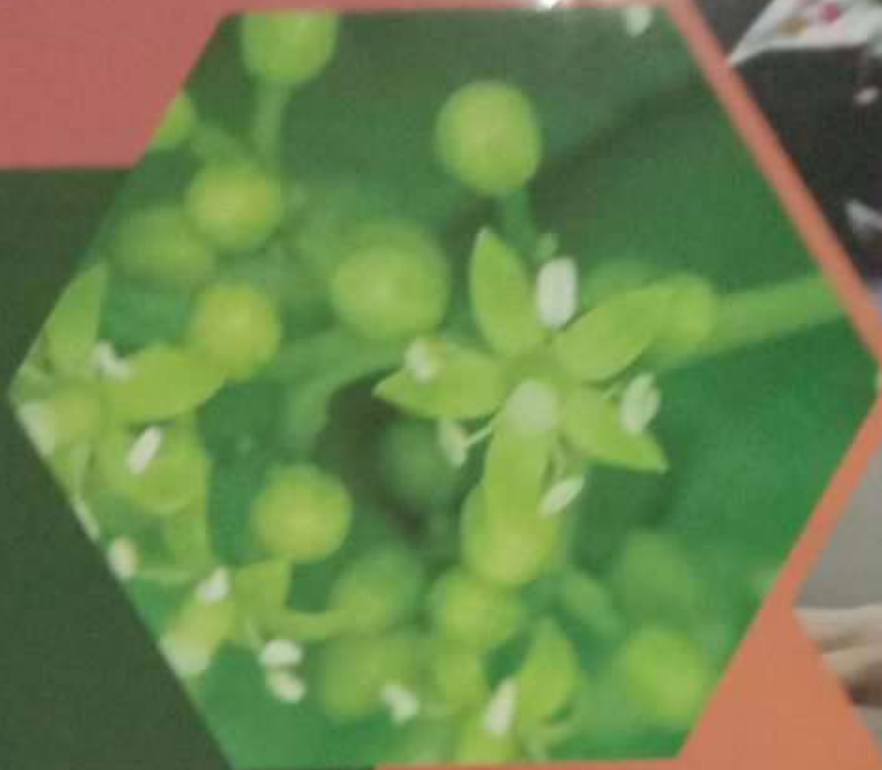
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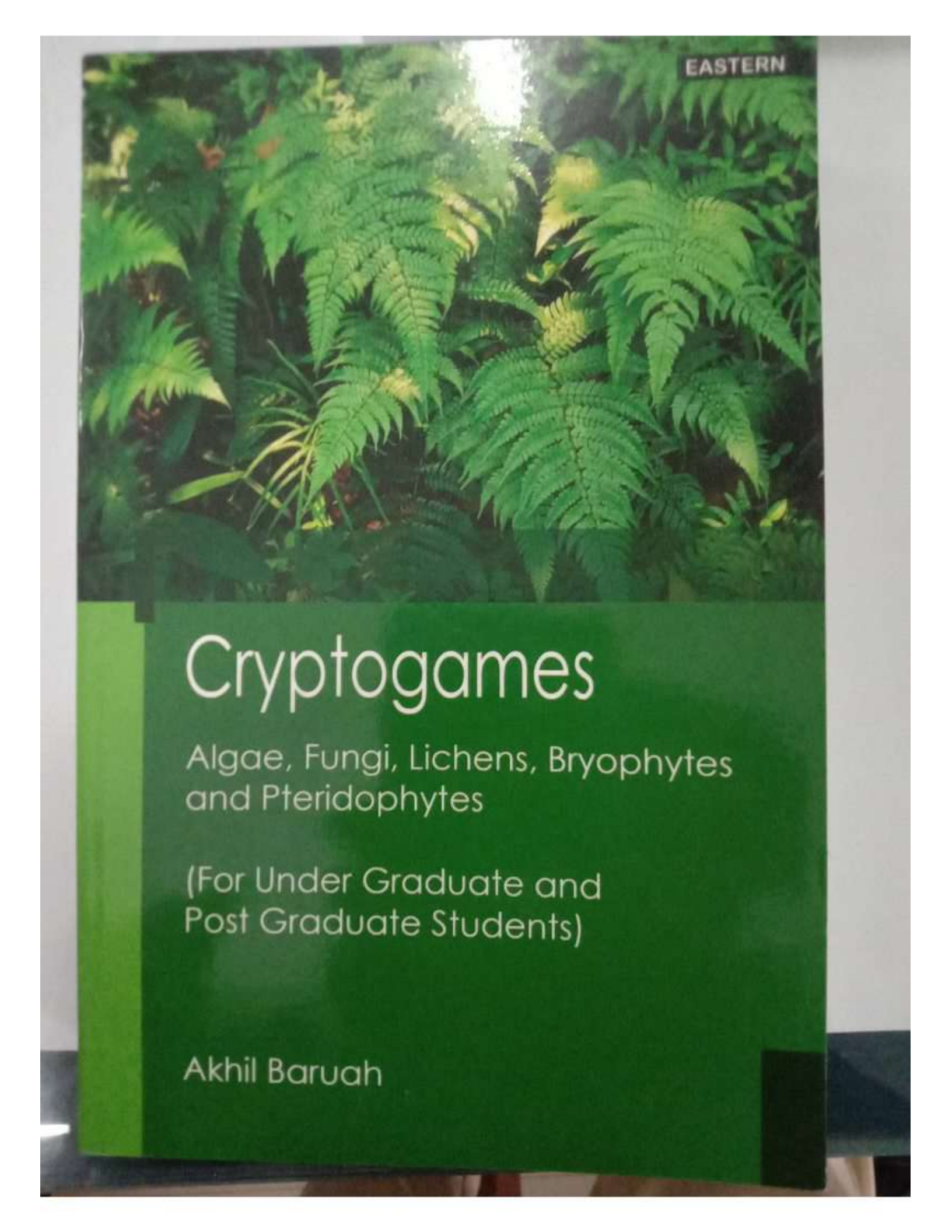
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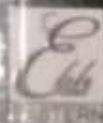
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Dr. Ashish Kar is presently serving as Fellow Scientist in The Energy and Resources Institute (TERI), Northeastern Regional Centre, Guwahati. He is so far credited with 92 research papers/ book chapters, 3 books, 5 scientific articles, 1 patent and delivered 9 talks as resource person.

He has contributed a book chapter in the volume 8 (India) of the prestigious book "*Medicinal and Aromatic Plants of the World*" published by the Springer Nature Switzerland AG.

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Dr. Akhil Baruah, FES, FIAT, FLS (London), FAPT, Awardee of National Scholarship (1989-1990), CSIR-Junior Project Fellowship (1994-1996), CSIR-Senior Research Fellowship (1996-1999) and CSIR-Extended Senior Research Fellowship (1999-2000).

For his outstanding research contribution, he has been awarded "9th Dr. Biju Mohan Das Memorial Science Award, 2007" in Biological Science.

In recognition of his all round excellence as an educatorist as well as for his excellent Academic and Research activities, Oil India Limited has been awarded/selected him the "Oil Shiksha Ratna Puraskar, 2017" on the auspicious occasion of Teachers' day.

Dr. Baruah has also been selected for the "Best Teacher Award, 2020" by the IQAC of Darrang College, in recognition of his all round excellence in Academic, Research and other activities. The IQAC has been instituted this Award for the first time in the "Platinum Jubilee" year (1945, 26 July-2020) of this premier institute.

However, Asomiya Club, Tezpur on its 108th Foundation Day on 15 April 2023, recently facilitated him for his overall excellence in Academic, Research and other activities.

Dr. Baruah is presently serving as Associate Professor & Former HoD, in the P.G. Department of Botany, Darrang College, Tezpur under Gauhati University, Gauhati, Assam. He is so far credited with 161 research papers/book chapters, 53 Books (47 solo/first authored + 6 Edited), 34 seminar presented papers, delivered 11 talks as resource person/speaker, more than 235 popular science articles, credited with 1 patent, supervised many Undergraduate and Post graduate students for their projects / dissertations, discovered 4 new aromatic plant taxa, 3 new types of stomata, and many promising aromatic & spice plant resources for natural essential oils of fragrance, flavour & pharmaceutical values from Northeast India.

One of his books entitled 'Tejpat – the Indian Bay Leaves' published (2011) from Germany has been recently published (2021) in 5 European Language Editions. These are Tejpat – les feuilles de la baie d'Inde in French, Tejpat – die indischen Lorbeerblätter in German, Tejpat – le foglie della baia indiana in Italian, Tejpat – indyjskie Liście Zalci in Polish and Tejpat – as Folhas da Baía da Índia in Portuguese.

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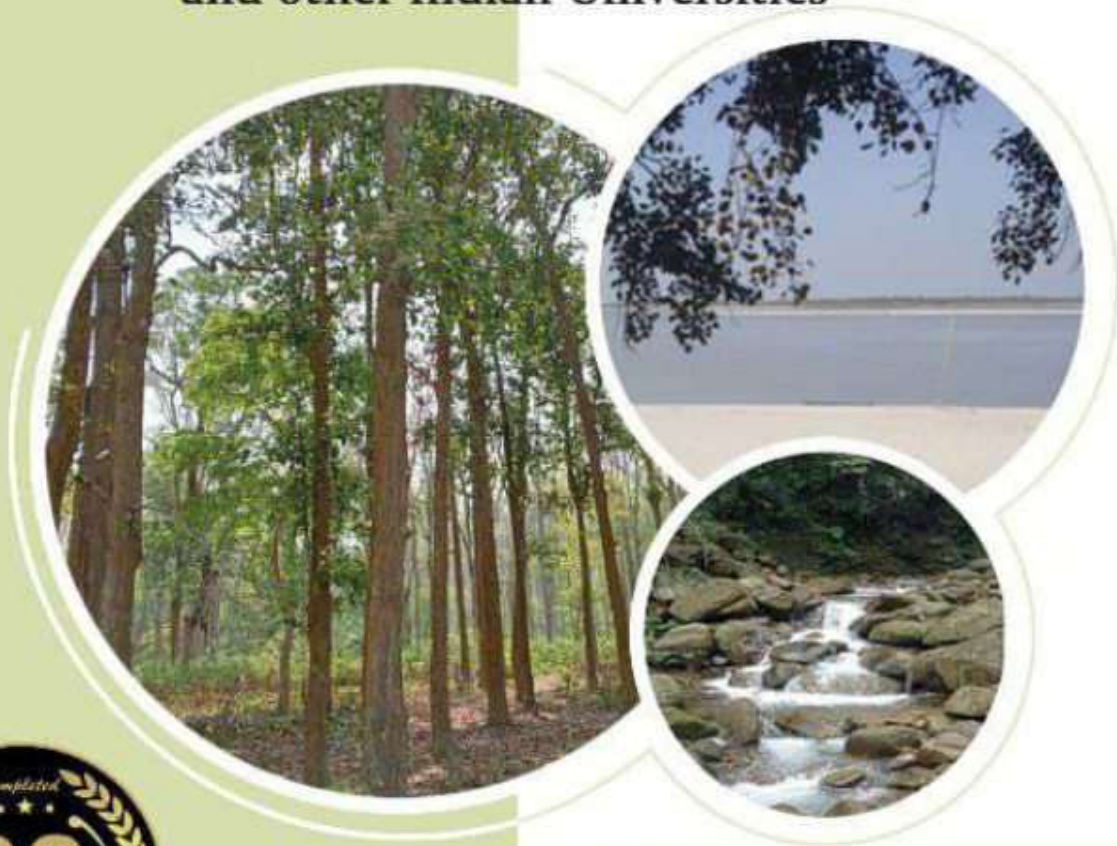


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Dr. Deka has received Merit award certificate for best graduate from Pub Kamrup College, (Gauhati University) in 2003, Financial assistance for participating in international symposium on Insects, Entomological society of Malaysia (Held on 3-5th Dec, 2012) from Science and Engineering Research Board; DST (Under International Travel support scheme), InSc. Research Excellence Award 2020, Young Scientist award (8th Academic Achievement Award-2020) and Young Scientist Award – 2021 (3rd National Conference on "Recent Advances in Crop Protection Including IPM and Environmental Sciences from GLP Perspective" Chennai, organized by the Dr. B. Vasantharaj David Foundation). He is a member of the "Entomological Society of America", Member of the "European Federation of Biotechnology", Member of the "International Association of Computer Science and Information Technology," Singapore (IACSIT), Zoological Society of Assam (ZSA) and Member of the Asia-Pacific Chemical, Biological, & Environmental Engineering Society (APCBES), Hong Kong. He is an Editorial Board Member of the *Asian Journal of Conservation Biology* (AJCB) (Scopus).



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The roofed turtles of Genus Pangshura



Chittaranjan Baruah
Dhirendra K Sharma

The freshwater roofed turtles of Genus *Pangshura*

Reptilia: Testudines: Geoemydidae: *Pangshura*

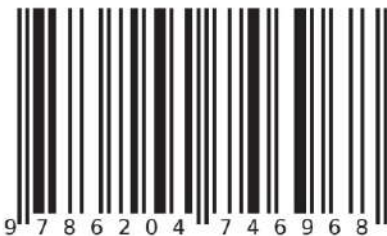
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The book entitled “The freshwater roofed turtles of Genus Pangshura” has been prepared as a part of Turtle Conservation genetics Research efforts in India. The genus Pangshura belongs to the family Geoemydidae and includes highly endangered South and South-east Asian turtle species. It contains 4 species namely Pangshura tecta, Pangshura sylhetensis, Pangshura smithii and Pangshura tentoria. The work presented in this book might have a lot of implication for biodiversity documentation and could be used to clarify taxonomic uncertainties of certain Pangshura species. The book addresses the gaps in our understanding of the biogeography of Pangshura in Indian subcontinent. Conservation genetics data presented in this book will be helpful to design effective management plan in future.

Dr. Chittaranjan Baruah, Assistant Professor, Postgraduate Department of Zoology, Darrang College, Tezpur, Assam, India; Member of IUCN & Editor, AJCB.

Dhirendra Kumar Sharma, Professor in the Department of Zoology, University of Science and Technology, Meghalaya, India; Former Professor & Head Department of Zoology, Gauhati University, India.



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শংকৰদেৱ

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◆ মূল পাঠ : নাৰায়ণ, কাহে ভকতি		২০
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◆ মূল পাঠ : গজেন্দ্ৰ উপাখ্যান		৩১
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□ কীৰ্ত্তনৰ গজেন্দ্ৰ উপাখ্যান আৰু শিশুলীলা	ড° বিনীতা বৈশ্য	৫৪
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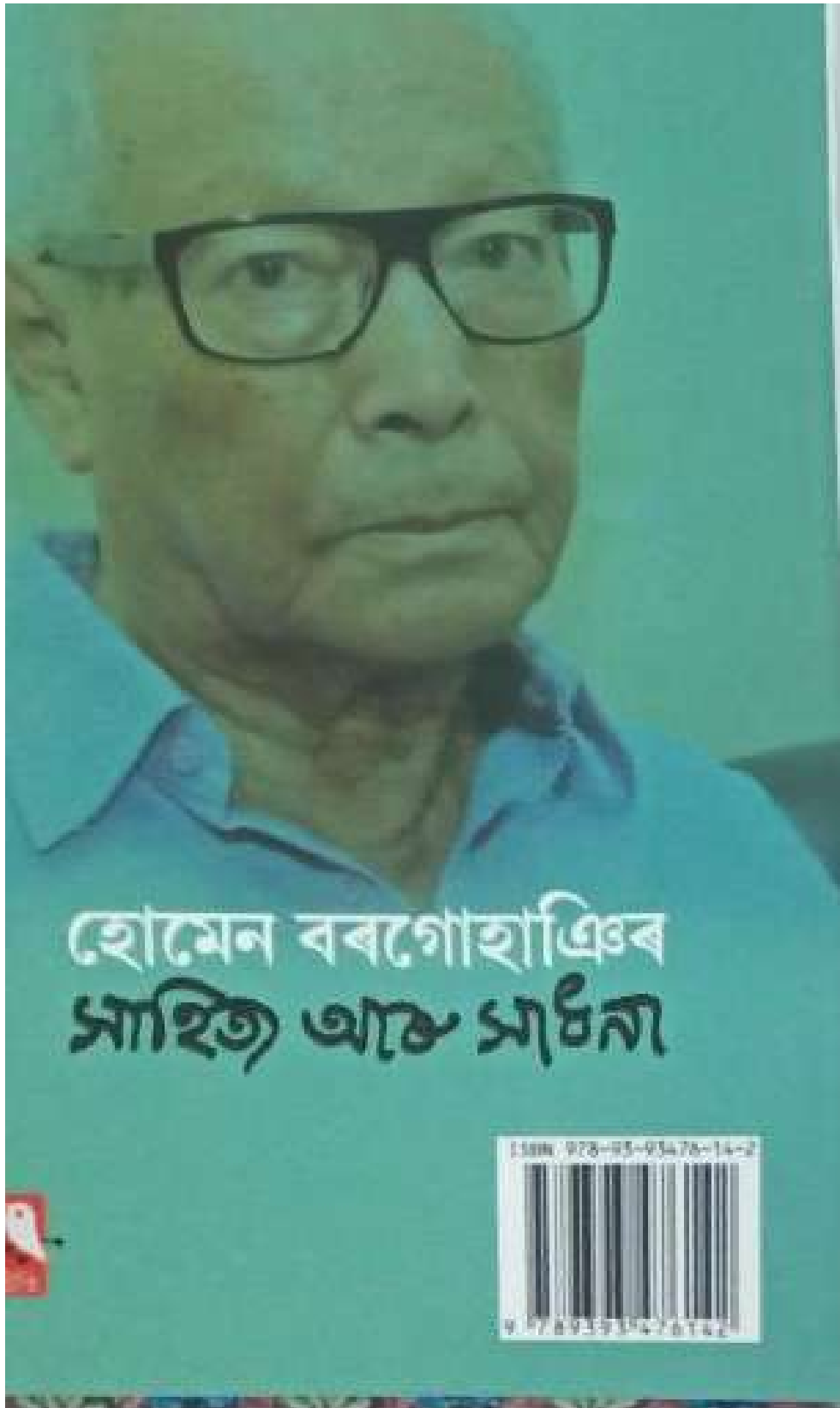


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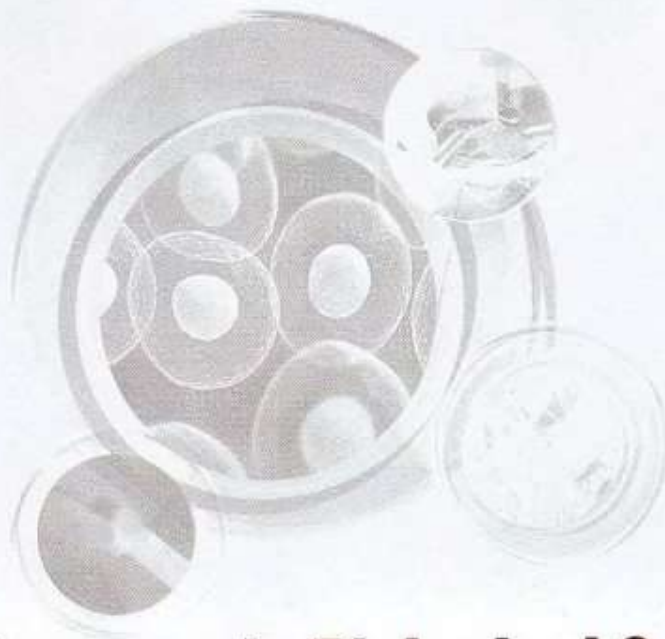
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1st Year

Dr. Akhil Baruah • Dr. Chittaranjan Baruah



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(PART -1)

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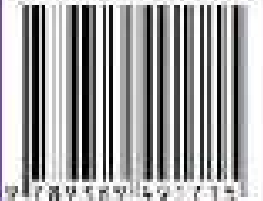
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অসমৰ সামাজিক আৰু ৰাজনৈতিক ইতিহাসৰ এক প্ৰাচীন পৰম্পৰা আছে। এই পৰম্পৰাই সময়ৰ অগ্ৰগতিত নিত্য নতুন ৰূপ লাভ কৰি আহিছে। ছশ বছৰীয়া আহোম ৰাজত্বৰ অন্তত আৰু অত্যাচাৰী মানৱ উপদ্ৰৱৰ শেষত অসমত বৃটিছ শাসকগোষ্ঠীৰ প্ৰবেশ ঘটিছিল। বৃটিছৰ প্ৰবেশৰ ফলস্বৰূপে অসমৰ সমাজ জীৱনত ব্যাপক পৰিবৰ্তন সাধিত হ’ল। বৃটিছ শাসকগোষ্ঠীৰ প্ৰায় সমসাময়িকভাৱে অসমলৈ আগমন ঘটিছিল আমেৰিকান বেপ্টিষ্ট মিছনেৰীসকলৰ। আমেৰিকান বেপ্টিষ্ট মিছনেৰীসকলৰ অসম আগমনৰ লগে লগে অসমীয়া সাহিত্যতো আধুনিকতাৰ বাট মুকলি হ’ল। ঊনবিংশ শতিকাত অসমত সংঘটিত অনেক ঘটনাৰ ভিতৰত খ্ৰীষ্টান মিছনেৰীসকলৰ উদ্যোগত ‘অৰুনোদই’ পত্ৰিকাৰ প্ৰকাশ অসমীয়া সামাজিক-সাংস্কৃতিক জীৱনৰ এক উল্লেখযোগ্য ঘটনা আৰু এই ‘অৰুনোদই’ৰ জৰিয়তেই অসমীয়া আলোচনীৰ ভেটি প্ৰতিষ্ঠিত হ’ল। সংগ্ৰাম আৰু বিভিন্ন ঘাত-প্ৰতিঘাতৰ মাজেৰে অসমীয়া আলোচনীয়ে ডেৰশ বছৰৰো অধিককালৰ পথ-পৰিক্ৰমা অতিক্ৰম কৰিছে আৰু অসমীয়া আলোচনী সাহিত্যৰ ইতিহাসক পল্লৱিত, সমৃদ্ধ আৰু ব্যাপ্ত কৰি তুলিছে।

১৯০৭ চনত পদ্মনাথ গোহাঞিবৰুৱাৰ সম্পাদনাত প্ৰকাশিত ‘উষা’ আছিল অসমীয়া আলোচনী জগতৰ এখন আগশাৰীৰ আলোচনী। ই আছিল মূলতঃ সমাজ, সাহিত্য, বিজ্ঞান, কৃষি, শিল্প, বাণিজ্য ইত্যাদি বিষয়ক। এই আলোচনীখন প্ৰকাশ কৰাৰ আঁৰত আছিল গোহাঞিবৰুৱাৰ একান্ত সাহিত্যভাবনা। নিজৰ সাহিত্য চৰ্চাৰ লগতে সেই সময়ৰ অসমীয়া মানুহৰ মাজত সাহিত্যবিষয়ক চিন্তা দাঙি ধৰাৰ উদ্দেশ্যে তেওঁ এখন আলোচনী প্ৰকাশৰ পৰিকল্পনা কৰিছিল আৰু এই পৰিকল্পনাকে বাস্তৱত ৰূপায়িত কৰি সম্পাদনা কৰিছিল ‘উষা’। এই ক্ষেত্ৰত তেওঁক উদ্গনি যোগাইছিল পূৰ্বৱৰ্তী অসমীয়া আলোচনীৰ ক্ষীণকায় অৱস্থাটোৱে।

১৯০৭ চনত পদ্মনাথ গোহাঞিবৰুৱাৰ সম্পাদনাত প্ৰকাশিত ‘উষা’ আছিল অসমীয়া আলোচনী জগতৰ এখন আগশাৰীৰ আলোচনী। ই আছিল মূলতঃ সমাজ, সাহিত্য, বিজ্ঞান,

GENDER EQUALITY AND SUSTAINABLE DEVELOPMENT



Sujata Choudhary
Parbin Hussain

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Gender Equality and Sustainable Development

By : Dr. Sujata Choudhary

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4.

Awareness on Menstrual Hygiene Management Among the Girls and Women : A Case Study Based on an NGO

Dr. Gakul Kumar Das*

Introduction

In the battleground of the building a nation the Non-Government Organizations has a vital role. Making of a developed country, the NGOs play a key role and also fill the gaps in the various socio-economic development schemes adopted by governments. In India also, NGOs are taking their part in making the country the best. Most of the NGOs work for the poor, uneducated, uncivilized and marginalized section of the society.

*Assistant Professor, Department of Assamese, Darrang College, Tezpur.

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Climate Change Management

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Madiha Farooq, Asma Nazir, Shahnaz Anjum, Bisma Farooq, Shayista Yousuf

Pages 137-155

Climate Change Drivers and Soil Microbe-Plant Interactions

Sangeeta Singh, Tanmaya Kumar Bhoi, Ifrah Khan, Vipula Vyas, R. Athulya, Atiraj Rathi et al.

Pages 157-176

Climate Changing Impact on Microbes and Their Interactions with Plants: An Overview

Niraj Singh, Pranjal Pratim Das

Pages 177-190

Soil Salinity and Climate Change: Microbiome-Based Strategies for Mitigation of Salt Stress to Sustainable Agriculture

Manisha Phour, Satyavir S. Sindhu

Pages 191-243

Over View of Symbiosis Mechanisms and Soil Quality Management Practices to Combat Environmental Changes

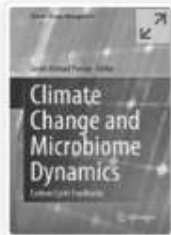
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Pages 245-270

Symbiosis Mechanisms and Usage of Other Additives Like Biochar in Soil Quality Management

Soheila Aghaei Dargiri, Ali Movahedi

Pages 271-305



Climate Change and Microbiome Dynamics pp 177–190

[Home](#) > [Climate Change and Microbiome Dynamics](#) > Chapter

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Abstract

Global warming and climate change are the burning issues that affect all domains of life on earth directly or indirectly. In the context of microorganisms, it is now well known that diverse communities of microbes are associated with plants and play a crucial role in plant health by stimulating plant growth, enhancing resistance to diseases, biotic and abiotic stresses. Climate

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Shella Permatasari Santoso, Chang-Wei Hsieh, Artik Elisa Angkawijaya, Alfin Kurniawan and Kuan-Chen Cheng
9. The application of biosurfactant for the modification of the rheological properties of wheat dough
Shailendra Kumar Arya and Archita Sharma
10. Biofabrication of nanobiosurfactant and their wide application in the food industry
Ouahid ELASRI
11. Application of biosurfactants as emulsifiers in the processing of food products with diverse utilization in the baked goods
Bidyut Saha
12. Advancements and Challenges in Preparation of Biosurfactants
Abdul Ghafar Wattoo, Maria Kanwal, Rao Arsalan Khushnood, Atif Liaqat, Zhenlun Song and Rabia Iqbal
13. (Telli) Antibiofilm activities of biosurfactants
Alia TELLI Sr. and Mohamed Amine Gacem
14. Application of biosurfactant as solubilizers and wetting agents
Mridula Guin and N. B. Singh Jr.
15. Glycolipid Biosurfactants: Biosynthesis, and related Potential Applications in Food Industry
Richard Ashby, Wan Nur Fatimah Wan Muhammad Zulkifi, Rashid Yatim, Kangzi Ren, and Ahmad Mustafa
16. Future applications of biosurfactant in food industry
Adeshina Fadeyibi
17. Application of biosurfactants as antioxidants
Narayana Saibaba KV
18. Next Generational Biosurfactant and Their Practical Applications in Food Industries
Rupam Katakai, Mayur Mausoom Phukan, Debajit Kalita, Pranay Punj Pankaj, Jayabrata Saha, Pranjal Pratim Das, Plaban Bora, Nabanita Hazarika, Samson Rosly Sangma and Manoj Kumar



Applications of Next Generation Biosurfactants in the Food Sector

2023, Pages 361-389

Chapter 18 - Next-generational biosurfactant and their practical application in the food industry

[Mayur Mausoom Phukan^a](#), [Samson Rosly Sangma^a](#), [Debajit Kalita^b](#), [Pranay Punj Pankaj^c](#), [Pranjal Pratim Das^d](#), [Plaban Bora^e](#), [Jayabrata Saha^f](#), [Kumar Manoj^g](#), [Nabanita Hazarika^h](#), [Rupam Katakiⁱ](#)

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Abstract

Biosurfactants are bio-origin surfactants synthesized by microorganisms, plants, and higher organism such as vertebrates. Due to its diverse range of profitable and beneficial properties as well as eco-friendly nature, it is gaining its popularity as a potential nature-based alternative for synthetic surfactants, which the latter is found to be problematic to the society and environment due to its nonbiodegradability and high toxicity. Following its high emulsification potential, antimicrobial action, and antibiofilm formation properties, rhamnolipids are the most studied and widely applied biosurfactant molecules in the present scenario. They are almost entirely employed in food industries as an additives or surface-modifying agents. Biosurfactant has exceptionally satisfactory properties, which include surface interface activity, extreme condition tolerance, biodegradability, and low toxicity. Large-scale production of biosurfactant is unfeasible due to its huge production cost, low availability of raw materials, toxic-related issues. The present article highlights some of the concerning issues with special reference to application, important parameters for commercialization, biochemical properties, and socioeconomic impact on environment of biosurfactants to have uses as next-generation surfactant in food industry in particular.

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[Recent advances and industrial applications of biosurfactants](#)

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G
I
P

- Chapter 2 Threats and conservation of the medicinal plants** 27
Saeid Hazrati, Maryam Mohammadi-Cheraghabadi and Saeed Mollaei
🔒 Requires Authentication
- Chapter 3 Culture, tradition, and indigenous practices on medicinal plants** 53
Sonal Mishra and Trilok Kumar
🔒 Requires Authentication
- Chapter 4 Plants alkaloids and flavonoids: biosynthesis, classification, and medicinal uses** 87
Tarun Kumar Patle, Pramod Kumar Mahish and Ravishankar Chauhan
🔒 Requires Authentication
- Chapter 5 Terpenoids, steroids, and phenolic compounds of medicinal plants** 105
Maryam Mohammadi-Cheraghabadi and Saeid Hazrati
🔒 Requires Authentication
- Chapter 6 Characterization techniques used for the analysis of phytochemical constituents** 131
Charu Arora, Dipti Bharti, Brij Kishore Tiwari, Ashish Kumar, Dakeshwar Kumar Verma and Bhupender Singh
🔒 Requires Authentication
- Chapter 7 Medicinal bioactivity: anti-cancerous and anti-HIV activity of medicinal plants** 153
Suparna Paul, Subhajit Mukherjee and Priyabrata Banerjee
🔒 Requires Authentication
- Chapter 8 Anti-cancerous and anti-HIV activity of medicinal plants** 185
Hilal Ahmed, Tousief Irshad Ahmed, Roli Jain, Jyoti Rathore, Shanthi Natarajan, Reena Rawat and Bhawana Jain
🔒 Requires Authentication
- Chapter 9 Antimicrobial, anti-inflammatory, and wound-healing activities of medicinal plants** 205
Mayur Mausoom Phukan, Pranay Punj Pankaj, Samson Rosly Sangma, Ramzan Ahmed, Kumar Manoj, Jayabrata Saha, Manjit Kumar Ray, Amenuo Susan Kulnu, Rupesh Kumar, Kalpana Sagar, Pranjali Pratim Das and Plaban Bora
🔒 Requires Authentication
- Chapter 10 Antioxidant activity of medicinal plants** 227
Walid Daoudi, Abdelmalik El Aatiaoui, Selma Lamghafri, Abdelouahad



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Chapter 9 Antimicrobial, anti-inflammatory, and wound-healing activities of medicinal plants

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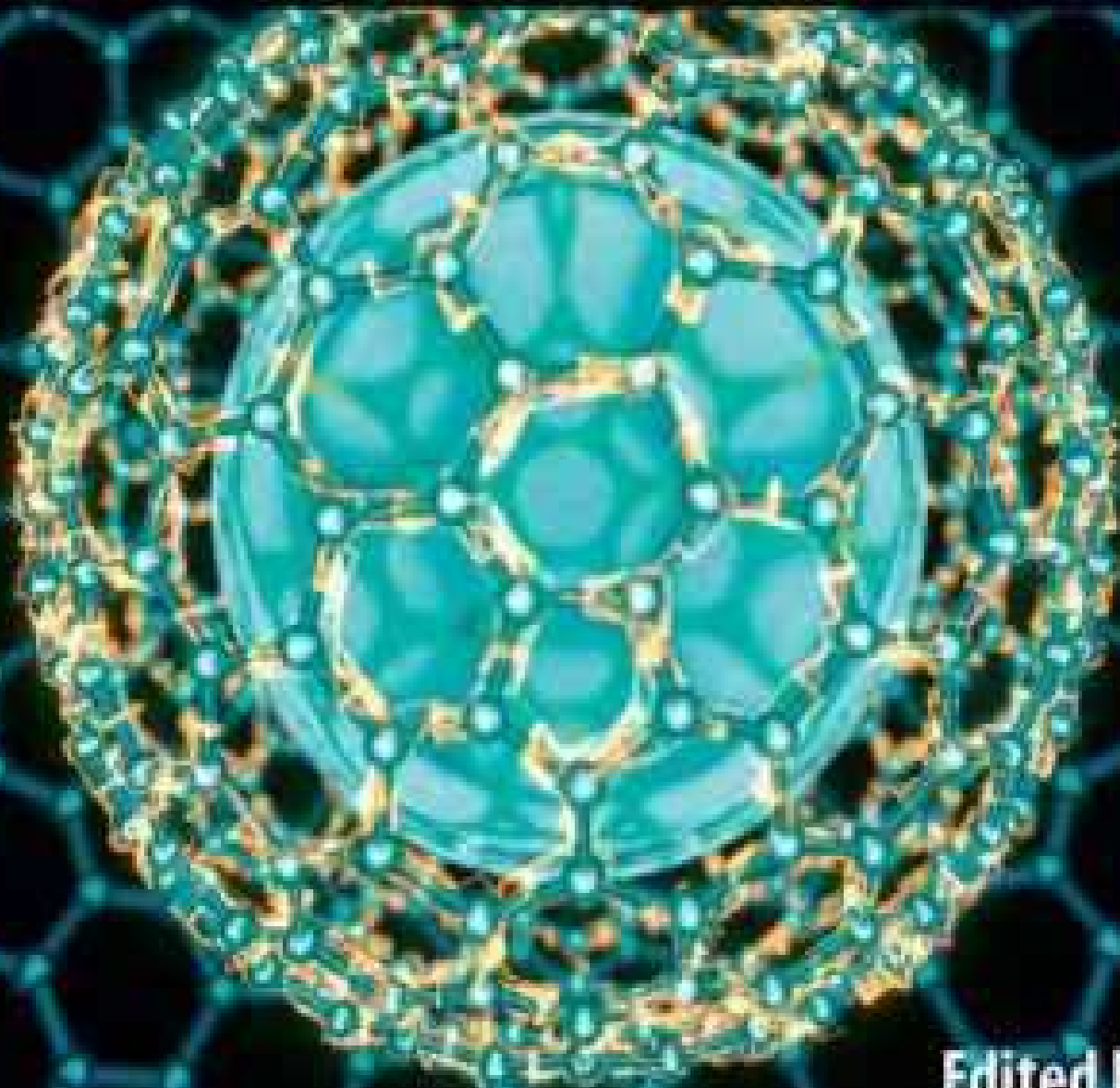
Abstract

Plants and the compounds derived from them have a long history of usage in the treatment and management of a wide variety of microbial diseases, wounds, and inflammation. This is likely due to the decreased risk of side effects associated with their use. The hunt for substitute methods or drug therapy, particularly those derived from medicinal plants, can be utilized to develop an economical, sustainable, stable, and effective delivery system for the treatment and allopathic management. The article aims to provide an overview to the readers, which will enable them in having a better comprehensive understanding of the functions that plant-based components play in the treatment and management of microbial disease, wounds, and inflammation.

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HANDBOOK OF BIOMOLECULES

Fundamentals, Properties, and Applications



Edited by
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Table of contents

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✓ *Part I: Fundamental and basics of biomolecules*Book chapter Abstract only

Chapter 1 - Amino acids: Classification, synthesis methods, reactions, and determination

Yeestdev Dewangan, Elyor Berdimurodov and Dakeshwar Kumar Verma

Pages 3-23



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Chapter 2 - Carbohydrate: Introduction and fundamentals

Ashish Kumar Asatkar and Ranjan Kumar Basak

Pages 25-55



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Chapter 3 - Nucleic acids: Components, nomenclature, types, and protection method

Mamta Tripathi, Avijit Sarkar and Mithlesh Mahilang

Pages 57-76

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2023, Pages 177-213

Chapter 8 - Alkaloids and terpenoids: Synthesis, classification, isolation and purification, reactions, and applications

[Mayur Mausoom Phukan^a](#), [Samson Rosly Sangma^a](#), [Debajit Kalita^b](#), [Plaban Bora^c](#), [Pranjal Pratim Das^d](#), [Kumar Manoj^e](#), [Pranay Punj Pankaj^f](#), [Imnawapang Jamir^g](#), [Dakeshwar Kumar Verma^h](#), [G. Bupesh^a](#), [K Meenakshi Sundaramⁱ](#)

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Abstract

In the past few decades there has been a tremendous spike in studies pertaining to secondary metabolite research specifically with regard to their prominence as a source of high-value pharmaceuticals. The secondary metabolites are heterogeneous low-molecular-weight products of secondary metabolism with very complex chemical structures and diverse biological functions. These highly complex metabolites are produced by plants and microbes (bacteria and fungi) and are not involved in primary metabolic processes such as growth and reproduction. Based on their chemical structure, synthesis, and functions they have been classified differently by different researchers. This chapter presents a comprehensive overview of alkaloids and terpenoids, especially their classification, isolation, purification, synthesis, and applications.

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ড° গোবিন্দ প্ৰসাদ শৰ্মা ৬৫-৬৯
- ❖ হোমেন বৰগোহাঞিৰ 'পিতা-পুত্ৰ'ৰ পুনৰ পঠন
ড° মদন শৰ্মা ৭০-৭৮
- ❖ হোমেন বৰগোহাঞিৰ উপন্যাসত গ্ৰামীণ জীৱনৰ প্ৰতিচ্ছবি
ড° জয়ন্ত কুমাৰ বৰা ৭৯-৯৫
- ❖ হোমেন বৰগোহাঞিৰ উপন্যাস 'সুবালা' এটি অৱলোকন
ড° নমিতা বৰুৱা ৯৬-১০২
- ❖ হোমেন বৰগোহাঞিৰ 'সাউদৰ পুতেকে নাও মেলি যায়'
উপন্যাসত অসমৰ লোকজীৱন
ড° দুবৰি গোস্বামী ১০৩-১১০
- ❖ হোমেন বৰগোহাঞিৰ পিতা-পুত্ৰ
ড° ধীৰাজ পাটৰ ১১১-১১৯
- ❖ হোমেন বৰগোহাঞিৰ সুবালা আৰু মৎস্যগন্ধা উপন্যাসৰ নাৰী
চৰিত্ৰ : এক চমু বিশ্লেষণ
ড° নন্দিতা গোস্বামী ১২০-১৩৯
- ❖ হোমেন বৰগোহাঞিৰ 'সাউদৰ পুতেকে নাও মেলি যায়'
উপন্যাসত কৈশোৰ মনস্তত্ত্ব
ড° বৰিতা দত্ত ১৪০-১৪৫
- ❖ হোমেন বৰগোহাঞিৰ উপন্যাসত নাৰী মনস্তত্ত্বৰ প্ৰতিফলন
চুইটি বৰা ১৪৬-১৫৩
- ✓ হোমেন বৰগোহাঞিৰ উপন্যাসত শ্ৰেণী বৈষম্য : 'হালধীয়া চৰায়ে
বাওধান খায়'ৰ বিশেষ উল্লেখনসহ
ৰুদ্ৰাক্ষী শইকীয়া ১৫৪-১৬১
- ❖ হোমেন বৰগোহাঞিৰ উপন্যাস অন্তৰ্ভাগ : এক আলোকপাত
প্ৰাৰ্থনা দত্ত ১৬২-১৭৪

হোমেন বৰগোহাঞিৰ উপন্যাসত শ্ৰেণী বৈষম্য : হালধীয়া চৰায়ে বাওধান খায়'ৰ বিশেষ উল্লেখনাসহ

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অবতৰণিকা :

ক্ষমতালোভী বা সুবিধাবাদী আৰু সুবিধাৰ পৰা বঞ্চিত অৰ্থাৎ শাসক আৰু শোষিত এই দুই শ্ৰেণীৰ মাজত সংঘাত, দমন-প্ৰতিৰোধ, দ্বন্দ্ব আদিক মূল বিষয়বস্তু হিচাপে লৈ পৃথিৱীৰ অধিকাংশ ভাষাতে মহৎ সাহিত্য ৰচনা হৈছে। শোষিতৰ ভাগ্য শোষকে নিৰ্ধাৰণ কৰে। শোষিতৰ যন্ত্ৰণা, দুখ-দুৰ্গতি, বেদনা, দুঃচিন্তা, গ্লানি, মানসিক অশান্তি আদিৰ উৎস শোষকেই। অসমীয়া ভাষাতো নিম্নবৰ্গীয় অভিজ্ঞতাৰ স্বৰূপ উদ্ঘাটন কৰি বৈচিত্ৰ্যপূৰ্ণ শৈলীৰে সাহিত্য ৰূপ দিবলৈ কেইবাগৰাকী সাহিত্যিকে প্ৰয়াস কৰিছে। কিয়নো সাহিত্য এনে এখন মঞ্চ যাৰ জৰিয়তে শোষিতৰ অধিকাৰ সম্পৰ্কে মানৱ সমাজক উদ্বুদ্ধ কৰিব পাৰে। শাসক-শোষিতক কেন্দ্ৰীয় বিষয়বস্তু হিচাপে লৈ কেইবাখনো উন্নত মানদণ্ডৰ গ্ৰন্থ বিভিন্ন ভাষালৈ অনূদিত হৈছে। সাহিত্যই শোষিতৰ মুক্তিৰ গান বিশ্বক পৰিচিত কৰাইছে। নিম্নবৰ্গীয় মানুহৰ স্বৰূপ দাঙি ধৰি তেওঁলোকৰ প্ৰতিৰোধী ভাষ্যক নিজস্ব কথনশৈলীৰে অপূৰ্ব ৰূপত তুলি ধৰিবলৈ কেইবাগৰাকী সাহিত্যিকে প্ৰচেষ্টা চলাইছে। আমাৰ আলোচনাত অসমীয়া সাহিত্যৰ মহীকহ সমাজ-সংস্কাৰক তথা প্ৰগতিশীলতাৰ বাৰ্তাবাহক হোমেন বৰগোহাঞিৰ (১৯৩২-২০২১) অন্যতম বহুলভাৱে চৰ্চিত উপন্যাস 'হালধীয়া চৰায়ে বাওধান খায়'ক আওতালৈ অনা হৈছে।

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GLUCOSE OXIDASE

STRUCTURE, PROPERTIES
AND APPLICATIONS

Dr. Gitashree Darabdhara

Dr. Manash R. Das

EDITORS



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Chapter 3

Enzyme-Immobilized 2D Nanosheets for the Detection of Glucose

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Abstract

Since many diseases can be diagnosed based on glucose concentration, fast and accurate glucose determination has become a widespread practice. Consequently, a great many studies are exercised on glucose biosensors and different varieties of biosensors are proposed. Enzyme-supported biosensors are now being explored extensively because they are suitable for sensitive, highly selective, and quick examination of a wide range of biological species both *in vivo* and *in vitro*.

To be specific, enzymes of the family of oxidases are normally employed which undergo reduction at first and the reduced form reacts with oxygen to form electroactive H₂O₂ which is oxidized at the surface of the biosensor to produce a substantial current signal. However, the electrode's stability and sensitivity deteriorate over time because the immobilised enzyme on the electrode's surface does not remain intact for an extended period of time.

* Corresponding Author's Email: saikiapp@gmail.com.

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RESEARCH TRENDS IN SCIENCE AND TECHNOLOGY



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18. **Sensing of Ammonia by SnO₂ nanoparticles using Raman Spectroscopy** 229-240
(Kakali Bhuyan Bora)
 19. **Electrostatic Probes for Plasma Diagnosis** 241-252
(Prarthana Gogoi and Paragjyoti Sut)
 20. **Magnetic Ferrite Nanoparticles (MFe₂O₄) as Heterogeneous Catalyst towards Organic Reactions** 253-264
(Saddam Iraqui and Xavy Borgohain)
 21. **Spatial and Temporal Variations of Particulate Matter Concentrations over Eastern Himalayan Foothills Region** 265-275
(Rohit Gautam, Partha Jyoti Sahu and Anindita Borah)
 22. **Synthesis of Layered double hydroxide nanosheets: A short review** 277-293
(Tumpa Paul, Dhrubajit Borah, Bhaskar Jyoti Saikia, Jayanta M Borah and Partha Pratim Saikia)



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6.1 Tourism and Its Impact on Environment

Krishna Priya Gogoi

Tourism is one of the important sources of income and revenue generation for many parts of the world. Tourism was recognized as an essential part of the nations after the *Manila Declaration on World Tourism of 1980* as tourism has its direct impacts on the economic, social, cultural, educational and environmental sectors along with the international relations of a country. According to 'The World Tourism Organization' tourism is in a term which goes beyond the normal perception of tourism as being limited specially to holiday activity only. International tourists reached 952 million in 2010, 996 million in 2011 and in 2016 international tourist arrivals grew by 3.9% to reach a total of 1235 million. The latest UNWTO World Tourism Barometer international tourist arrival reached about 1300 million in 2017. With the increasing number of tourists all over the world, increasing attention has also been focused and researched to the effects and impacts of tourism and related developments upon the environment of the tourists destinations. Tourism is more or less mainly depend upon the environment for much of its well-being, having both negative and positive impacts on the environment, but due to lack of knowledge, responsibility and long-term planning often lead to negative impacts to the environment along with the host area. A definition of environment in relation to tourism is necessary in this context, comprising both the physical and human environment.

Meaning of Tourism

Tourism is mainly viewed as leisure related activity that is not connected with everyday life. Almost each and every institution defines 'tourism' differently. UNWTO define tourism to prevent the disaccords given by different sources. According to UNWTO, 'Tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes'. When tourism is explained with the more general terms it is sum as 'Tourism is a collection of activities, services and industries which deliver a travel experience comprising transportation, accommodation, eating and drinking establishments, retail shops, entertainment businesses and other hospitality services provided for individuals or groups traveling away from home'. In order to characterize a trip which belongs to tourism are having the following criteria:

- Tourism is a travel outside the usual environment
- Type of travel where the travelling purpose different from being remunerated from within the place visited

VALUE CRISIS : THE GLOBAL ISSUE



Editors

Dr. Nabaprasad Nath

Anita Deka Bora

Dr. Bornali Borah

ASSAM COLLEGE TEACHERS' ASSOCIATION

VALUE CRISIS : THE GLOBAL ISSUE

It is collection of research papers and articles on the issue of value crisis in entire human race and possible means of its solution published by Dr. Jayanta Baruah, General Secretary, Assam College Teachers' Association, Solapara, Guwahati - 8. and Ganesh Books, Noonmati, Guwahati-20.

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Content

- ❖ Research Integrity and its Sustainability : Few Reflections with a Special Focus on Good Academic Research Practices (GARP) 7
Dr. Jahnabi Deka
- ❖ Role of Family in Inculcating Values 19
Dr. Shalini Sharma, Prof. Mumtaz Ahmad Khan
- ❖ Need of Peace Education in the present day context 28
Rita Goswami
- ❖ The Crisis of Ethical Values among Youth 40
Dulumoni Gogoi
- ❖ Value Crisis Among The Youth In Contemporary Society and Role of Value Education 47
Dr. Fatima Tohsin Sahidullah
- ❖ Value Based Education and National Education Policy 2020 58
Dr. Chanam Sonia Devi
- ❖ Sustainable Development and Inclusive Growth : 21st Century Reality Check 64
Anita Deka Bora
- ❖ Crisis of Ethics in Politics in the Broader Spectrum of Contemporary Indian Democracy 74
Bishaldeep Kakati, Bagmita Borthakur
- ❖ Role of Teacher in Promoting Peace Education 87
Dr. Dipalee Haflongber
- ❖ Youth Un Rest and its Remedies 92
Dr. Basanta Mangal Dutta
- ❖ Inculcating Sustainable Development Values in Society : A Theoretical Perspective 100
Binanda Boruah
- ❖ Educational Philosophy of Jiddu Krishnamurti's Holistic Development : Reflection in the New Education Policy 113
Dr. Sikha Bhagawati
- ❖ Eudaemonism: The Ethics of Personality 124
Manisha Baishya
- ❖ Value Education towards Personal Development 135
Dr. Chongtham Beda Devi
- ❖ Ecological Values and Poetry with Special Reference to William Wordsworth and G. M. Hopkins 13
Dr. Sekh Abdul Hakim

Eudaemonism : The Ethics of Personality

Manisha Baishya

Introduction

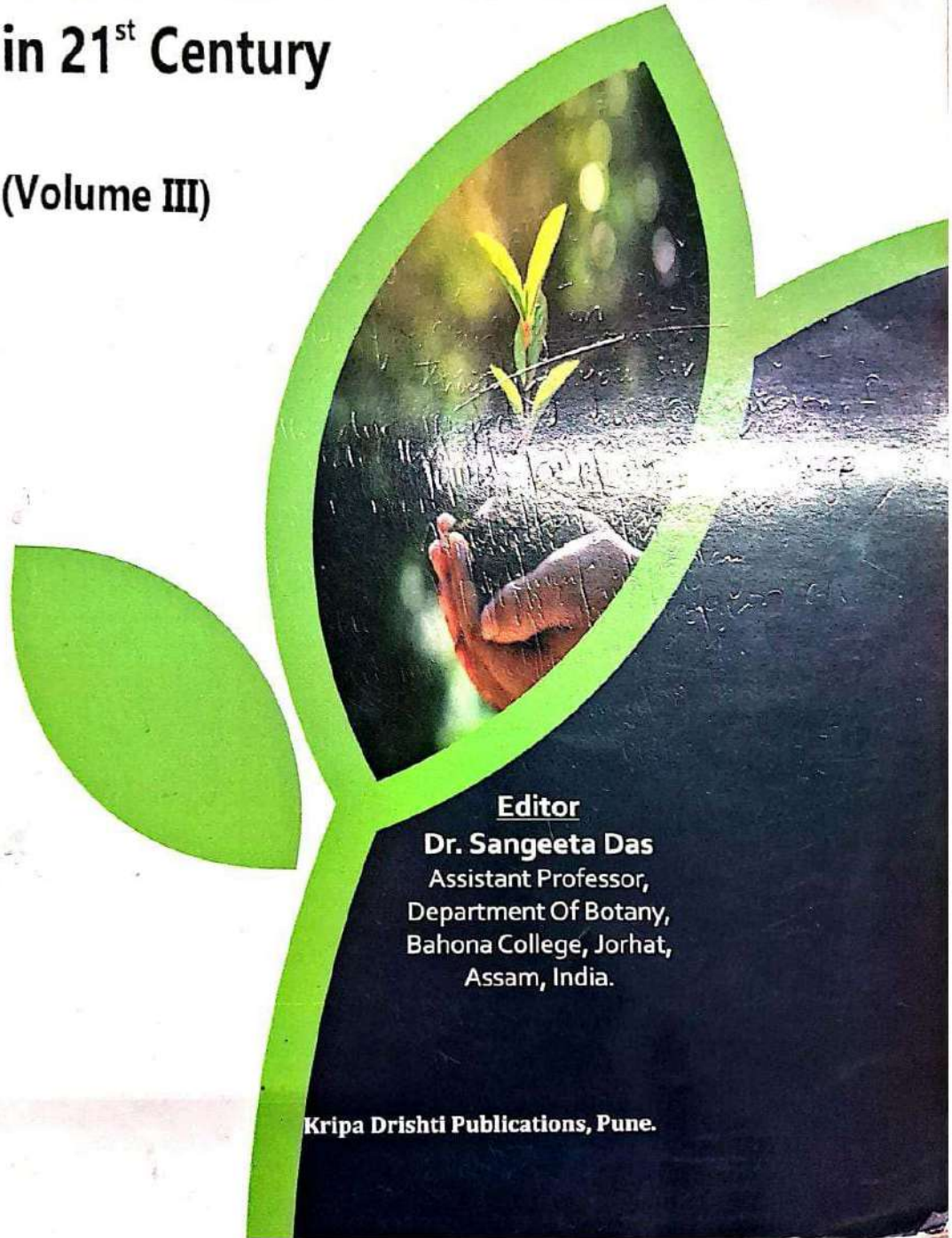
In the history of ethical theory we find not only a gradual approximation of the two opposed types-the Hedonistic and the Rationalistic-to the Eudomonic, but also an explicit formulation of Eudaemonism. This formulation is more or less incomplete; and its incompleteness leads to, or is itself the result of, a kind of survival now of Rationalism, now of Hedonism, alongside the deeper and more adequate view-an echo, as it were, of these one sided theories which refuses to be silenced by the new voice that is striving to make itself heard.

Eudaemonism is an ethical theory which maintains that happiness is reached through virtue. Eudaemonia which literally means 'having a good guardian spirit' is often translated in to English as 'happiness', and while this is adequate in so far as it goes, it does not entirely capture the meaning of the Greek word. One important difference is that happiness seems closely bound up with a subjective assesment of the quality of one's life, whereas eudaemonia refers to an objectively desirable life. Eudaemonia is then a more encompassing notion than happiness since bad events that do not contribute to one's experience of happiness do affect one's Eudaemonia. All ancient ethical theorists understand Eudaemonia to be the highest human

ENVIRONMENT

in 21st Century

(Volume III)



Editor

Dr. Sangeeta Das

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Kripa Drishti Publications, Pune.

13. Impacts of Climate Change in Indian Himalayan Region: an Overview

Sagarika Das, Kimi Deka

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Abstract:

Mountain regions provide diverse goods and services to human society. At the same time, mountain ecosystems are sensitive to rapid global warming. The fragile landscapes of the Himalayan region are highly susceptible to natural hazards, and there is ongoing concern about current and potential climate change impacts. A great deal of research work has been carried out on different aspects of Indian Himalayan Region (IHR) but the findings have yet to be correlated in the context of climate change. So, this article presents an overview of impacts of climate change in different aspects of Indian Himalayan Region based on literature review and anecdotal evidence.

Keywords: Climate change, Indian Himalayan Region (IHR), Biodiversity.

13.1 Introduction:

The Himalayas is recognized for its ecosystem services to the Asian region as well as to the world at large for maintaining slope stability, regulating hydrological integrity, sustaining high levels of biodiversity and human wellbeing. Due to its high biological and socio-

PROTECTING
HUMAN
RIGHTS

Emerging Issues & Challenges

Editors

Dr. Dipak Kumar Doley
Dr. Abul Foyes Md Malik



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- Examining the Feminine Condition Through the Lens of Selected Short Stories by Indian Women Writers/Sahanur Zakaria Barbhuiya /241
- Women's Political Participation and Empowerment: A Theoretical Review/Md Samsul Huda Molla/247
- Gender Inequality in Educational Context and Economic Perspectives of Status of Women and their Rights as Human Rights in the World with special Reference to North-East India/Siddhartha Suraj Dutta/254
- Human Rights as a Moral and Legal Norm/Sujata Moran/267
- Human Rights and Terrorism/Swarup Singha/271
- Nawal El Saadawi, Subaltern and Human Rights/Tayybur Rahman/278
- An Exploration of Power Politics in Nadine Gordimer's *July's People* Udesha Brahma/285
- Disability and Human Rights: Policy Status of Assam /Upama Saikia/292
- Violence Against Girl Child Rights and Various Laws for the Speedy Justice of Girl Child Rights/Priya Singh, Mejo Anson/299
- ভাৰতবৰ্ষত মহিলাৰ অধিকাৰ/মনীষা গগৈ/৩০৭
- 'আংকুশ' উপন্যাসত মানব অধিকাৰ উলংঘনৰ প্ৰসংগ/মণ্টু বৰা, ইউবেকা কাকতি/৩১৫
- দেউৰীসকলৰ সমাজ জীৱনত নাৰীৰ স্থিতি/দীপশিখা ভৰালী/৩২২
- গৰ্ভপাতৰ স্বাধীনতা মহিলাদেৱ 'আত্মনিয়ন্ত্ৰণৰ অধিকাৰ': আৰ্যবিশ্ব একটা সামাজিক বিতৰ্ক/ড° অমিতাভ কাঞ্জিলাল/৩৩০
- ভাৰতীয় প্ৰেক্ষাপটে শিশু ও নাৰীৰ অধিকাৰ/ড° জয়ন্তী সাহা/৩৪০
- মধ্যযুগৰ বাংলা সাহিত্যে মানবতাবাদঃ একটা অধ্যয়ন/ৰঞ্জয় সাহা/৩৪৪
- 'বাঘে টাপুৰ ৰাতি' ত প্ৰতিফলিত অসমৰ সামাজিক চিত্ৰায়ণ আৰু মানব অধিকাৰ/সুনয়না বৰুৱা/৩৫৩
- দাদাৰ পটভূমিতে সমৱেশ বসুৰ দুটি ছেটিগল্পঃ মানবতাৰ সন্মানে/ড° নন্দা নাথ/৩৬২
- শিক্ষাক্ষেত্ৰে বৈষম্য : পশ্চিমবঙ্গ তথা সুন্দৰবনেৰ নিম্নবৰ্ণেৰ মহিলাদেৱ অৱস্থা/ৰূপালি হালদাৰ/৩৬৮
- A Historical Overview of the Evolution of Human Rights in India/ Dr. Siddhartha Pait/378

দাঙ্গার পটভূমিতে সমরেশ বসুর দুটি ছোটগল্পঃ মানবতার সন্ধানে

ড° নন্দা নাথ

দাঙ্গা থেকে দেশভাগ ভারতবর্ষের ইতিহাসে এক রক্তাক্ত অধ্যায়। হিন্দু এবং মুসলমান — এই দুই ধর্মবিশ্বাসী মানুষ তুর্কী আক্রমণের অন্ধকার সময় অতিক্রম করে অনেকটা কাছাকাছি আসার চেষ্টা করলেও কোনদিনই একসূত্রে বাঁধা পড়েনি। ধর্মীয় আচার - আচরণের বৈপরীত্যে, হৃদয়ের দূরত্বে বিভিন্ন সময় দেখা দিয়েছে সংঘাত। সম্পর্কের অবনতি থেকে জন্ম নেয় সাম্প্রদায়িক দাঙ্গা। ভিন্ন ধর্ম, ভিন্ন জাত অথবা ভিন্ন ভাষার মানুষের প্রতি ঘটে যাওয়া কোনো ঘটনা বা জনশ্রুতি থেকে অন্যায়-অবিচারের প্রতিশোধস্পৃহা জনিত আক্রমণ, হত্যা, লুণ্ঠন, অগ্নিসংযোগ, অসহায় নারীদের ধর্ষণ, হত্যা ইত্যাদিকে বলা চলে সাম্প্রদায়িক দাঙ্গা। কোনো ধর্ম বা জাতির কিছুসংখ্যকের অপরাধের প্রতিশোধ নেওয়া হয় বহুদূরবর্তী একই জাতি, ধর্ম বা ভাষাভাষী মানুষের উপর, যাদের ঘটে যাওয়া ঘটনার সঙ্গে কোনো যোগসূত্রই নেই। শুধুমাত্র একই ধর্ম বা একই ভাষাভাষী হওয়ার অপরাধে তাদের চরম মূল্য দিতে হয়েছে। দীর্ঘদিন পাশাপাশি বসবাস করা ভিন্ন ধর্ম, ভিন্ন ভাষার মানুষের মধ্যে তৈরী হয়ে যায় শত্রুভাবাপন্ন মনোভাব। সামান্য কারণে পরস্পরের গ্রাম বা অঞ্চলকে আক্রমণ করে উভয়গোষ্ঠী নিজ নিজ শক্তি প্রদর্শনে মত্ত হয়। মানুষের মধ্যকার প্রচ্ছন্ন পশুত্ব সুযোগ পেলেই যে দাঁত-নখ বের করে নেয় ইতিহাস এর সাক্ষ্য দেয়। ছেচল্লিশের দাঙ্গার অমানবিকতা, ইতরতা তারই পুনরাবৃত্তি। ইংরেজ শাসনকালে ভারতে হিন্দু-মুসলমান দাঙ্গা আনুপাতিক হারে বাড়তে থাকে এই দাঙ্গা শুধুমাত্র বাংলাদেশেই নয়, ভারতের অন্যান্য প্রদেশেও ব্যাপক আকার ধারণ করে, যার ফলস্বরূপ একসময় ভারত দ্বিখণ্ডিত হয়। পরিণামে ক্ষত বিক্ষত হয় দেশ, ভিটেমাটি ছেড়ে লক্ষ-লক্ষ মানুষ জিন্নমূল উদ্ভাস্তে পরিণত হয়। মানবতার এই লাঞ্ছনা, ট্রাজেডি শিল্পী-সাহিত্যিকের মননেও প্রভাব ফেলেছে, আর সাহিত্যে প্রতিফলিত হয়েছে তার

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২ ড° গকুল কুমাৰ দাস

অসমীয়া সাহিত্য আৰু সংস্কৃতিৰ প্ৰেক্ষাপটত ঊনবিংশ শতাব্দীৰ গুৰুত্ব যিদৰে অপৰিসীম আৰু ব্যাপক, ঠিক তেনেদৰে আধুনিক অসমীয়া সংগীতৰ পৰিষ্কাৰতো উক্ত শতিকাতোৰ গুৰুত্ব অনেক। ঊনবিংশ শতাব্দীতেই পোনতে সত্যনাথ বৰা আৰু পিছলৈ লক্ষীৰাম বৰুৱাৰ একান্ত প্ৰচেষ্টাত অসমীয়া গীতি সাহিত্যৰ প্ৰচলিত ধাৰাটোৱে মোট সলাই নতুন ৰূপত বিকশি উঠিছিল। আনকি ১৮৮৮ চনত সত্যনাথ বৰাই 'গীতাৱলী' শীৰ্ষক গীতৰ পুথিখন ৰচনা কৰাৰ আগলৈকে অসমীয়া গানৰ অস্তিত্বই নাছিল বুলি বেণুধৰ ৰাজখোৱাই তাৎপৰ্যপূৰ্ণ মন্তব্য প্ৰদান কৰিছিল।^১ এই প্ৰসংগতে বীৰেন্দ্ৰ কুমাৰ ফুকনৰ এষাৰ মন্তব্যও প্ৰনিধানযোগ্য। অসমীয়া সংগীতৰ ক্ষেত্ৰখন যে অন্য ৰাজ্যতকৈ তুলনামূলকভাৱে ভালেখিনি পিছপৰা, সেই সন্দৰ্ভত ফুকনে মন্তব্য প্ৰদান কৰিছিল এইদৰে— “....মাৰ্গ সংগীতৰ অগ্ৰাণ জ্যোতিৰে জ্যোতিৰ্ময় অসমীয়া সংগীত। ৰাগ সংগীতৰ ঐতিহ্যৰে গৰিয়ান অসমৰ চৰ্যাপদ, ওজাপালি, বৰগীত, নাটৰ গীত আদি। নাট্যশাস্ত্ৰৰ আধাৰত ৰচিত 'শ্ৰীহস্তমুক্তাৱলী'ৰ হস্ত আৰু পদ চালনাৰ কঠোৰ অনুশাসনেৰে সুদৃঢ় আমাৰ ওজাপালি আৰু সত্ৰীয়া নৃত্যৰ ধাৰা। কিন্তু

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BIKASH NATH
BIRAJ JYOTI KALITA

TEA PLANTATION LABOUR OF ASSAM

The book is an attempt to unravel the trajectories of silence and dominance in the cultural landscape of the tea gardens situated in the frontier state of Assam. Built on the virgin forest land of Assam and conquering the hidden treasures of nature, the tea garden symbolizes the essence of the garden from an Edenic perspective at first sight, but from a deeper angle, it showcases the systematic manipulation of the poor labourers for the enrichment of a few agency houses based in Calcutta and London.

The tea garden was the mini-world where various forms of cultural practices took place through verbal communications and social customs. The distance between the workers' quarters and the colonial bungalows portrays the unequal power structure. The tea gardens also highlight the centre of protests. The representation of the subjugated women labourers is explained in the book. Overall, the book attempts to locate the varied interests and contents of the people of the tea garden society from a newer perspective.

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Contents

Background And Ideological Orientation With Special Reference To Tea Industry Of Assam	
Part IV Social Status And Culture Of The Tea Garden Society	
14. Tea Garden Workers-behind Their Livelihoods	159
15. Socio-economic Conditions Of Tea Plantation Child Labourers During Colonial Assam	174
16. The Poetics Of Representation, Resistance And Everyday Life In The Partings	181
17. Glancing Marriage Rituals Of Tea Garden Communities Of Assam With Fidelity To Folk Songs	189
18. Festivals Of The Tea Garden Society Of Assam: A Study With Special Reference To Karam Puja	197
✓ 19. The Dialect Prevalent In The Tea Gardens Of Assam: An Introductory Analysis	204
20. A Brief Introduction To The Languages Of The Tea Workers Of Assam	209
Part V Women Workers Of The Tea Plantation Industry	
21. Women Laborers In Tea Plantation In Assam: A Marxist Feminist Articulation	217
22. Women In Tea Trade Unions Of Assam: A Study On The Experience Of Inclusion And Exclusion	231
23. Women Labour, Hierarchical Structure And Public Patriarchy In The Tea Estates Of Assam	243
24. Women Empowerment In Tea Garden Community: Past, Present And Future	249
25. Women Of Reproductive Age Group: A Study Among The Tea Garden Labourer Community Of Cachar District	257

CHAPTER XIX

The dialect prevalent in the tea gardens of Assam: An introductory analysis

Mizanur Hussain Mondal

Introduction:

Assam is a very large state inhabited by people belonging to many castes and communities, each having their own languages, religions, and traditions. Language is the conduit of public consciousness in its cultural heritage. Bholanath Tiwari Ji says – 'Language is the medium through which we think and express our thoughts' (Tiwari,1996). So it is through language that we understand each other's feelings.

The British arrived in Assam in the year 1826. The state of Assam has undergone a complete transformation after the arrival of the British. Due to which socioeconomic, cultural, political, and administrative sectors also changed a lot. They are the descendants of tribals and backward castes brought in by the British colonials who are working as laborers in the present tea garden industry. They are heterogeneous, multi-ethnic comprising many tribal and caste groups.

When tea-people were brought to Assam, they were very different parts of India. Another fact is that Dr. Nathaniel Wallis Sahib, the Superintendent of the Calcutta Botanical Garden, requested Ahom King Purandar Singha for permission to start tea cultivation in Dikhowmukh to Gabharu Parbat area. At that time, according to the law if somebody clears vast jungle, he does not have to pay any tax for that land. But later, Wallis Sahib got despaired and went back when Purandar Singha said that the cultivator had to pay half of his crops as tax of such land (Bora,2006). The primary occupation of the labourer is working as skilled or unskilled labourer in the tea plantations. In the tea industry, they are engaged in the tea plantations or factories as permanent or casual or temporary labourers. Besides a few educated labourers are also engaged in the offices or factories or plantation areas as 'babu'. Apart from these occupations, now a days, tea garden workers have also engaged themselves in other jobs outside the garden, such as, teacher, Ashakarmi, Anganwadi karmi, businessman and others job in government.



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CONTENT

- Chapter-1 Present status and potential distribution prediction of Indian Peafowl *Pavo cristatus* in Assam, India using MaxEnt model 9
✎ Vivek Chetry, Pranjal Mahananda, Prasanta Kumar Saikia
- Chapter-2 Estimation of Carbon stock of Tree Communities along the Three selected roads of Guwahati city, Assam, India 21
✎ Jijnyasha Bayan, Maitreyee Goswami, Uma Dutta, Arup Kumar Hazarika, Kuladip Sarma
- Chapter-3 Web Stability : A Possible Function of Stabilimentum in *Argiopepulchella* webs (Araneae : Araneidae) 43
✎ Sangeeta Das, Jatin Kalita, Nilutpal Mahanta, Langtuk Terang, Reshmi Bhattacharjee
- Chapter-4 Diet of Tadpoles of Streams of West Manipur Hills 51
✎ Shelina D. Yumkham, Saibal Sengupta
- Chapter-5 Prediction of Potential Distribution of *Dendrocygna javanica* in North East India using Maxent 63
✎ Langtuk Terang, Chandan Mahanta, Sangeeta Das, Sumantra Chaudhury
- Chapter-6 A study of the human-elephant conflict in the fringe villages of Kakoi Reserve Forest of Lakhimpur district, Assam 74
✎ Bhaswat Ranjan Borah, Jogen Chandra Kalita
- Chapter-7 A study on diverse Heteropteran fauna of Kamrup (M), Assam 85
✎ Santana Saikia, Anjana Singha Naorem
- ✓ Chapter-8 Diversity of earthworm species used by the farmers in udalguri District of Assam 94
✎ Daijy Kalita, Binita Das
- Chapter-9 Pollinating insect diversity and its conservation 99
✎ Pollobi Duara
- Chapter-10 Understanding Human-Elephant conflict at the fringe of Bornadi Khalingduar Forest Complex 103
✎ Gayatri Deka, Sangita Baruah, Sunit kumar Das
- Chapter-11 Rural Tourism and its impacts on fauna- A study in Nameri National park, Assam 111
✎ Tanuja Tamuli Phukan.

- Chapter-12 Diversity of Odonata Species along the waterside of Kopili River at Hawaipur, West Karbi Anglong 125**
 ✎ Ashim Biswas, Seema Kaur
- Chapter-13 Studies on vegetative propagation rate of some genera of Orchids from Nagaon district of Assam 130**
 ✎ Dr. Basistha Kalita
- Chapter-14 Studies on feeding deterrent properties of plants in Kaliabor Sub-division, Assam against Assamese macaque (*Macaca assamensis*) 139**
 ✎ Abhijit Sonowal, Chiranjeev Bezbaruah, Aakrit Kashyap, Madhurya Das
- Chapter-15 Bioprospection of lichens concerning human welfare 145**
 ✎ Rosni Jabin, Rajashree Deka, Jogen Chandra Kalita, Farishta Yasmin
- ✓ **Chapter-16 Prospects of Non-conventional Plant-based Formulations of Probiotics 156**
 ✎ Minakshee Sarmah, Dr. Manab Deka
- Chapter-17 Proximate and fatty acid content of edible viscera and muscle of Ghungroo pig breed of Assam, India 165**
 ✎ Rijumoni Daimari, Silistina Narzari, Jatin Sarmah
- Chapter-18 A pilot study on Food adulteration practices and it's Awareness among people in Nagaon Town, Assam 172**
 ✎ Aryan Kumar Singh, Priyanki Sharma
- Chapter-19 Longevity and Equality at ages of death in *Homo Sapiens*: A Comparative study with special reference to India and its states 183**
 ✎ Rajan Sarma, Shreya Sarma
- ✓ **Chapter-20 Assessment of the Physiological and Psychological Attributes of PCOS Patients of Western Assam 188**
 ✎ Juli Bairagi, Sreeja Dutta, Ajit Hazarika
- Chapter-21 A study on indigenous knowledge of Medicinal Plants in the treatment of various Diseases among the Tribal Community of Jorhat, Assam 200**
 ✎ Priyanka Saikia, Manashi Bortamuly
- Chapter-22 Effect of thyroid disorder on hematological parameters in tribal pregnant women of different trimester in Dima Hasao district, Assam 211**
 ✎ Trisha Sonowal, Jatin Sarmah, Paresh Kumar Sarma
- Chapter-23 A study on comparative analysis and prevalence of some communicable diseases in 5 Health Centre of Kaliabor Sub Division, Nagaon, Assam 224**
 ✎ Akankhya Sharma, Anupam Kumar Medhi, Abhijit Sonowal, Latashree Kalita, Gosai Chan Das.

- Chapter-24 Understanding the structural and functional impact of pathogenic G6PD mutations - An *in silico* analysis 235
 ✎ Noymi Basumatary, Jatin Sarmah.
- ✓ Chapter-25 Snakebite and Traditional Medicinal Plants 247
 ✎ Debashree Saikia, Ashish K. Mukherjee
- Chapter-26 Traditionally used medicinal plants of North Eastern Region of India for curing diabetes with special reference to *Phlogacanthus thyrsiformis* (Roxb. ex Hardw.) Mabb 252
 ✎ Rajashree Deka, Jogen Chandra Kalita
- ✓ Chapter-27 Effect of Aqueous Extracts of Tobacco Leaves (*Nicotiana tabacum*) on Certain Organs and Hematological Indices of Albino Mice 268
 ✎ Debarati Roy, Nabanita Medhi
- Chapter-28 Incidence of helminth parasites in the fishes of Deepor Beel, the lone Ramsar site of Assam 279
 ✎ Bobita Bordoloi, Arup Kumar Hazarika
- Chapter-29 A discussion on the scope of Pearl oyster culture in districts of Assam by the scientific exploration of *Lamellideans marginalsis* 284
 ✎ Moushumi Hazarika, Utpal Bora, D.K Sharma
- Chapter-30 Tea Pest Management: A non-chemical Approach 290
 ✎ Bhabesh Deka
- Chapter-31 Influence of different food plants on the gut α -amylase activity of eri silkworm *Samia ricini* 302
 ✎ Hatarkhi Mwchahary, Rajib Ratan Kashyap, Dulur Brahma
- Chapter-32 Length-Weight Relationship and condition factor of freshwater Climbing Perch, *Anabas testudineus* (Bloch, 1792), from Jorhat District, Assam 310
 ✎ Niva Dutta, Bibha Chetia Borah, Pavitra Chutia
- Chapter-33 Dry Fish with special reference to *Puntius sophore*, *Amblypharyngodon mola*, *Channa punctatus* and *Gudusia chapra* and their contribution towards nutrition and ethnomedicinal practices 319
 ✎ Karabi Kalita, Devajit Basumatari

Chapter 8 :

**DIVERSITY OF EARTHWORM SPECIES USED BY THE
FARMERS IN UDALGURI DISTRICT OF ASSAM**

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ABSTRACT

Vermicomposting has gained momentum in recent years due to its manifold benefits. Earthworms are known to degrade organic matter, but all species are not having the same potential to degrade organic matter. So selecting a suitable earthworm species is the first important step of vermicomposting activity. In this study an attempt has been made to expose the diversity of earthworm used in Vermicomposting in udalguri District of Assam. The study found three types of earthworm species which are available in four major vermicompost projects. These are *Eisenia fetida*, *Eudrilus eugeniae* and *Perionyx excavatus* where Eisenia Felida is found in all the four vermicomposting projects as common species. The study further advocates on conducting research activities, surveys and carrying out continuous investigation in order to make the farmers informed about the utility of different species of earthworm.

Keywords : Vermicomposting, Earthworm, Eisenia fetida, Eudrilus eugeniae and Perionyx excavatus.

INTRODUCTION

Vermicompost is known to be the world's best fertilizer. It is a method of preparing enriched compost with the use of earthworm. It is one of the easiest methods to recycle the agricultural waste and to produce quality compost. Earthworm consumes biomass and excretes it in digested form called worm cast. And this cast are popularly known as black cast for it highly rich in nutrients, Growth promoting substances, beneficial soil micro flora and having properties of inhibiting pathogenic microbes. Vermicompost is stable, fine granule organic manure which enrich soil quality by improving its physiochemical and biological properties. It is highly useful in raising seedling and for crop production.

Earthworms are known to degrade organic matter but all species are not having the same potential to degrade organic matter. So selecting a suitable earthworm species is the

Chapter 16 :

PROSPECTS OF NON-CONVENTIONAL PLANT-BASED FORMULATIONS OF PROBIOTICS

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ABSTRACT

Over the past few decades, consumer's awareness on health promoting effects has contributed to the development of novel functional food formulations. Fermented dairy products are conventionally in use and are popular as good carrier matrices of probiotic microorganisms. Fermented dairy products have high cholesterol, lactose, and proteins which may limit their consumption by some population groups. The ever increasing number of individuals with lactose intolerance, dyslipidemia, and vegetarianism supports the importance of use of non-dairy probiotic products such as fruits and vegetables to develop probiotic formulations since fruits and vegetables have growth promoting nutrients for probiotic microorganisms without dairy products-like drawbacks. Such plant products contain requirements necessary for probiotic adhesion to plant tissue. The intricate structure of the plant cell can protect the microorganisms allowing them to survive in the hostile environment of host gastrointestinal (GI) tract. Studies have also shown that fruits and vegetables have potential to serve as carrier food matrices to create probiotic foods with high cell viability. These intrinsic characteristics protect the probiotic microorganisms as they can pass through the GI tract. Development of non-dairy probiotic products, including food matrices from non-conventional food fruit, inevitably has a promising future in coming days.

Keywords : Functional food, probiotic, food matrices, health benefits, non-dairy probiotics

INTRODUCTION

Fermentation process is an important process for food preservation which enhances beneficial properties of the raw materials. It is the oldest method for the development of aromas, textures and flavors of food. It is defined as the chemical breakdown of a substance by various microorganisms such as bacteria, yeast, fungi, etc. Microorganisms enhance several health promoting benefits of fermented food by their functional properties. Microbes act as initiators of fermentation of food like dairy, cereal, vegetable and meat. These microbes

Chapter 20 :

ASSESSMENT OF THE PHYSIOLOGICAL AND PSYCHOLOGICAL ATTRIBUTES OF PCOS PATIENTS OF WESTERN ASSAM

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ABSTRACT

The polycystic ovarian syndrome is of clinical and public health importance as it is a very common multifaceted disorder affecting up to 1 in 5 women of reproductive age. This problem is of great concern now-a-days because of its association with infertility and other associated chronic diseases. A demographic survey helps in understanding the distribution pattern of the disease in various populations. Such a survey was conducted among the patients of western Assam by quantitative and qualitative methods. All the patients were from urban areas. Almost all of them were overweight and showed the symptoms like oligomenorrhoea, menorrhagia, acne, hirsutism, cardiovascular diseases, hypothyroidism and problems with conceiving. Some of the patients were suffering from endometrial cancer too. The prevalence of the disease was found to be highest in women 20-22 years of age. Unhealthy diet, lifestyle changes and genetic factors can be considered the main causative agents for such prevalence. Proper awareness programs should be conducted to make people embrace a healthy lifestyle and get rid of such lifestyle diseases.

Keywords: PCOS, Western Assam, Lifestyle diseases, Reproductive disorder.

INTRODUCTION

Polycystic Ovarian Syndrome (PCOS) is a complex disorder of metabolism and of the endocrine and reproductive system that affect approximately 5-10% female population in developed countries (Abbott et al. 2005; Xita and Tsatsoulis, 2006). Although the disease is prevalent in developed countries like the US and European countries according to biomedical

SNAKEBITE AND TRADITIONAL MEDICINAL PLANTS

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ABSTRACT

World Health Organization has recognized snakebite as a neglected tropical disease. In Indian subcontinent, inadequate hospital based reporting has resulted in estimates of total snakebite mortality ranging widely from about 1,300 to 50,000 per year. Administration of bivalent or polyvalent antivenom is the only available therapy against snake envenomation; however, it has several limitations including adverse side-effects, low immuno-recognition and/or neutralization of less immunogenic toxins of low molecular mass, and is inaccessible to the impoverished section of the society. Moreover, the poor distribution and limited availability of antivenom have propagated the use of traditional medicine especially in rural communities throughout the world. India has a wide variety of medicinal plants those are used by the rural people of India since time immemorial, however without any scientific validation.

A study was conducted to explore the effect of some ethno-medicinal plants which may contain snake venom PLA₂ inhibitors. Many plants are traditionally used for snakebite treatment by the people of Assam, North-east India. In this study, the methanolic extracts of the leaves of *Azadirachta indica* and *Xanthiumstrumarium* showed promising inhibitory activity against *Naja kaouthia* venom PLA₂-induced catalytic activity as well as anticoagulant activities. These plant extracts may be investigated further to discover the active molecules which will be useful for the treatment of snakebite patients.

Keywords: Antivenom, *Azadirachta indica*, *Naja kaouthia*, snakebite, traditional treatment, *Xanthiumstrumarium*

Chapter 27 :

**EFFECT OF AQUEOUS EXTRACTS OF TOBACCO LEAVES
(*Nicotiana tabacum*) ON CERTAIN ORGANS AND
HEMATOLOGICAL INDICES OF ALBINO MICE**

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ABSTRACT

The present study was carried out with an objective to evaluate the impact of aqueous extract of tobacco leaves (of different dosages) on certain vital organ and hematological indices under equal environment. Using an oral route of administration, the mice (n=15; w=20-23g;) were administered two doses of aqueous extract of tobacco leaves (AEST) per day to group AEST-L (50mg/kg b.wt) and AEST-H (200mg/kg b.wt) for 15 days, after acute toxicity testing of the tobacco leaves. Effect of AEST was observed at hematological and histopathological level by following standard methods. The study of AEST treatment showed reduced pace of body weight gain. Significant decline ($p<0.01$) in total erythrocyte count (TEC), Hb% and significantly ($p<0.01$) elevated leucocyte count had observed. Studies of histopathology of liver and kidney at Light microscope level also revealed severe damage in the cellular architecture of those organs as a result of AEST treatment. From the analysis of the findings, it can be concluded that aqueous extract of tobacco leaf has a direct impact on body weight and general functioning of the body organs as well as on hematological parameters. There has been direct significant alteration in organ structure at gross and cellular level.

Keywords: Aqueous; histopathology; hematological; Albino mice.

INTRODUCTION

Tobacco is a widely used medium for intoxicification, which become most preventable cause of death in the world. Surveys portray an alarming death toll of about 5.4 million per year that possess a great threat to human being as the projected estimated death toll rise to

ABOUT THE EDITORS



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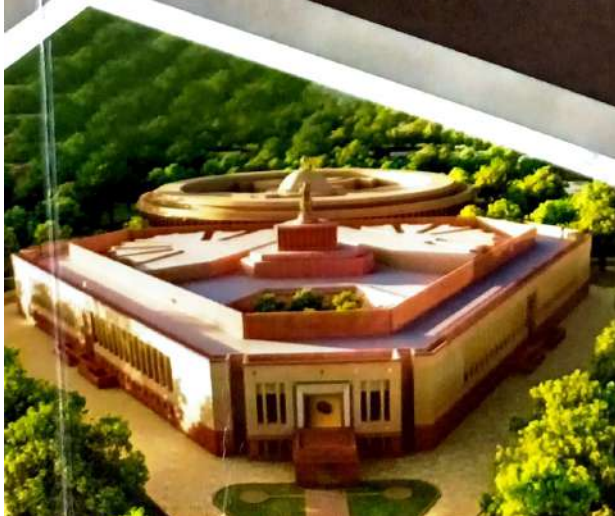
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Contents

Unit-I: Constitutional Provisions and Kinds of Bill: 13

Constitutional Provisions of Legislative Procedure (Articles 107-122), Kinds of bills in India—Ordinary Bill, Conflict between two houses in relation to ordinary bill; Money bill, Powers of the Rajya Sabha in relation to Money bill; Finance bill- Finance bill Type I & II; Government bill/ Public bill and Private bill, Facts about private members' bill; Difference between Public bill and Private bill; Difference between Money bill and Finance bill; Difference between Ordinary bill and Money bill.

Unit-II: Drafting, Introduction and Readings of the Bills:

Procedures and Processes: 43

Introduction-Drafting of bills; Law making procedure in Indian Parliament: Procedure in respect of Ordinary Bill, Assent of the President; Procedure of passing Money bills in the Parliament; Gazette notification.

Unit -III: Parliamentary Committees-Composition and

Functioning: 52

Introduction- Meaning of Parliamentary Committees, Classification of Parliamentary committees, Functions and

Limitations of Standing Committee System, Merits of Committee System; Select Committee: Its Role and Functions, Joint Parliamentary Committee(JPC): Composition, Powers and Functions, its Role and Limitations; Public Accounts Committee: Composition, Powers and Functions; Committee on Privilege: Composition and Functions; Business Advisory Committee: Composition and Functions ; Ethics Committee: Its formation and Functions.

Unit-IV: Motions and Hours in the House:

77

Introduction-VariouS Motions and Hours: Question Hour: Types of Questions, Significance of Question Hour; Zero Hour, Difference between Question Hour and Zero Hour; Calling attention Motion, Adjournment Motion: Conditions for moving Adjournment Motion; Privilege Motion, Censure Motion: Impact and Importance of Censure motion, Rajya Sabha and Censure Motion; No-confidence Motion, Difference between Censure Motion and No-Confidence Motion, Confidence Motion, List of PMs facing No- confidence Motion in Indian Parliament; Cut Motion: Types of Cut Motion.

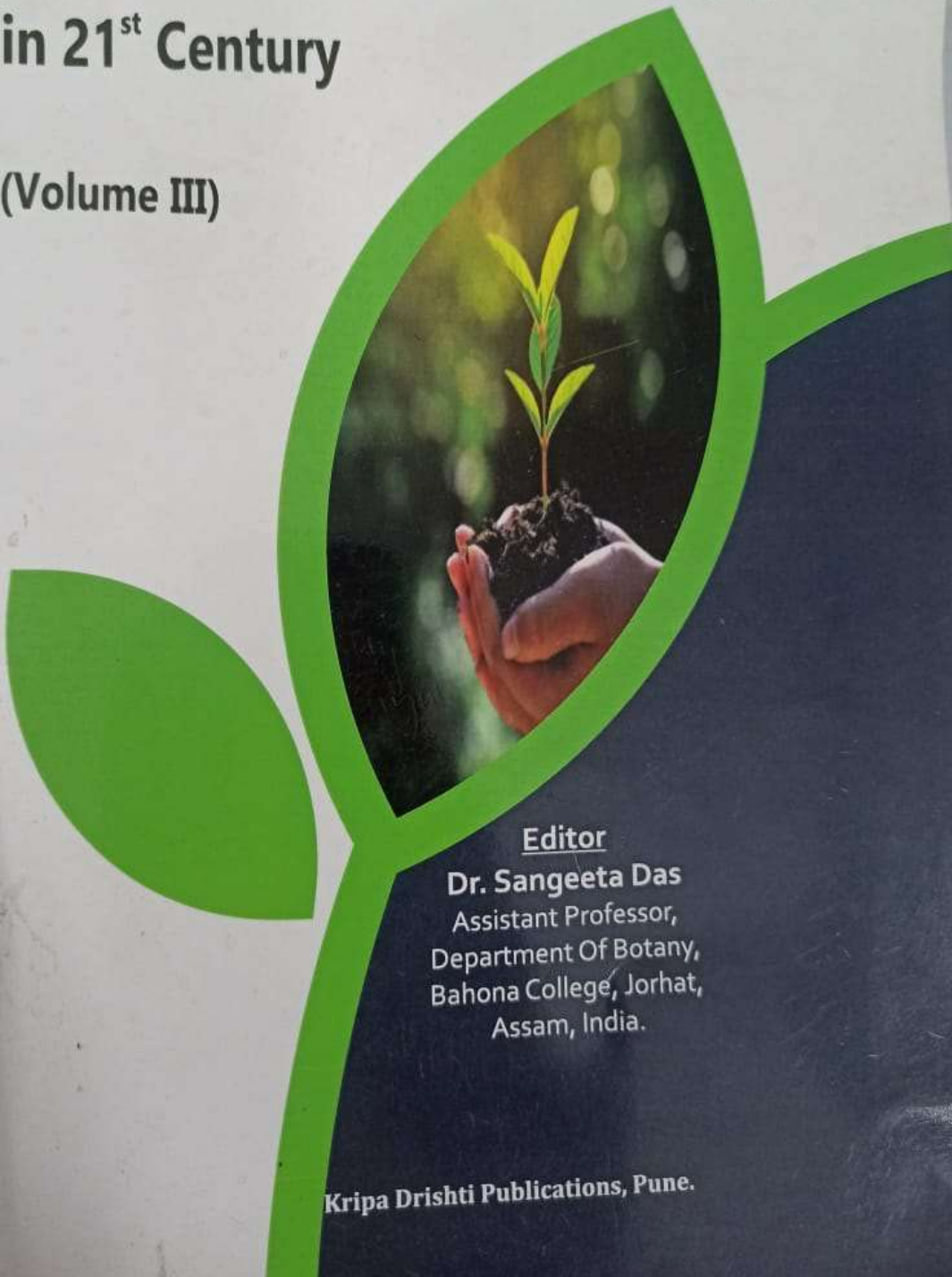
References

96

ENVIRONMENT

in 21st Century

(Volume III)



Editor

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10. Impact of Climate Change on Agriculture

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Abstract:

Climate change affects our world tremendously, Urbanization plays a key role in the climate change. The major cause of urbanization results from the increase in the population. Increase in population and their anthropogenic activities affect our climate in a greater scale. Increase in CO₂ emission is one of the major factors of climate change. Developed countries as well as undeveloped countries are equally responsible for CO₂ emission. USA contributes maximum in CO₂ emission. Climate change affects agriculture sector in negative way in the sense that weather affects the growth of many horticultural crops. Yield of many agriculturally important crops also decreases because of change in weather condition. Change in weather conditions affects the growth and development of many plant pathogens and their pathogenicity. Climate change can be mitigated through various ways. Mitigation and adaptation strategies are expected to increase farmers' income without compromising agricultural production sustainability. Climate change is quite unpredictable thus there is a need to mitigate the worsening impacts of climate change through several ways.

Keywords: *Climate change, urbanization, pathogenicity and mitigate.*

10.1 Introduction:

Climate change is one of the major problems across the world, modernization of lifestyle and ever increasing urbanization are the main factors. It is commonly defined as considerable changes in the average values of precipitation and temperature (meteorological elements) whose average has been calculated for a very long period (WMO, 1992). Increase in population and their tremendous increase of anthropogenic activities are also contributing on changes in Climate change. Sustainability of natural resources on our planet due to increase in human population is a major question (Arora, 2018). Almost all the parts of earth are touched and disturbed by human population and have put great constraint on the natural resources (Arora, 2018). Increase in the emission of various greenhouse gases showed greater impact on our planet and it has been estimated that this will result in rise in temperature by 02 °C by 2050 by various agencies such as United States Development Authority (USDA) and Organization for Economic Cooperation and Development (OECD)(Arora 2018 and IPCC,2007).Concentration of various greenhouse gases has been increased in a greater rate

CHANGING PARADIGMS OF RESEARCH

VOLUME-1



Dr. Aruna Dev Roy

Dr Dev Roy is presently working as an Assistant professor in one of the prestigious private universities of North East The Assam Royal Global University. Her rich experience of more than a decade in teaching in the field of Management and Marketing has earned her laurels in her designated field of study. She has

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CHANGING PARADIGMS OF RESEARCH

VOLUME-1

Dr. Aruna Dev Roy
Dr. Rajat Bhattacharjee

Contents

Topic	Author	Page Number
Preface to First Edition		iii
Acknowledgement		v
From the Editor's desk		vii
✓ Green Marketing in Assam: An Overview	Ms. Alpana Baruah	1
Role of Food Corporation of India: An Analytical Study in Assam	Ms. Anwasha Bhattacharjee	19
Work Life Balance of Working Women in Educational Institutions: An Analytical Study	Mr. Basu Mandal	43
Work from Home: COVID 19 pandemic effect on Stress among the male and female HR Professionals	Dr. Mahuya Deb	57
Effectiveness of Internal Control Practices in Small Businesses: Employees' Perspective	Mr. Devansh Bajaj	69
A Study on Effectiveness of Tax Audit in India: Auditor's Perspective	Ms. Hrishika Pipalwa	80

**Green Marketing in Assam:
An Overview**

Alpana Baruah

Abstract

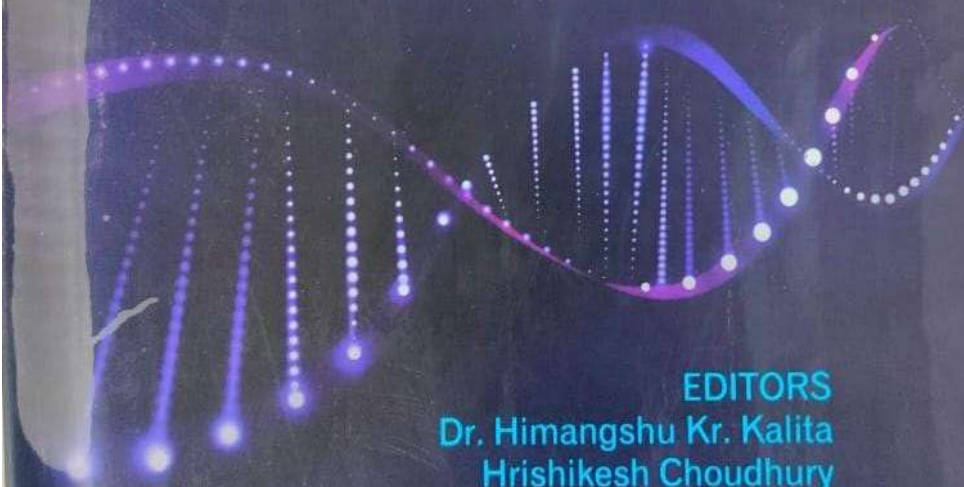
Going green is now becoming a global phenomenon due to various environmental issues, like global warming, greenhouse gases, declining air quality, etc, which are created by the most intelligent creation of the earth, i.e., we the human bring through our consumption & production. From the longevity and sustainability point of view, it is also essential we should be part of green behaviour. here, the thought of green marketing has arrived and also raises the question of how we should create green behaviour among us. The term green marketing includes all those types of products and services which are environmentally safe. As Assam is the land of blue hills and red river and is well known for its natural beauty, it must be a region that is famous for its virgin beauty and natural resources. Different kinds of flora & fauna are concerned about the sustainability of their environment or not? Are the citizens being conscious of green products, and adopting eco-friendly behaviour, or what is the present scenario towards green marketing in the case of Assam? The present study focuses on the concept of green marketing and also identifies the various advantages along with challenges faced by green products.

Keywords: *green marketing, green products, eco-friendly behaviour, sustainability, environmental benefits.*

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EMERGING TRENDS IN LIFE SCIENCES

Volume-I



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MAMMALIAN TARGET OF RAPAMYCIN (MTOR): A POTENTIAL TARGET FOR CANCER THERAPY

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Department of Zoology,
North-Eastern Hill University, Shillong, Meghalaya

ABSTRACT:

The main characteristics of cancer are the uncontrolled proliferation of cells, invasion of tumor into neighbouring tissues and the abstinence of the cells from apoptosis and autophagy. The pathway that mainly regulates these features of cell survival is the PI3K/Akt/mTOR signaling pathway. mTOR is a serine-threonine kinase that phosphorylates a number of proteins involved in various fundamental cellular processes like protein synthesis, cell growth, metabolism, survival, and autophagy. Any aberrant mutations in the signaling molecules involved in mTOR pathway will result in the formation of cancer. In most human cancers, deregulation and activating somatic mutations of mTOR is frequently evidenced and hence mTOR is widely being used as a target for treating cancer. Various mTOR inhibitors have been developed and used in some cancer treatments although a few of these inhibitors are not fully efficient in suppressing the cancer. Thus, there arises an urge to carry out detailed investigation in this aspect.

Keywords: Cancer, mTOR, PI3K/Akt, Rapamycin.

INTRODUCTION:

Cancer is a disease where the abnormal cells of the body

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Keywords: Cancer, mTOR, PI3K/Akt, Rapamycin.

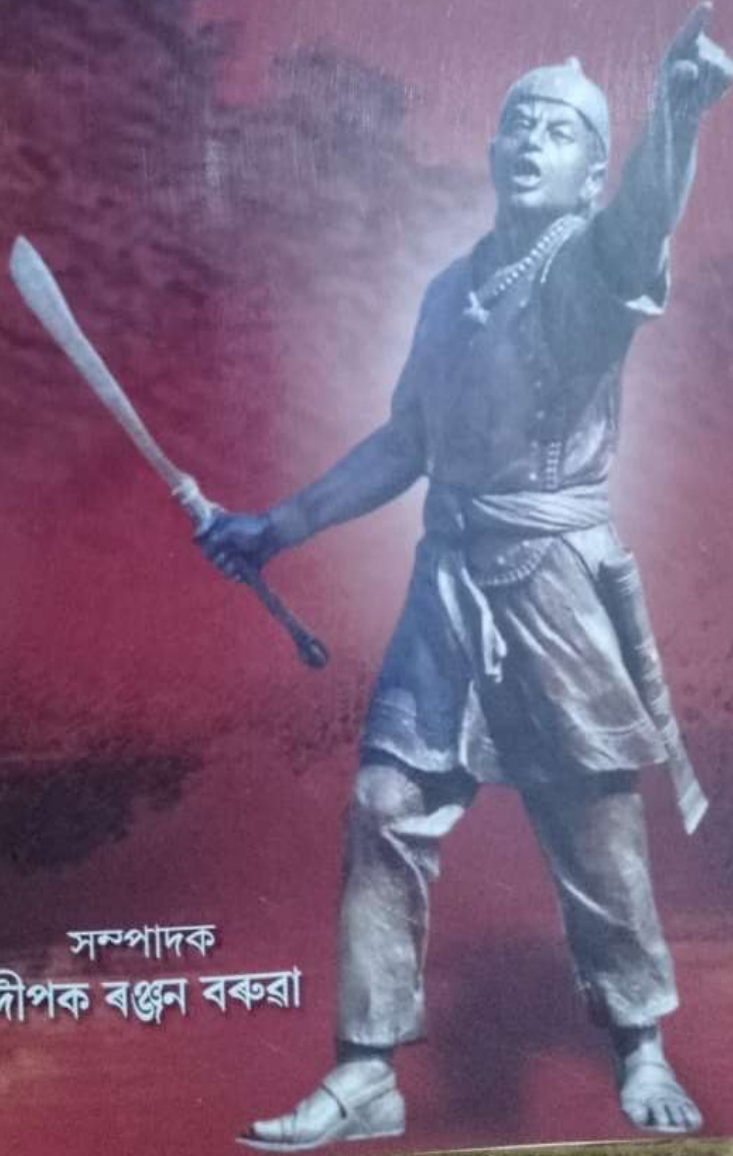
INTRODUCTION:

Cancer is a disease where the abnormal cells of the body

ফু হান লুঙ

বীৰ লাচিত বৰফুকনৰ ৪০০ বছৰীয়া জয়ন্তী উদ্‌যাপন উপলক্ষে প্ৰকাশিত স্মৃতিগ্ৰন্থ

টাই আহোম যুৱ পৰিষদ; অসম (টাইপা) তিনিচুকীয়া জিলা সমিতিৰ সৌজন্যত
ডুমডুমা, কাকপথাৰ, হাঁহখাটি-ছেখোৱা আঞ্চলিক সমিতিৰ উদ্যোগত আৰু বৃহত্তৰ ডুমডুমাৰাসী ৰাইজৰ সহযোগত



সম্পাদক
দীপক ৰঞ্জন বৰুৱা

অসমীয়া জাতীয় চিন্তাৰ বিৱৰ্তন আৰু লাচিত বৰফুকন



ড° কঙ্কন ডেকা
সহকাৰী অধ্যাপক, ইতিহাস বিভাগ
দৰং মহাবিদ্যালয়

The past legitimizes. The past gives a more glorious background to a present that doesn't have much to celebrate.

– Eric Hobsbawm

ঐতিহাসিক শৰাইঘাটৰ যুদ্ধত, অনুপ্রাণিত বামসিহেৰ নেতৃত্বত অহা মোগল বাহিনীক চূড়ান্তভাৱে পৰাস্ত কৰি আহোম সেনাপতি লাচিত বৰফুকনে অতুলনীয় বীৰত্বৰ অক্ষয় কীর্তি অৰ্জন কৰিছে। দিল্লীৰ শাহজাহান ঔৰংজেবৰ সমগ্ৰ ভাৰতবৰ্ষৰ অধীনত হোৱাৰ দুৰ্বাৰ বাসনাক মূলিসাৎ কৰি অসামান্য কৃতিত্ব আৰু গৌৰৱৰ অধিকাৰী হোৱা লাচিত বৰফুকন অসমৰ ইতিহাসৰ এক স্মৰণীয় চৰিত্ৰ। সপ্তদশ শতিকাত, ঔৰংজেবৰ বাজত্বৰ কালতেই মোগল সাম্ৰাজ্যৰ ভৌগোলিক পৰিসীমাৰ বিস্তৃতিয়ে সৰ্বোচ্চ শিখৰত আৰোহণ কৰিছিল। একেদৰে, এই ঔৰংজেবৰ শাহজাহানৰ বাজত্বৰ কালতেই মোগল ৰাজশক্তিৰ ৰাজ্য বিস্তাৰৰ অভিযানৰ বিৰুদ্ধে অসমীয়া প্ৰত্যাহান গঢ়ি তুলিছিল শিৱাজী মহাৰাজৰ নেতৃত্বত দক্ষিণ-পশ্চিম ভাৰতত মাৰাঠাসকলে আৰু লাচিত বৰফুকনকে মুখ্য কৰি চতুৰ্দ্ধক সিংহ, আতন বুঢ়াগোহাঁই আদি ৰাজপুত্ৰ সকলৰ নেতৃত্বত উত্তৰ-পূব ভাৰতত আহোমসকলে। ১৬৭১ খ্ৰীষ্টাব্দৰ শৰাইঘাটৰ নিৰ্ণায়ক ৰণত মোগল বাহিনীক পৰাজিত কৰা আহোম সেনাবাহিনীক সন্মুখৰ পৰা নেতৃত্ব প্ৰদান কৰা লাচিত বৰফুকন আছিল অতুলনীয় বীৰত্ব, অসাধাৰণ নেতৃত্ব গুণ আৰু চৰিত্ৰ বলেৰে বিভূষিত। অৱশ্যে এয়া অনস্বীকাৰ্য যে — শৰাইঘাটৰ ৰণত যুঁজত নমা আহোম সেনাৰ সৈতে সেই কালৰ উত্তৰ-পূবৰ বিভিন্ন ৰাজ্যৰ বহু জাতি-জনগোষ্ঠীৰ যুঁজাৰুৰে কাফত কাফ মিলাই ৰণত নামিছিল। লাচিত বৰফুকনৰ বীৰত্ব, চৰিত্ৰৰ দৃঢ়তা আৰু অসামান্য নেতৃত্বদায়ী ক্ষমতা আদি গুণাবলীয়ে ইতিহাসৰ এক উজ্জ্বল চৰিত্ৰৰূপে পৰৱৰ্তী কালৰ প্ৰজন্মসমূহক অনুপ্রাণিতকৰি আহিছে।

ড° সূৰ্য্যকুমাৰ ভূঞাই আগবঢ়োৱা তথ্য অনুসৰি শৰাইঘাট যুদ্ধৰ ঠিক পিছতেই লাচিত বৰফুকনৰ পৰলোকপ্ৰাপ্তি ঘটে। লাচিত বৰফুকনৰ জীৱনাৱসানৰ পাছত প্ৰায় এক দশক কাল আহোম ৰাজশক্তি আভ্যন্তৰীণ ৰাজনৈতিক অবিয়া-অবিত বিক্ষত হৈ পৰে। সম্ভৱতঃ ইয়াৰ বাবেই লাচিত বৰফুকনৰ গৌৰৱোজ্বল কৃতিত্বৰ কাহিনী সময়ৰ সোঁতত হেৰাই যোৱাৰ উপজন্ম হয়। সৰ্বশ্বৰ শৰ্মা বৰুৱাই



ন-দিগন্তত আৰোহণ

১৮৮৯ চনত্ৰ ত্ৰিপলৈক শাকৰা তেলৰ সফল আবিষ্কাৰকে আৰম্ভ কৰি উত্তৰ-পূৰ্বাঞ্চলৰ বাহা অসমৰ নাহেৰকটীয়াত আৰ্শীন ভাৰতৰ প্ৰথমটো তৈল ক্ষেত্ৰ স্থাপনৰ পৰা বৰ্তমানলৈকে তিনিটা শতাব্দী ধৰি উত্তৰাধিকাৰ সাব্যস্ত কৰা তথা উত্তৰ-পূব ভাৰতৰ আয়েককৰ গতি বৃদ্ধি কৰাৰ উদ্দেশ্যেৰে সৈতে অইল ইণ্ডিয়া লিমিটেডৰ জন্ম হয় ১৯৪৯ চনৰ ১৮ ফেব্ৰুৱাৰীত।

বিশ্বব্যাপক পৰামৰ্শী তৈল আৰু গেছ অন্বেষণকাৰীৰ মুঠ সংকল্প আৰু এক আণীকাৰবদ্ধ কৰ্মপদ্ধিয়ে অইলক ইয়াৰ অধিন ভাৰতীয় উপস্থিতি বিস্তাৰ কৰাত সক্ষম কৰি তোলে আৰু নিজ পৰিচালনে বিভিন্ন বিদেশী বাষ্ট্ৰ যেনে - বাংলাদেশ, থেলে, ইন্ডোনেছিয়া, সিৰিয়া, মোজাম্বিক, নাইজেৰিয়া, কম্বিয়া, আমেৰিকা যুক্তৰাষ্ট্ৰ আৰু ভেনিজুয়েলা আদিত নিজ শিল্পৰ বিস্তাৰ কৰে।



অজি, নৰেয় - বাহেৰা পতন এক প্ৰতিষ্ঠান হিচাপে অইল ইণ্ডিয়া লিমিটেডে এক দাবদ্ধ নিগমিত নাগৰিক হিচাপে বিশেষ গুৰুত্ৰ প্ৰদান কৰি ইয়াৰ কৰ্তব্য পালনৰ জৰিয়তে "বিশ্বভাৰীয়া উপস্থিতিৰে জ্ঞাতৰম গতিত বিকশিত পতি প্ৰতিষ্ঠান" হোৱাৰ বিসং-সিমিত সংগে, তাক অৰ্জন কৰাত সম্পূৰ্ণৰূপে আণীকাৰবদ্ধ।

বিশ্ব স্তৰত সঠিক গতি নিৰ্ধাৰণ কৰা



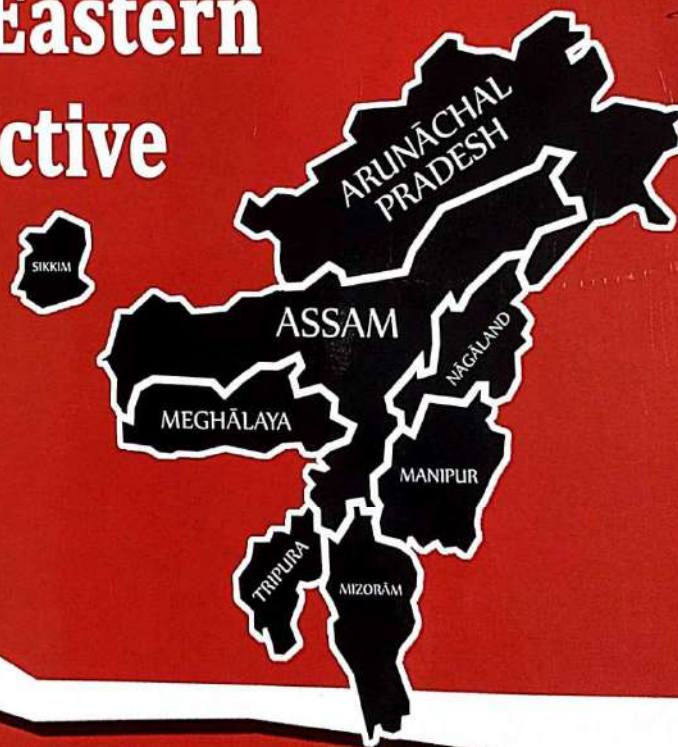
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Contemporary Issues in Geography: North-Eastern Perspective



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Content

Chapters	Page No
1 Analysing Vegetative Cover using Geospatial Technology of Tinsukia District <i>Ambika Rabha, Rebecca Kramsapi</i>	7
2 Growth of Slums and Precarity Faced By Women : A Study of Upper Assam with Special Reference to Dibrugarh District <i>Preeti Barsha Borah</i>	15
3 Development of the Economy of North-Eastern Region through Potato Cultivation; A Case study of Assam <i>Dr. Rimjim Bordoloi, Dr. Ashi Lama</i>	24
4 Issue of Accessibility and Reliability: Road Network Connectivity in TLC, Arunachal Pradesh <i>Manngam Wangpan and Sailajananda Saikia</i>	41
5 Household Solid Waste Management Practices and Challenges: A Study in Tihu Town of Assam <i>Jumi Das</i>	56
6 Socio-Economic Characteristics and Financial Behaviour of Tea Garden Labourers of Biswanath District of Assam <i>Shilpi Shikha Chetia</i>	78
7 Assessment of Bank Erosion in Dibru Saikhowa National Park from 2010 to 2020 <i>Ankita Mahanta, Sikhmoni Devi, Dr. Chandra Kumar Dutta</i>	90
8 ✓ How to Rescue a City? Optimum Locational Planning of Urban Fire Stations in Guwahati City (India) by using Geo-Spatial Technologies <i>Manjit Das, Niha Dutta</i>	98

How to Rescue a City? Optimum Locational Planning of Urban Fire Stations in Guwahati City (India) by Using Geo-spatial Technologies

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Abstract

Fire is one of the serious threats among non-natural disasters for urban settlements, especially in high population density regions. It not only causes mortality but also severely damages the housing and infrastructures of a region. Guwahati city, one of the largest metropolises of North East India is now experiencing the rapid growth of urbanization due to its easy accessibility and geographic conditions. The drastic change in the demographic field of Guwahati city has now led to an increasing demand of different emergency services especially, fire services. Rescue and life safety are one of the most important functions of fire service department. But performing these acts systematically and efficiently depends upon the optimal location of the fire station, because if the location is not accessible then the fire fighters may not easily reach the incident site within the reasonable and acceptable response time. This paper is an attempt to identify the existing fire stations as well as potential areas for establishing more fire stations in GMC area of Guwahati city if required. It has been tried to highlight the key issues using secondary information collected from various sources and also satellite data have been superimposed using GIS tool to analyze and justify the results.

Key words: Disaster, emergency service, GIS, response time, urbanization.

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BIODIVERSITY CONSERVATION

ISSUES AND PROSPECTS

JUNE, 2023

Editors:

S. I. Bhuyan
M. Islam
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CONTENTS

Chapter No.	Title	Authors	Page No.
1	Cellulolytic activity of litter fungi isolated from specific litter of Salcete, Goa.	Amisha Shirodker Pednekar, Khan Sadiya, Vaz Shannon, Rodrigues Swetha, Naik Prachi, Sharma Preety	11-23
2	A study on ecotourism potentiality in and around Chandubi wetland, Assam (India)	Archana Mahanta, Lakshmi Roy, Niha Dutta	24-34
3	Study of wild Aromatic plants used as a source of food and medicine by the Rabha Tribes of Goalpara District, Assam.	D. Boro, H. Narzary, J. Brahma	35-46
4	Floral traits and Pollination syndromes in <i>Syzygium myhendrae</i> (Bedd .ex.Brandis) Gamble: an endangered tree species of the Southern Western Ghats.	Divya S Pillai, A K Sreekala	47-55
5	<i>Ficus altissima</i> Blume (Moraceae): a new distributional record for the flora of Manipur, India.	Dolly Tourangbam, Amom Gyanendro Singh, Longjam Malemnganbee Chanu	56-60
6	Exploration of external markers for identification of resinous Agarwood tree and documentation of oil extraction process.	Joyashree Dutta, Mantu Bhuyan	61-71
7	Comparative wood anatomy of hardwood and softwood species with reference to their identification.	Malti K. Singh	72-79
8	Impact of antioxidants in the mitigation of oxidative stress in livestock animals with special reference to Pigs.	Manasee Choudhury, Pranab jyoti Das	80-88
9	Seasonal variation and quantitative analysis of aquatic macrophyte of Haora River, Tripura.	Maria Deb Barma, Sabyasachi Dasgupta	89-99

A Study on Ecotourism Potentiality in and Around Chandubi Wetland, Assam (India)

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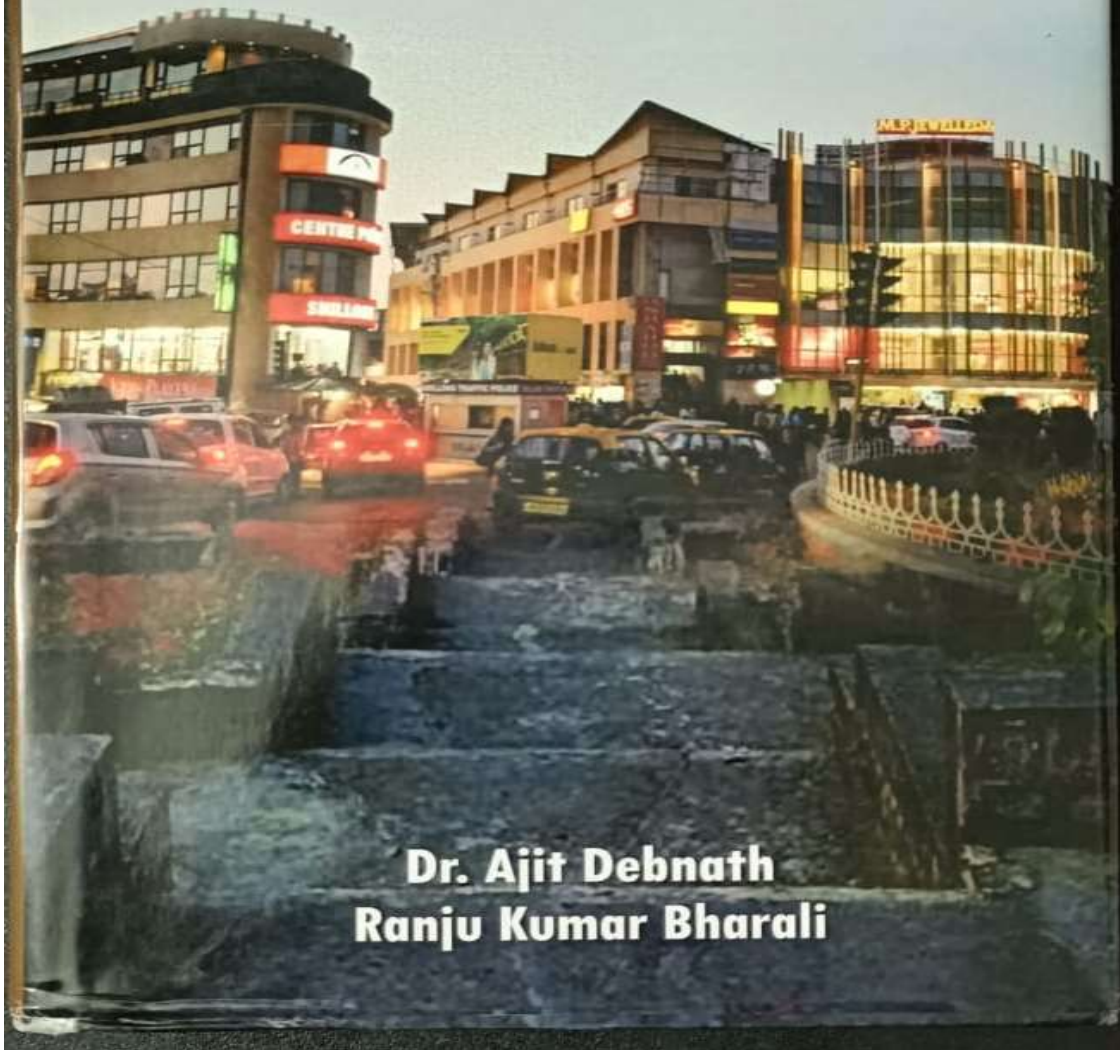
Abstract

There is no doubt that ecotourism is one of the flourishing industries in the present-day world. Ecotourism is found as one of the best approaches to exploit the physical and cultural resources of the Chandubi wetland in a sustainable manner. Its rich natural scenic beauty and clean and green environment is eco-friendly, healthy as it is located between hilly and plain areas of South Kamrup District in isolated mode, away from the influence of Guwahati city. Ecotourism can make a significant contribution in protection, conservation and restoration of present biodiversity and sustainable use of the natural resources of the Chandubi wetland. The growth of ecotourism will give the national and international importance to Chandubi wetland along with its development. Here, an attempt is made to assess the ecotourism potentiality of the wetland by using SWOT analysis and Pralong's method. As per the Pralong's method tourist value of Chandubi is 0.67 out of 1 and indicates that Chandubi has a great potentiality to develop as an ecotourism destination in the land of Assam.

Keywords: *Ecotourism, biodiversity, Pralong's method, sustainable, SWOT analysis, Pralong's method.*

A MITTAL PUBLICATION

Urban Development in North East India



Dr. Ajit Debnath
Ranju Kumar Bharali

CONTENTS

<i>Acknowledgements</i>	v
<i>Preface</i>	vii
<i>List of Contributors</i>	xiii
1. Urban Local Governance in Assam	1
– DR. BANDANA CHOWDHURY & DR. JAYASHREE CHOWDHURY	
2. Challenges of Waste Pickers' Socio-Economic Status in Nagaon Municipality Area	11
– BHAGYASHREE BORA	
3. A Study on Urbanization in North–Eastern Region of India	25
– ASHOMI KALITA	
4. Urbanization, Digital Divide and The Unorganized Sector of Assam: Question of Livelihood Security and Sustainability	35
– SIVANATH CHUTIA	
5. Interstate Variation in Access to Selected Household Amenities in North Eastern Region of India	45
– BIMAN KUMAR NATH AND JYOTISMITA BORAH	
6. Factors Influencing Migration of People From Rural To Urban Area: A Factor Analysis With Special Reference To Golaghat City of Assam	59
– DIGANTA KR. MUDOI	
7. Urbanisation Through Industrialisation in India- An Analysis With Special Reference to Assam	71
– DAISY RANI KALITA AND AJIT DEBNATH	

URBANISATION THROUGH INDUSTRIALISATION IN INDIA: An Analysis with Special Reference to Assam

DAISY RANI KALITA AND AJIT DEBNATH

Introduction

Industrialisation and urbanisation are two sides of the same coin. There would be no urbanisation without industrialisation, they are complementary and supportive of one another. Historically, industrialisation has resulted in urbanisation by creating job opportunities and economic growth, which has resulted in a shift in population from rural to urban areas. Typically, urbanisation begins with the establishment of a factory or multiple factories within a region, resulting in high demand for factory workers. Similarly, other businesses such as housing, retailers, service providers, and so on are being developed to meet the product demands of factory workers. This generates even more job opportunities and manpower demands, resulting in the formation of an urban area. Urbanisation is the spatial carrier of industrial development, while industrialisation is the source of power for economic expansion. Industrialisation is inextricably linked to urbanisation, and urbanisation is an expression of industrialisation. It refers to the movement of people from dispersed rural areas to compact urban areas, as well as the process of increasing population concentration in urban areas. The demographic ethic, social-

URBAN DEVELOPMENT IN NORTH EAST INDIA

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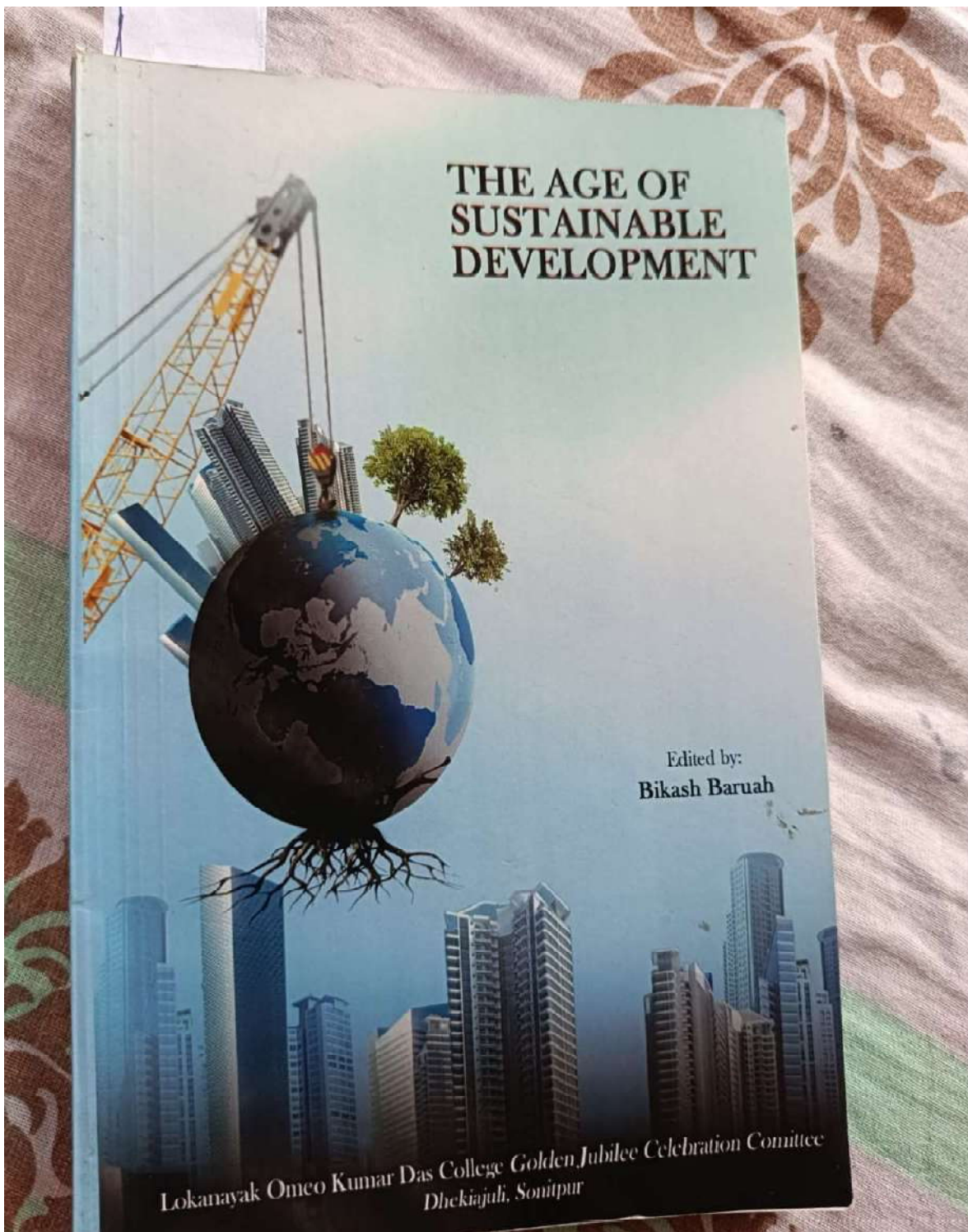


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E-BANKING PRACTICES IN INDIA WITH SPECIAL REFERENCE TO SONITPUR DISTRICT OF ASSAM- A CASE STUDY

ABSTRACT :

E-Banking, also known as online banking or virtual banking or internet banking is a system which enables banking transactions like transfer of funds, payment of loans and EMIs, deposit and withdrawal of cash virtually with the help of internet. It is one among the extended features which banking institutions provide, in addition to traditional banking. e- Banking is the most used feature by the citizens of India after the effect of demonetization. Most of the Indian customers both male and female are not conscious about e-banking security. They have lack of technical knowledge to handle their e-bank account. Many of them have no computer in their residence. Female users are more conscious than male. Indian banks are operating their e-banking functions by non-technical hand. The main objective of present study is to find out the perception, attitude and practice of male and female users of e-banking in Sonitpur District of Assam. The investigation was concentrated on male and female users of e-banking in various divisions, districts, towns and rural areas in Sonitpur District of Assam. The sample consisted of 25 female and 75 male bankers and bank customers, were selected purposively from various territory. Data was col-

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Chapter 14

Prospects of Smart Farming as a Key to Sustainable Agricultural Development: A Case Study of India



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14.1 Introduction

Technology has always played an important part in the development of our nation's businesses, and this is also true in the agricultural industry. The agricultural industry is reaping substantial benefits from a variety of new and developing modern technologies. In the manufacturing sector, technology is having a beneficial impact on everything from flying drones to artificial intelligence (AI). Every stage of the agricultural process, from the field to the very end (i.e., after harvesting), is now dependent on technological advances. It is becoming clearer that the world is transitioning to a

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A Review of Recent Advances in Translational Bioinformatics and Systems Biomedicine

Chapter | First Online: 02 December 2022
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Chittaranjan Baruah, Bhabesh Deka & Saurov Mahanta

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Abstract

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Chapter 20 - Weeds as a renewable bioresource: prospects for bioconversion to biofuels and biomaterials through a cascade of approaches

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Chapter 9

The Topp-Leone-G Power Series Distribution Its Properties and Applications

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MS Classification: 60E05; 62E15; 62F10.

1. Introduction

The Topp-Leone distribution is commonly used in many applied problems, particularly in lifetime data analysis that has attracted various statisticians as an alternative to the Beta distribution. A generalization of this distribution is the Topp-Leone-G family of distribution. The distribution function of the Topp-Leone-G family is given by Ali et al. (2016) as,

$$F^{\text{TLG}}(x; \alpha) = G(x)^\alpha [2 - G(x)]^\alpha; \quad x \in R, \alpha > 0 \quad (1)$$

The probability density function (pdf) of the corresponding (1) is given by,

$$f^{\text{TLG}}(x; \alpha) = 2\alpha g(x)\bar{G}(x)G(x)^{\alpha-1}[2 - G(x)]^{\alpha-1} \quad (2)$$

where, $g(x)$ and $\bar{G}(x) = 1 - G(x)$ are the probability density function (pdf) and the survival function (sf) of the baseline distribution.

Roозegar and Nadaraja (2017) defined the Topp-Leone power series distribution with sf and pdf,

$$\bar{F}^{\text{TLPS}}(x; \lambda, \alpha, \beta) = \frac{\Phi(\lambda[1 - G(x; \alpha, \beta)])}{\Phi(\lambda)} \quad \text{and} \quad f^{\text{TLPS}}(x; \lambda, \alpha, \beta) = \frac{\lambda g(x; \alpha, \beta) \Phi'(\lambda[1 - G(x; \alpha, \beta)])}{\Phi(\lambda)}$$

where, $g(x; \alpha, \beta)$ and $G(x; \alpha, \beta)$ are the pdf and cdf of the two parameter Topp-Leone distribution $\Phi(\lambda)$ and $\Phi'(\cdot)$ are defined below.

In this article, we introduce a new extension of the Topp-Leone-Power series family of distributions by compounding Topp-Leone-G by power series distributions, to get the Topp-Leone-G power series distribution.

Given $N = n$, let $X_i, s(i = 1, 2, \dots, n)$ be independent and identically distributed (iid) random variables from the Topp-Leone-G family of distributions whose cdf is given by eq. (1). Consider N to be a discrete random

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