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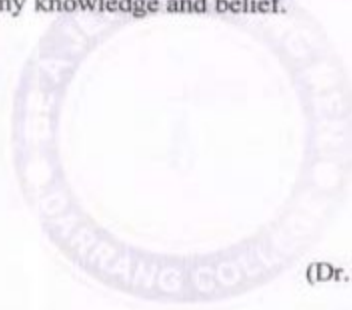
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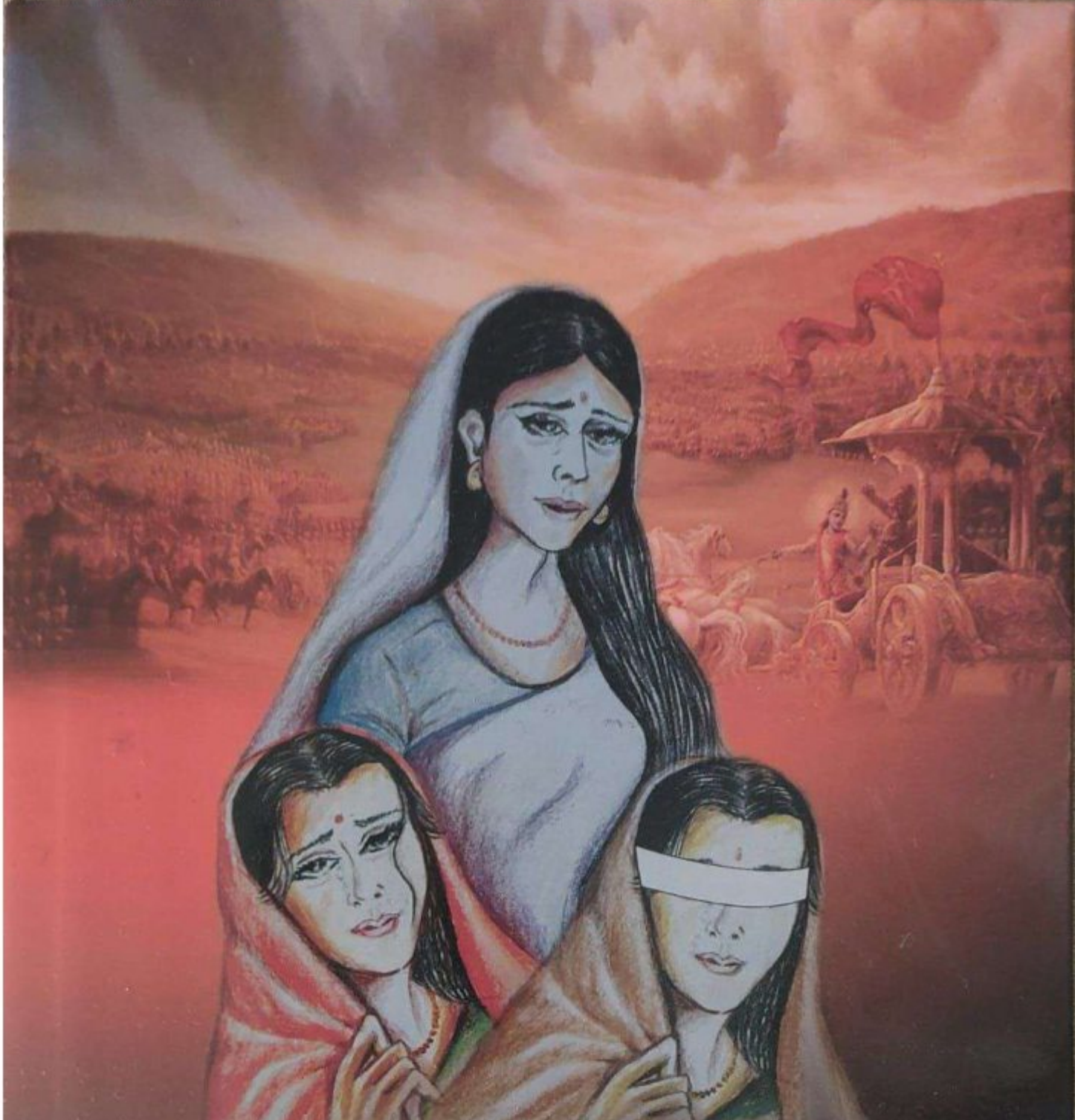
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Dr. Baruah is presently serving as Assistant Professor (Sr. G) in the Postgraduate Department of Zoology, Darrang College, Tezpur (under Gauhati University), Assam, India. Prior to the present appointment, he had served as Research Associate in Bioinformatics at the DBT-BIF Center, Gauhati University for a period of 3 years. Dr. Baruah has nine years of undergraduate and postgraduate teaching and research experience.

Dr. Baruah is so far credited with more than 40 research papers, 1 book, 8 book chapters, 30 seminar presented papers, delivered more than 25 talks in Bioinformatics as Visiting Professor in North Lakhimpur College (Autonomous) and as Resource person in the higher learning institutions of northeast India including Gauhati University, Assam Agriculture University, Bodoland University, CSIR-NEIST, Cotton University, USTM (Meghalaya), St. Anthony's College (Shillong), Mangaldai College and Kaliabor College and Dhing College, Assam. He has completed four research projects as Principal Investigator with international funding. He is one of the Recognized Ph.D. Research Guides of School of Biological Sciences, University of Science and Technology, Meghalaya. He is the Life member of 10 National & International Professional Bodies, Editorial Board members, *Indonesian Journal of Applied Environmental Studies* (In JAST) and Reviewer of 6 international Bioinformatics and Molecular Biology journals published by Springer Nature, Elsevier and Taylor and Francis.



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For his outstanding research contribution, he has been awarded "Dr. Birej Mohan Das Memorial Award" (2011) in recognition of his research work.

In recognition of his research excellence as an educationalist as well as for his excellent leadership and research activities, he has been awarded/selected from the "Oil Shiksha Ratna Award" (2017) in his professional services & leadership by

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He was working as Postgraduate supervisor of North-east India for his doctoral thesis. He undertook his research work at Tropical Research Laboratory (CSIR), (Presently known as North East Institute of Science & Technology), Jorhat Assam (1974-1976). Since then he is actively engaged to explore the Postgraduate research work under his supervision & to work on academic activities.

He started as presently working as Associate Professor & Former HoD, in the P.G. Department of Botany (Teaching) (Group) under Assam University, Gauhati, Assam. He is so far credited with 161 published research papers/articles (Journal, 7, Books, 1) and 145 edited, 34 seminar presented papers, authored 10 books in various papers more than 775 popular science articles, credited with 1 patent, guided 1 Ph.D. student and many M.Sc. students for their M.Sc. Dissertations, discovered 4 new aromatic plant oils (1 new type of essential oil and many promising aromatic & spice plant resources for natural essential oils & fragrances, natural & synthesized) from North-east India.

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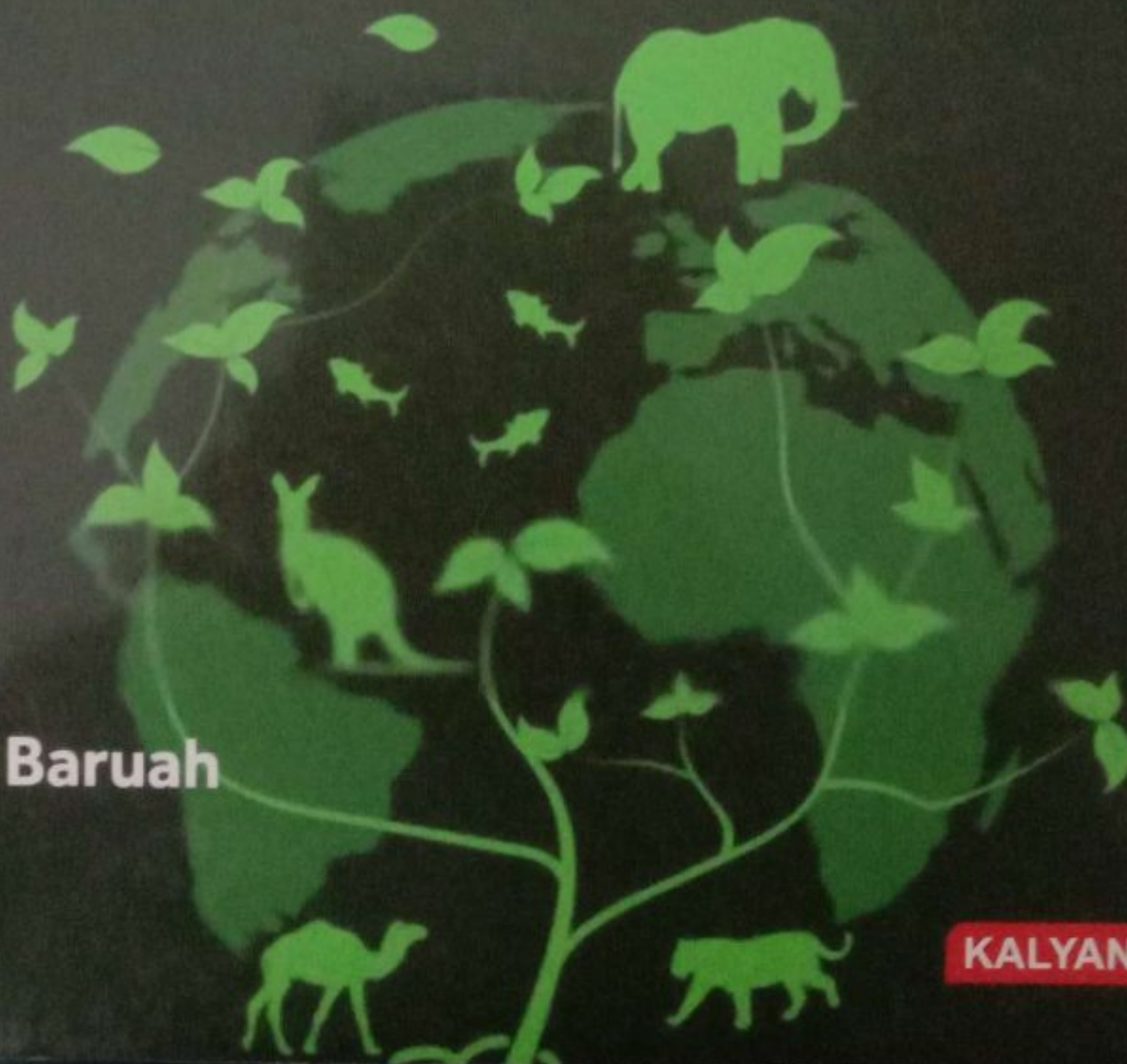
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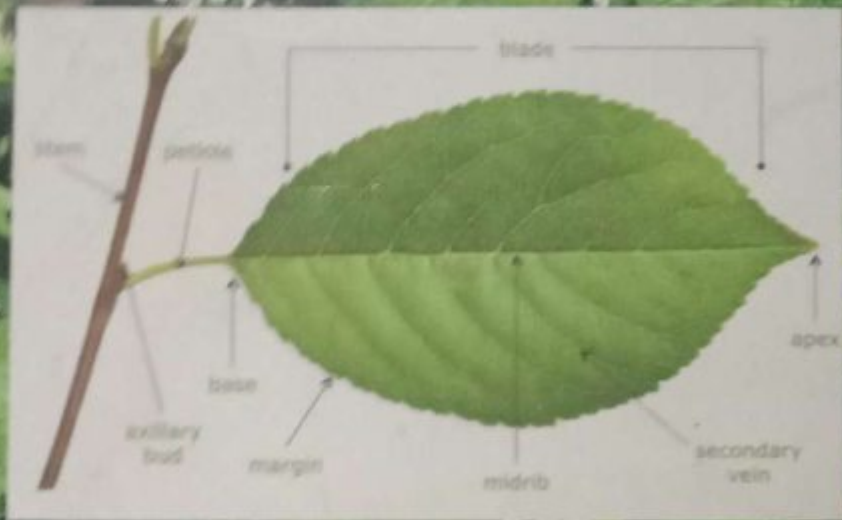
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**Dr. Akhil Baruah**

## ABOUT THE AUTHOR



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).

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# Text Book of **ETHNOBOTANY**

Akhil Baruah  
Ashish Kar



**KALYANI**



## About the Authors

Dr. **Mani Narain** (1933-1987, P.O. Guntur, 1987), Associate of National Fellowship (1986-1988), UGC-Junior Project Fellowship (1984-1986), UGC-Senior Research Fellowship (1986-1988) and UGC-Calendar Senior Research Fellowship (1986-1988).

For his outstanding research contribution, he has been awarded "A" Dr. Biju Mahan Das Memorial Science Award, 2007 in Botanical Science.

Awards in recognition of his all round excellence as an educator as well as for his excellent teaching and research activities. Dr. Mani Narain has been awarded/selected for the "100th Birth Anniversary Award, 2017" on the auspicious occasion of Teachers' Day.

Dr. Narain has also been selected for the "Best Teacher Award, 2007" by the UGC of Guntur College. In recognition of his all round excellence in Academic, Research and other activities, the UGC has been conferred the Award for the first time in the "Platinum Jubilee" year (1985, 25 July 2000) of the present nation.

Dr. Narain is presently serving as Associate Professor & Faculty (H.C.) in the P.O. Department of Botany, Guntur College, Guntur under Coastal University, Guntur, Andhra. He is so far credited with 160 research papers/book chapters, 40 Books (20 scientific authored - 4 Edited), 34 seminar presented papers, delivered 11 talks as resource person/lecturer, more than 200 popular science articles, credited with 1 patent, guided 1 M. Phil. student and many P.O. students for their M. Sc. Dissertations, discovered 4 new animal/plant taxa, 2 new types of animals, an many promising animals & some plant resources to utilize essential oils of fragrant, Spice & pharmaceutical value from Northwest India.

One of his books entitled "Tiger - the Indian Big Cat" published (2011) from Germany has been recently published (2017) in 3 European Language Editions. These are Tiger - les grandes de la base effondré in French, Tiger - die indische Kattenschäfer in German, Tiger - le tigre de la base effondré in Italian, Tiger - indische Löwe Jagd in Polish and Tiger - el tigre de la base de India in Portuguese.

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Dr. **Manish Kumar** is presently serving as Fellow Scientist in The Energy and Resources Institute (TERI) - New Delhi, Southwestern Regional Centre, Guntur. He is so far credited with 36 research papers, book chapters, 1 book, 2 scientific articles, 1 patent and delivered 8 talks as resource person.

Dr. Kumar is awarded of Junior Research Fellowship from UGC, Senior Research Fellowship from UGC and MHRD, Department of New Family Structurally Award.

He works in the President garden (Rustlingal Shree, New Delhi) for identification of medicinal, ornamental and wild medicinal plants available inside Rustlingal Shree, campus. Working in a laboratory for "Plant Genetic Diversity" as a research guide, sponsored by IIS, Guntur.

He is the Fellow - Life member of 8 national international professional bodies and recognized as Reviewer/Editor of 20 Indian and Foreign journals and Editorial member of one journal.

Dr. Kumar presented 10 research papers in National International seminar/workshop/conference/ symposium. He also handled several Seminars and B & D projects as Principal Investigator funded by National and International funding agency.



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**Dr. Tankeswar Nath**, Awardee of National Fellowship (1987-88), ICAR-NET (1998), ICAR-Senior Research Fellowship (1998-2000), CSIR-Senior Research Fellowship (2001-2003), One year (2004-2005) over sea fellowship (Gifu University, Japan), One month Indo-European over sea fellowship (Italy & Greece) by AdaptNet (Jan-Feb, 2020). He has also eight years (2002-2010) industrial research experiences as a 'Research Scientist' in Jubilant Life Sciences Ltd., Noida.

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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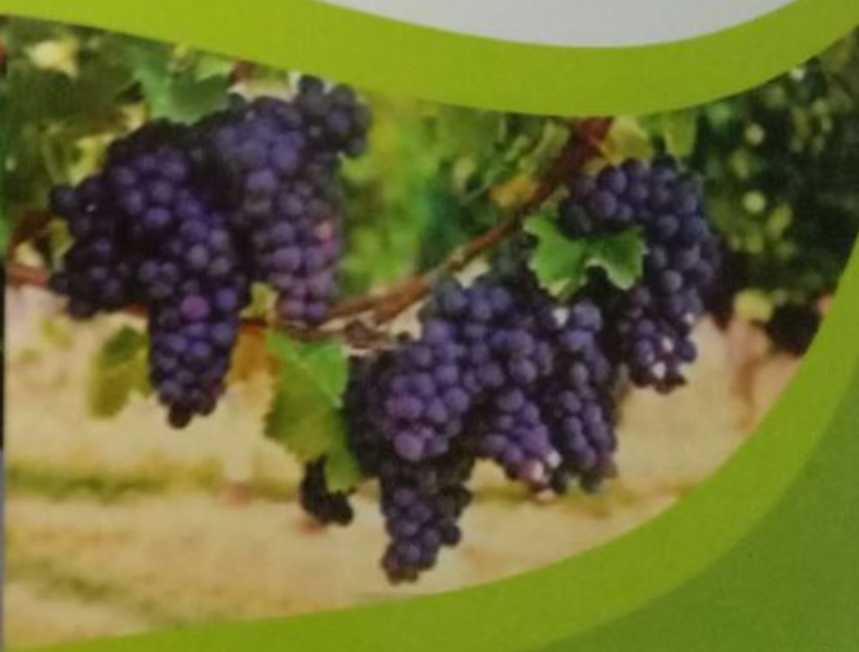
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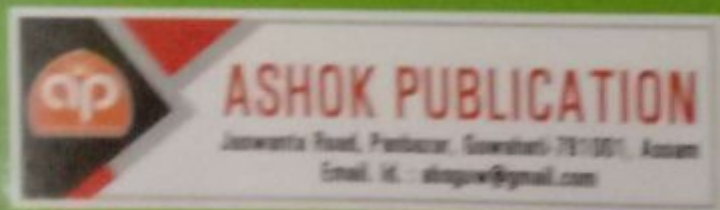
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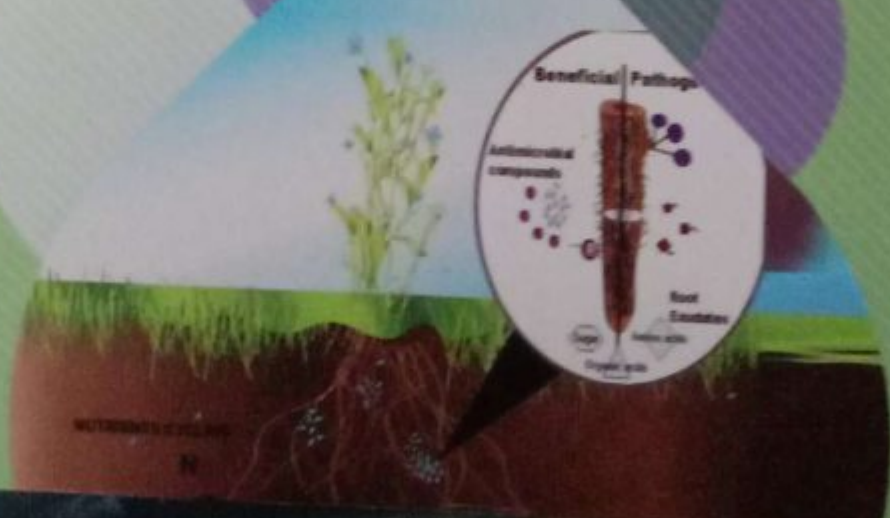
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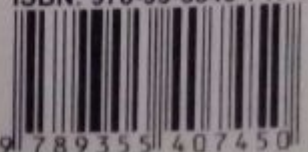


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Dr. Akhil Baruah, FCS, FIC, FLS (London), FAPT, Awardee of National Scholarship (1989-1990), CSIR-Junior Project Fellowship (1994-1996), CSIR-Senior Research Fellowship (1996-1999) and CSIR-Extended Senior Research Fellowship (1999-2000).

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

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Dr. Baruah has more than two decades of teaching and research experience and is presently serving as Associate Professor & Former HoD, in the P.G. Department of Botany, Darrang College, Tezpur under Gauhati University, Guwahati, Assam. He is so far credited with 160 research papers/book chapters, 43 Books (37 sole/first authored + 6 Edited), 34 seminar presented papers, delivered 11 talks as resource person/speaker, one Radio talk, more than 235 popular science articles, credited with 1 patent, guided 1 M. Phil. student and many P.G. students for their M. Sc. 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' Indian in French, Tejpat – die indischen Lorbeerblätter in German, Tejpat – le foglie della baia indiana in Italian, Tejpat – indyjskie Liscie Zatoki in Polish and Tejpat – as Folhas da Baia da India in Portuguese.

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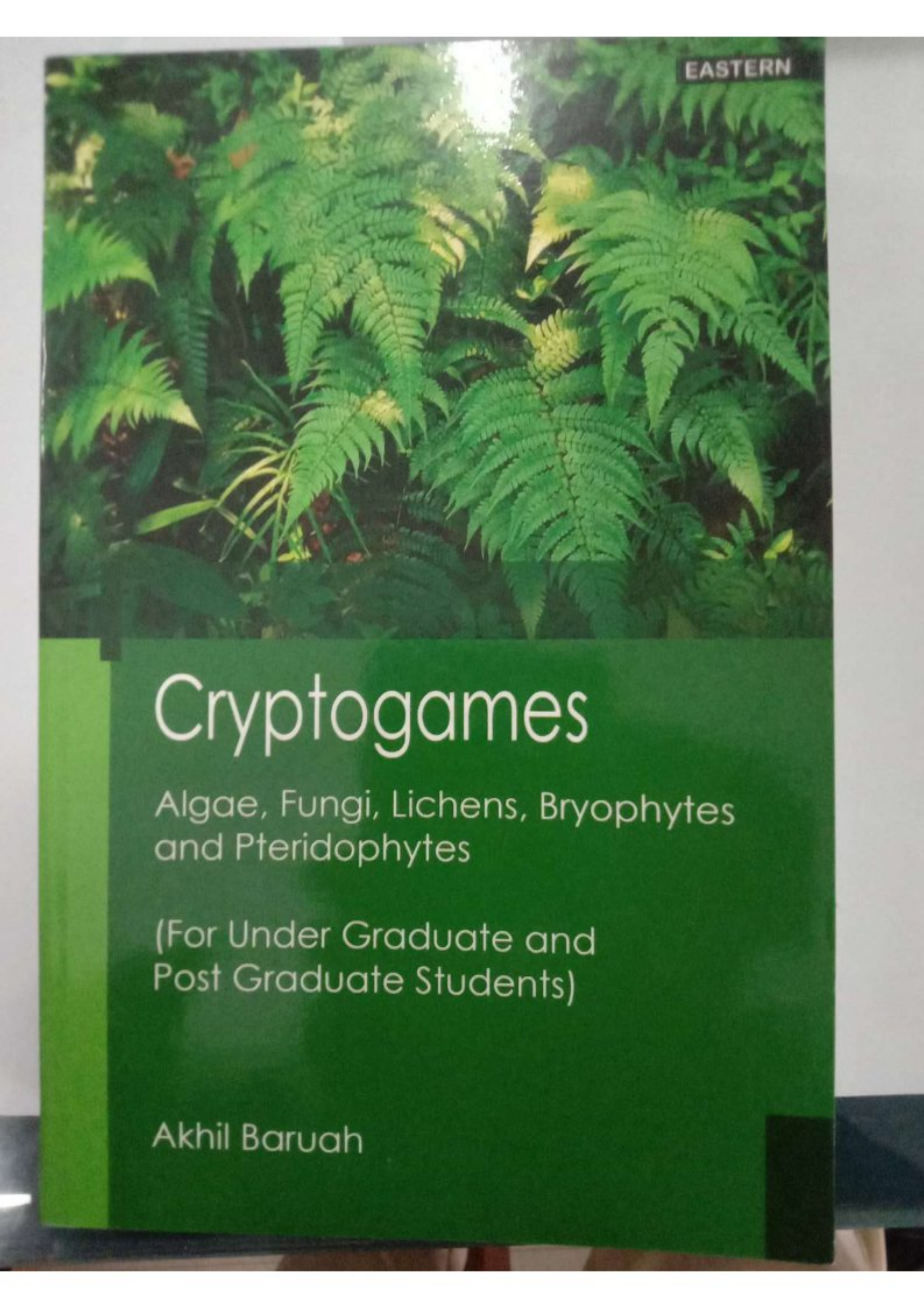
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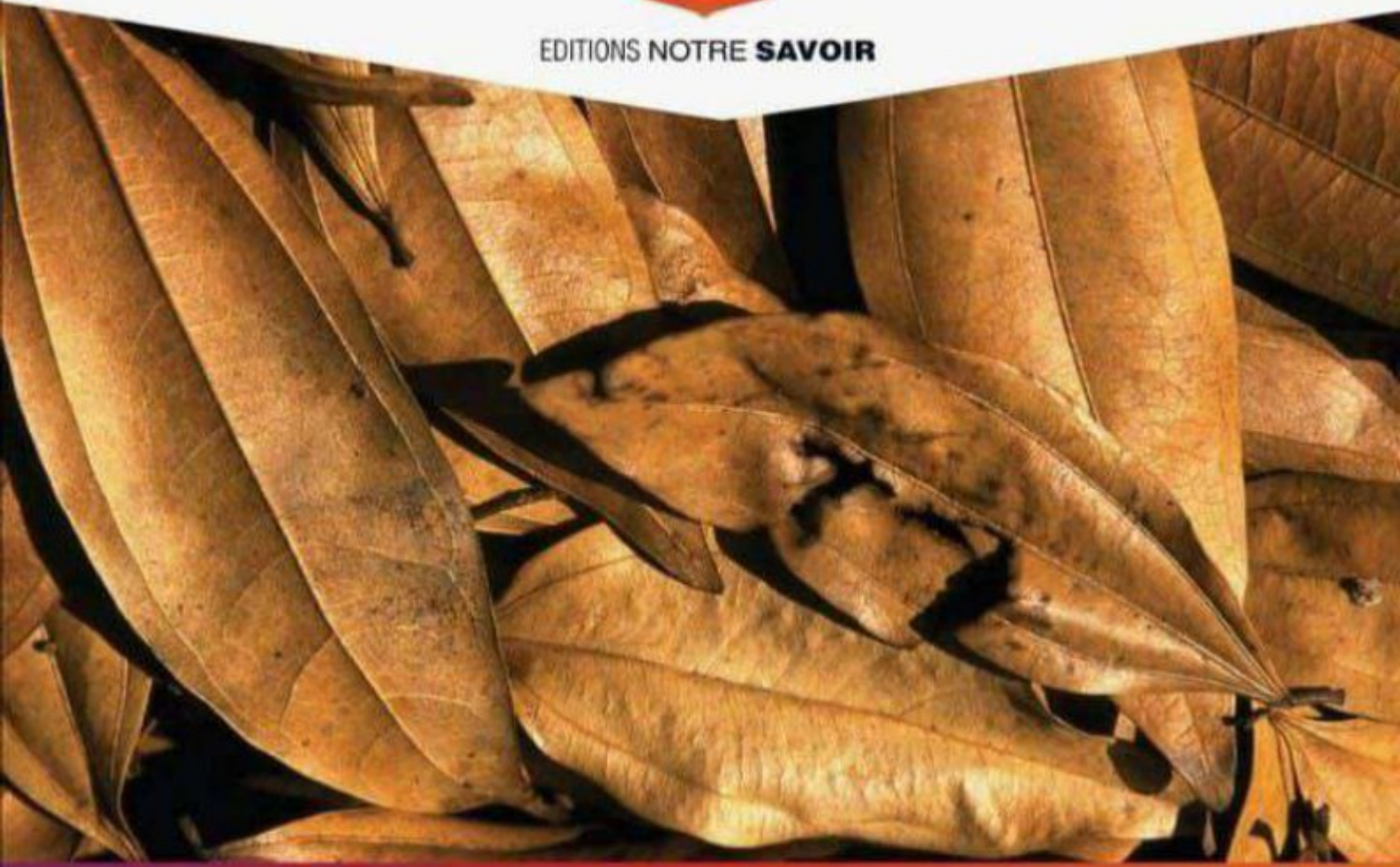
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Dr. Akhil Baruah



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# **Tejpat - les feuilles de la baie d'Indian**

*Taxonomie et diversité des ressources en tejpat,  
potentiel industriel des huiles essentielles, mesures  
de conservation*

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**Akhil Baruah**

# Tejpat - les feuilles de la baie d'Indian

Le tejpat est une sorte d'épice feuillue obtenue à partir d'un certain nombre de *Cinnamomum* spp, dont *C. tamala* est la "véritable source de commerce". Le Shillong du NE IND est le principal marché du tejpat, d'où il est transporté vers d'autres régions du pays/à l'étranger. Le *Cinnamomum* a un centre de diversité dans l'Himalaya oriental et les régions voisines du NE IND. De vastes travaux de recherche et de développement sur le tejpat sont en cours ou terminés dans le NE IND et dans d'autres régions du monde. Mais aucune compilation de ces travaux sous la forme d'une monographie n'est disponible à ce jour. Vu l'importance et le potentiel commercial de Tejpat, un livre intitulé *Tejpat-the Indian Bay Leaves* est maintenant à votre disposition. Ce livre rassemble des informations sur Tejpat qui sont actuellement dispersées dans un certain nombre de revues. Le contenu de base de ce livre est le suivant : Taxonomie, caractères microscopiques et huiles essentielles, conservation, aspects utiles et autres des espèces de *Cinnamomum* utilisées comme Tejpat. Ce livre sera utile aux institutions de recherche et d'enseignement, aux diverses industries, à l'agriculture et aux domaines connexes, ainsi qu'aux exportateurs, aux transformateurs, aux planteurs et à tous ceux qui s'intéressent aux plantes aromatiques et épicées.



Akhil Baruah : Lauréat du CSIR-New Delhi Senior/Extended- Senior Research Fellowships et lauréat du Dr. B.M. Das Memorial Science Award en sciences biologiques. Professeur principal de botanique, Darrang College, Tezpur (Université Gauhati, IND). Il est l'auteur de 116 documents de recherche, 120 articles scientifiques et 4 livres et a déposé un brevet.



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**Akhil Baruah**

# **Tejpat - die indischen Lorbeerblätter**

*Taxonomie & Diversität der Tejpat-Ressourcen,  
Industrielles Potenzial ätherischer Öle,  
Erhaltungsmassnahmen*

# Tejpat - die indischen Lorbeerblätter

Tejpat ist eine Art Blattgewürz, das aus einer Reihe von *Cinnamomum* spp. gewonnen wird, von denen *C. tamala* die "echte Quelle des Handels" ist. Shillong von NE IND ist der Hauptmarkt für Tejpat, von wo aus es in andere Teile des Landes/aus dem Ausland transportiert wird. Die *Cinnamomum* hat ein Zentrum der Vielfalt im östlichen Himalaya und den angrenzenden Regionen der NE IND. Umfangreiche F&E-Arbeiten zu Tejpat werden in Nordost-Indien und auch in anderen Teilen der Welt abgeschlossen/fortgeführt. Bisher ist jedoch noch keine einzige Zusammenstellung dieser Werke in Form einer Monografie verfügbar. In Anbetracht der Bedeutung und des Marktpotenzials von Tejpat liegt nun ein Buch *Tejpat - Die indischen Lorbeerblätter* in Ihrer Hand. Dieses Buch fasst Informationen über Tejpat zusammen, die derzeit in einer Reihe von Zeitschriften verstreut sind. Die grundlegenden Inhalte dieses Buches sind - Taxonomie, mikroskopische und ätherische Ölzeichen, Konservierung, nützliche und andere Aspekte der als Tejpat verwendeten *Cinnamomum*-Arten. Dieses Buch ist nützlich für Forschungs- und akademische Institutionen, verschiedene Industriezweige, die Landwirtschaft und verwandte Bereiche sowie für Exporteure, Verarbeiter, Pflanzler und alle, die sich für Aroma- und Gewürzpflanzen interessieren.



Akhil Baruah: Preisträger des CSIR-New Delhi Senior/Extended- Senior Research Fellowships & Empfänger des Dr. B.M. Das Memorial Science Award in Biological Science. A Sr. Asst. Prof. für Botanik, Darrang College, Tezpur (Gauhati Univ., IND). Er ist Autor von 116 Forschungsarbeiten, 120 wissenschaftlichen Artikeln und 4 Büchern und ist mit 1 Patent ausgezeichnet.



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# **Tejpat - le foglie della baia indiana**

*Tassonomia e diversità delle risorse Tejpat,  
potenziale industriale degli oli essenziali, misure di  
conservazione*

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**Akhil Baruah**

# Tejpat - le foglie della baia indiana

Il tejpat è una specie di spezia a foglia ottenuta da una serie di *Cinnamomum* spp. di cui *C. tamala* è la "vera fonte di commercio". La Shillong di NE IND è il principale mercato del tejpat da dove viene trasportato in altre parti del paese/all'estero. Il *Cinnamomum* ha un centro di diversità nell'Himalaya orientale e nelle regioni limitrofe del NE IND. Ampi lavori di ricerca e sviluppo su Tejpat sono completati e sono in corso nel NE IND e anche in altre parti del mondo. Ma finora non è disponibile una sola raccolta di queste opere sotto forma di monografia. Considerando l'importanza e le potenzialità di mercato di Tejpat, un libro *Tejpat-the Indian Bay Leaves* è ora con la vostra mano. Questo libro raccoglie informazioni su Tejpat che sono attualmente sparse in diverse riviste. I contenuti di base di questo libro sono: Tassonomia, Personaggi microscopici e oli essenziali, Conservazione, Utile e altri aspetti delle specie di *Cinnamomum* usate come Tejpat. Questo libro sarà utile alle istituzioni di ricerca e accademiche, alle varie industrie, all'agricoltura e ai settori affini, così come agli esportatori, ai trasformatori, ai piantatori e a tutti coloro che sono interessati alle piante aromatiche e alle spezie.



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# Tejpat - indyjskie Liście Zatoki

*Taksonomia i różnorodność zasobów Tejpatu, potencjał przemysłowy olejów bazowych, środki ochronne*

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**Akhil Baruah**

# Tejpat - indyjskie Liście Zatoki

Tejpat jest rodzajem przyprawy liściastej otrzymywanej z wielu gatunków *Cinnamomum* spp., z których *C. tamala* jest "prawdziwym źródłem handlu". Shillong of NE IND jest głównym rynkiem tego patentu, z którego jest on transportowany do innych części kraju/drogi. *Cinnamomum* posiada centrum różnorodności we Wschodnich Himalajach i regionach przyległych do NE IND. Szeroko zakrojone prace badawczo-rozwojowe na terenie Tejpatu są zakończone/realizowane w NE IND i w innych częściach świata. Jednak do tej pory nie jest dostępna ani jedna kompilacja tych prac w formie monografii. Biorąc pod uwagę znaczenie i potencjał rynkowy Tejpat, książka *Tejpat-the Indian Bay Leaves* jest teraz w zasięgu ręki. Książka ta gromadzi informacje o Tejpacie, które są obecnie rozproszone w wielu czasopiśmie. Podstawowe treści tej książki to - Taksonomia, Mikroskopijne i eteryczne czakry olejowe, Konserwacja, Przydatne i inne aspekty gatunków *Cinnamomum* wykorzystywanych jako Tejpat. Książka ta będzie przydatna dla instytucji badawczych i akademickich, różnych gałęzi przemysłu, rolnictwa i dziedzin pokrewnych, jak również dla eksporterów, przetwórców, plantatorów i wszystkich tych, którzy są zainteresowani roślinami Aromatic & Spice.



Akhil Baruah: Awardee of CSIR-New Delhi Senior/Extended- Senior Research Fellowships & Recipient of Dr. B.M. Das Memorial Science Award in Biological Science. A Sr. Assl. Prof. w Botani, Darrang College, Tezpur (Gauhati Univ., IND). Jest autorem 116 prac naukowych, 120 artykułów naukowych i 4 książek oraz 1 patentu.



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He was working on *Cinnamomum* species of Northeast India for his doctoral thesis. He undertook his doctoral work at Regional Research Laboratory (CSIR), (Presently known as North East Institute of Science & Technology), Jorhat during 1994-2000. Since then he is actively engaged to explore the *Cinnamomum* resources of NE India along with other R & D works and academic activities.

Dr. Baruah is presently serving as Associate Professor & Former HoD, in the P.G. Department of Botany, Darrang College, Tezpur under Gauhati University, Guwahati, Assam. He is so far credited with 161(105+54) research papers/book chapters, 32 Books (26 sole/first authored + 6 Edited), 34 seminar presented papers, delivered 11 talks as resource person/speaker, more than 225 popular science articles, credited with 1 patent, guided 1 M. Phil. student and many P.G. students for their M. Sc. 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.

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In recent years, his research activities are concentrated on the evaluation of the diversity and commercial potentials of New Aromatic, Spice & Medicinal plants, ethnobotany of traditional rice-beer, allelopathic effects of aromatic, spice and medicinal plants on seed germination, and Orchid anatomy.

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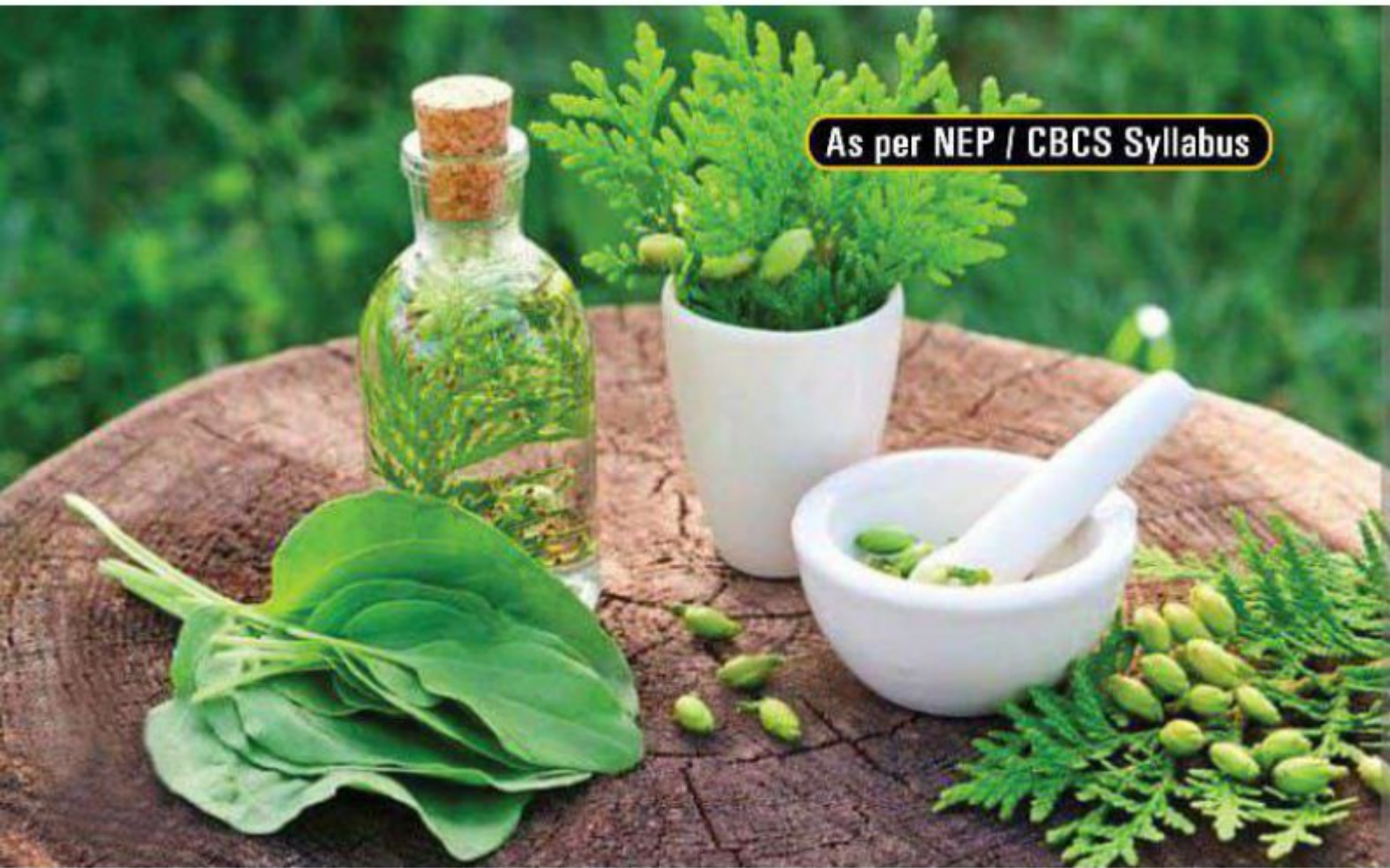


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**Dr. Ashish Kar** is presently serving as Fellow Scientist in The Energy and Resources Institute (TERI), Northeastern Regional Centre, Guwahati. He is so far credited with 92 research papers/ book chapters, 3 books, 5 scientific articles, 1 patent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

Dr. Ashish Kar is awardee of Junior Research Fellowship from DBT, DST Senior Research Fellowship from ICAR and NIPER. Recipient of Arun Pandey Biodiversity Award

He has worked in the President garden (Rashtrapati Bhawan) for identification of medicinal, ornamental and wild medicinal plants available inside Rashtrapati Bhawan campus. Worked in a documentary film 'Silent Sentinel' (Ethno medicine) as a research guide, sponsored by DD, Guwahati.

He is the Fellow / Life members of 6 national/ international professional bodies and recognized as Reviewers/ Referee of 23 Indian and Foreign journals and Editorial member of 1 journal.

Dr. Kar is a resource person of Min. of Environment, Forest & Climate Change (MoEF&CC), Govt. of India to evaluate and review Ministry funded projects. He has invited as an external examiner to conducted different examination of the Universities

Dr. Kar presented 31 research papers in National /International seminar/ workshop/Conference/ Symposium. He has attended 27 nos. national & international workshops/seminar/stakeholder meets/ webinar /summit. He also handled several Societal and R&D projects as Principal Investigator funded by the National and International funding agency.



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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 Liscie Zatrki* in Polish and *Tejpat – as Folhas da Baia da India* in Portuguese.

He is selected as a Specialist for the Herbs, Spices & Medicinal Plants and his name is enrolled in the 'International Directory of Specialists in the Herbs, Spices & Medicinal Plants' published by University of Massachusetts, USA. He is the Life/Fellow members of 12 National & International Professional Bodies and is recognized as Reviewer/Referee of 10 Indian and Foreign Journals and Editorial member of two journals.



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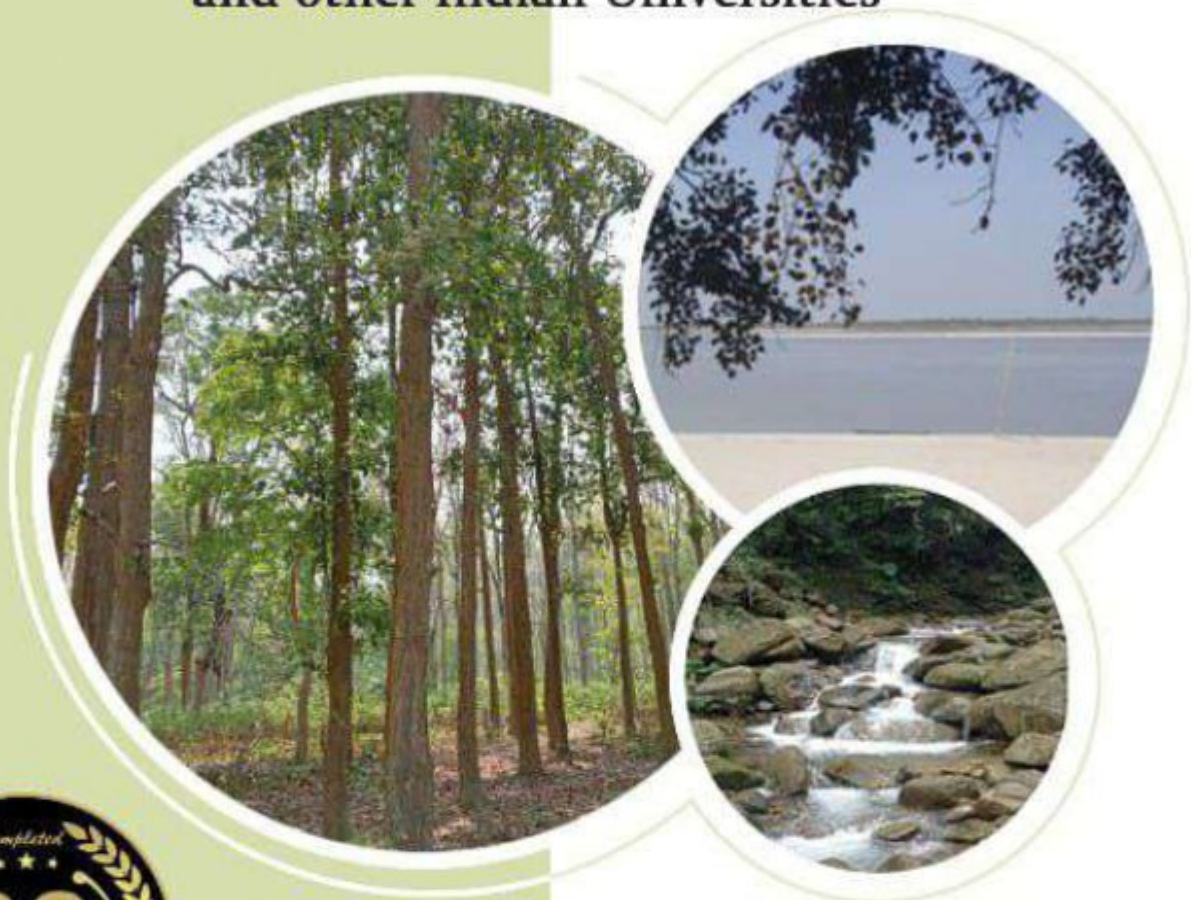


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As per NEP / CBCS Syllabus

# TEXTBOOK OF NATURAL RESOURCE MANAGEMENT

For B. Sc. Botany and Zoology Students of the Universities  
(GU, DU & AU) and Autonomous Colleges of Assam  
and other Indian Universities



Dr. Akhil Baruah  
Dr. Ashish Kar

## About the Authors



**Dr. Akhil Baruah**, FES, FIAT, FLS (London), FAPT, Awardee of National Science Foundation (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 "Nripendra Narayan Das Memorial Science Award, 2007" in Biological Science.

In recognition of his all round excellence as an educationist as well as an eminent/vert Academic and Research activities, Od India Limited has been awarded/selected by the "Od Shikshya 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, facilitated him for his overall excellence in Academic, Research and other activities.

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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.

Dr. Ashish Kar is awardee of Junior Research Fellowship from DBT, DST Senior Research Fellowship from ICAR and NIPER, Recipient of Arun Pandey Biodiversity Award.

He has worked in the President garden (Rashtrapati Bhawan) for identification of medicinal, ornamental and wild medicinal plants available inside Rashtrapati Bhawan campus. Worked in a documentary film 'Silent Sentinel' (Ethno medicine) as a research guide, sponsored by DD, Guwahati.

He is the Fellow / Life members of 6 national/ international professional bodies and recognized as Reviewer/ Referee of 25 Indian and Foreign journals and Editorial member of 1 journal.

Dr. Kar is a resource person of Min. of Environment, Forest & Climate Change (MoEF&CC), Govt. of India to evaluate and review Ministry funded projects. He has invited as an external examiner to conducted different examination of the Universities.

Dr. Kar presented 31 research papers in National /International seminar/ workshop/Conference/ Symposium. He has attended 27 nat. national & international workshop/seminar/stakeholder meets/ webinar /summit. He also handled several Societal and R&D projects as Principal Investigator funded by the National and International funding agency.



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Enrollment of students in the department – 2022

| SECTION    | GENERIC(G) | TOTAL (A+B) | TOTAL | TEACHER |
|------------|------------|-------------|-------|---------|
| 131        |            |             |       |         |
| 147        |            |             |       |         |
| 158        |            |             |       |         |
| Department |            |             |       |         |
| MINO       |            |             |       |         |
| SECTION-   |            |             |       |         |
| 193        |            |             |       |         |
| 131        |            |             |       |         |
| X          |            |             |       |         |

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research for B. Ed. course under Gauhati University by **Dr. Mukul  
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গুৱাহাটী - ২৪

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আৰ জি বৰুৱা ৰোড  
গুৱাহাটী-২৪

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তাৰিখ : মাৰ্চ,

2021

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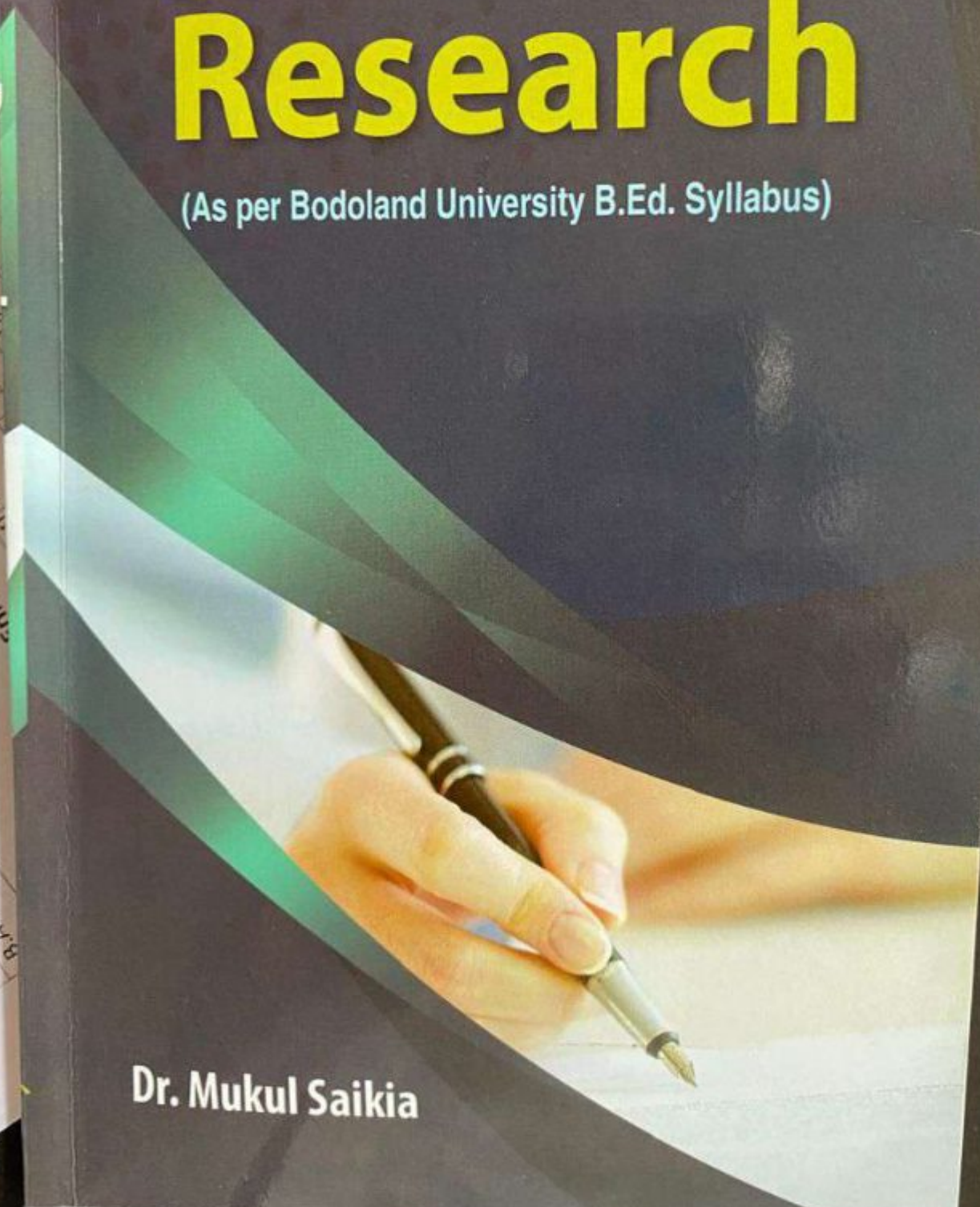
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# Action Research

(As per Bodoland University B.Ed. Syllabus)

Dr. Mukul Saikia



# ACTION RESEARCH

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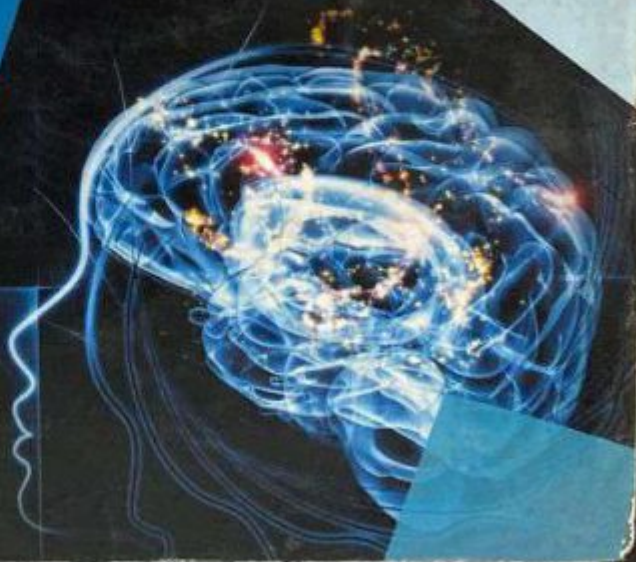
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ড° মুকুল শইকীয়া



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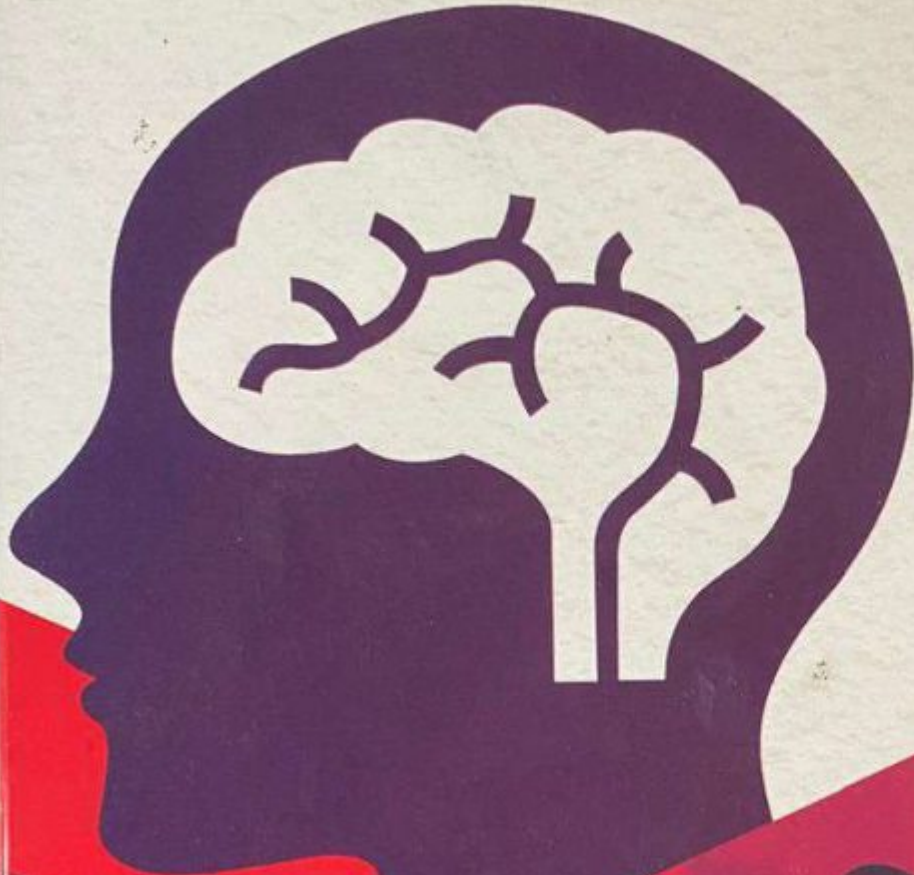
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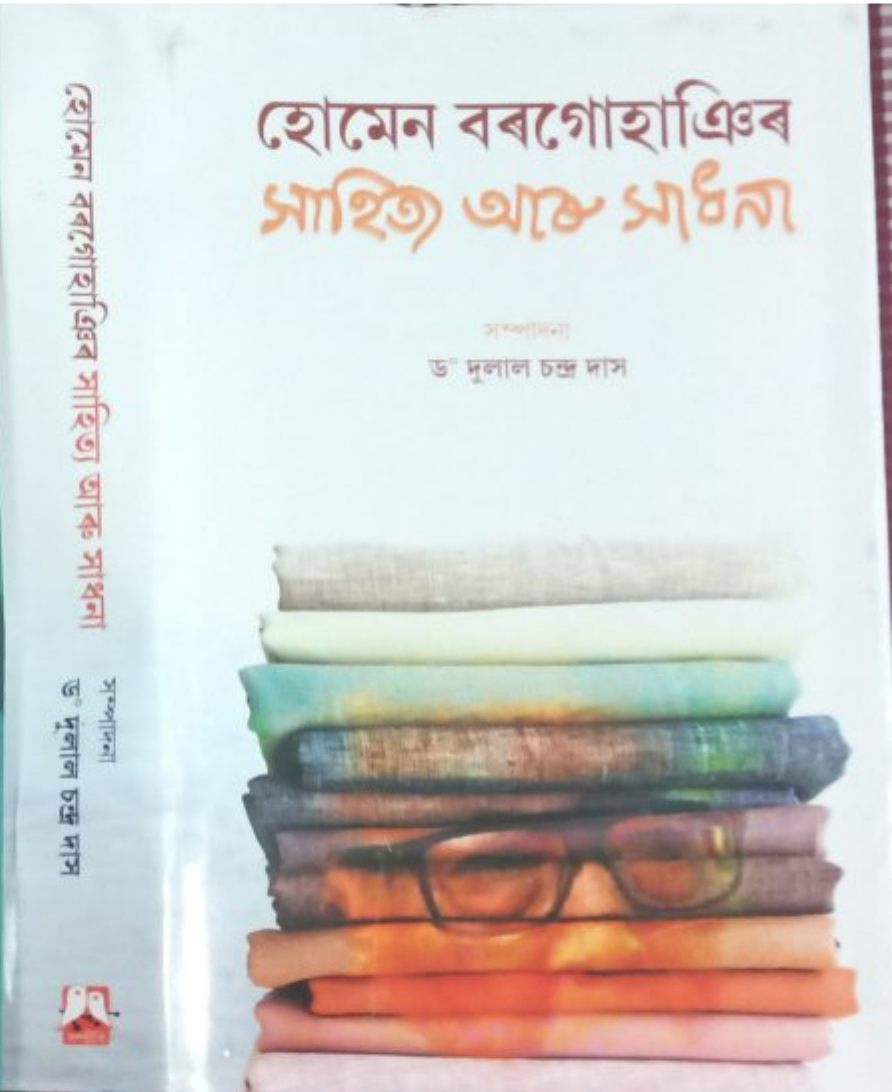
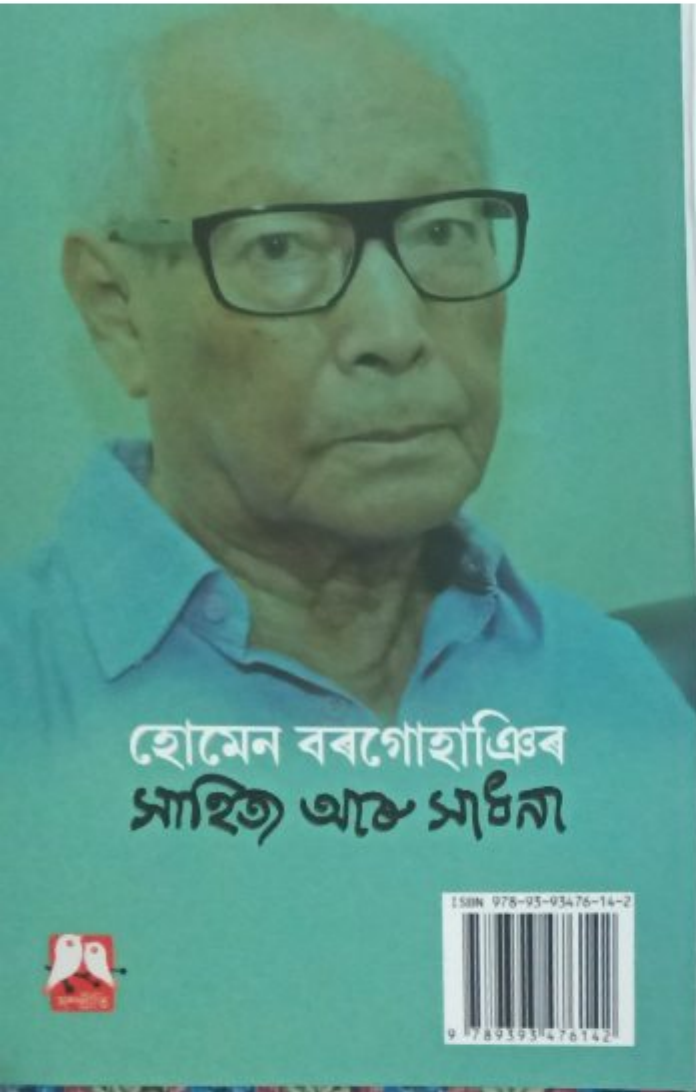
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কেইগৰাকীমান গল্পকাৰৰ গল্প

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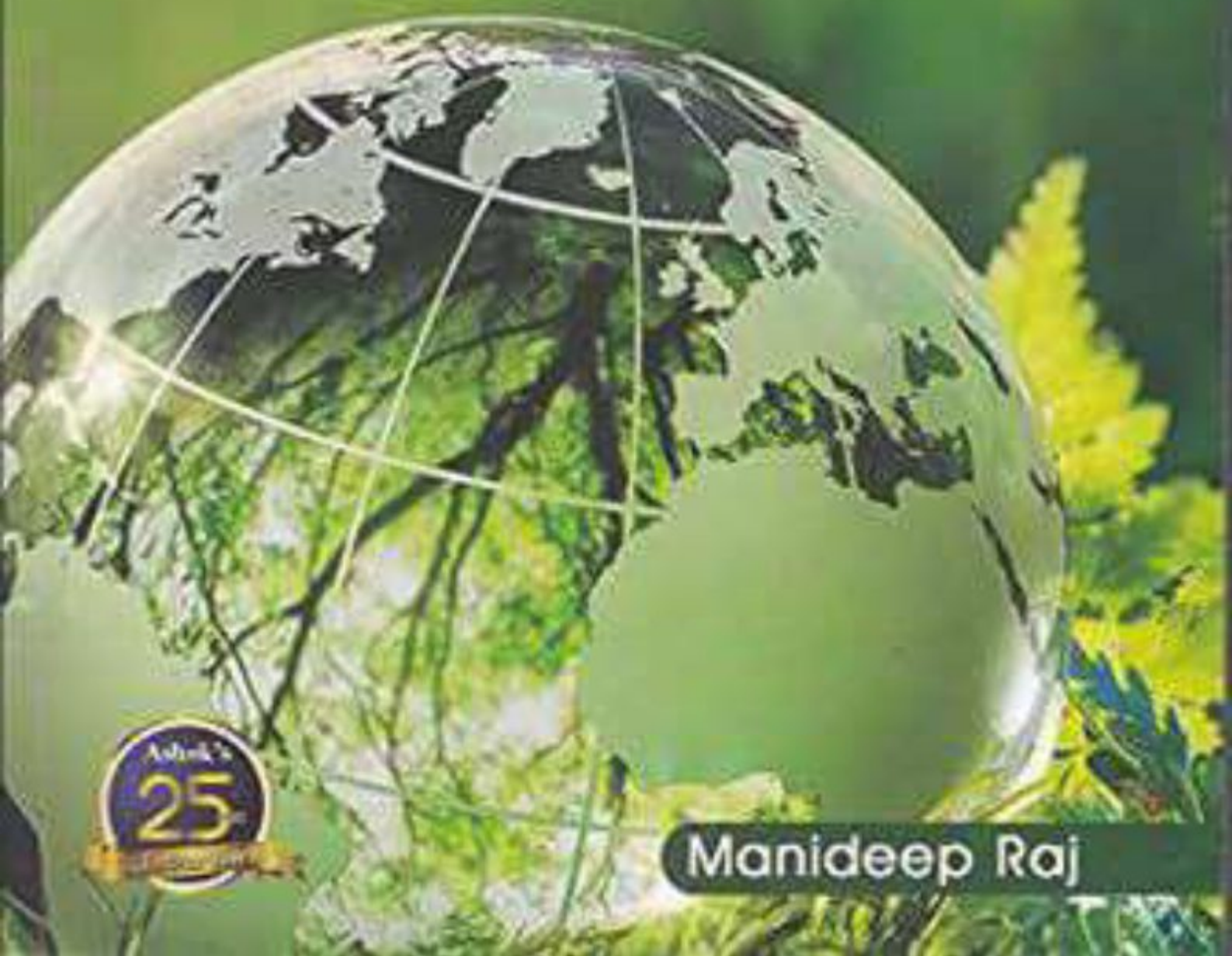
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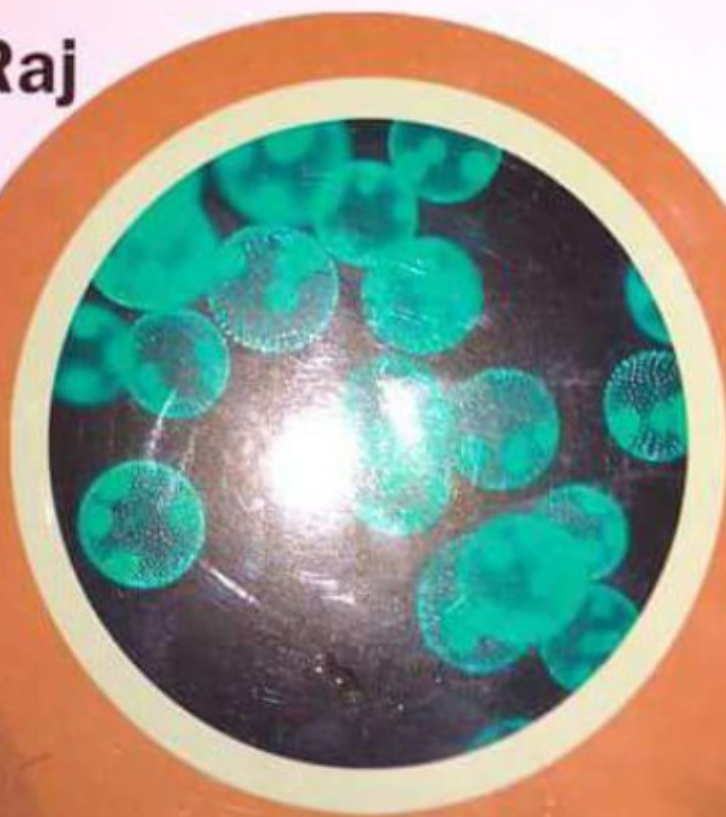


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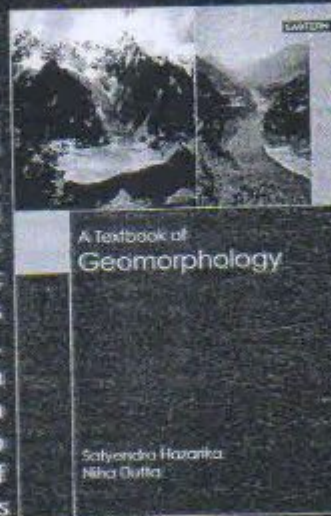
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**Dr. Satyendra Hazarika** (Ph.D, SLET-2003, DIP-TD) is working as a Assistant Professor (I-II) at Darrang College, Tezpur. The Arts Graduate Topper of Dibrugarh University (1993), Dr. Hazarika is also the recipient of Best Geography Graduate (1993) and Best Geography Post-graduate (1996-97) award of North-east India Geographical Society. He has published a number of research paper in journal of National repute, edited books and participated in several national and international seminars over the years. His field of specialization was Fluvial Geomorphology and did his Ph.D work in Flood vulnerability study of Kamrup Metropolitan District. (satyendrahazarika@rediffmail.com, m-94352-45858)

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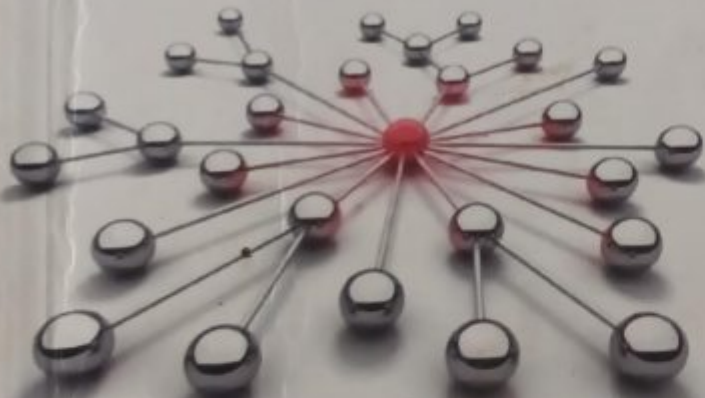
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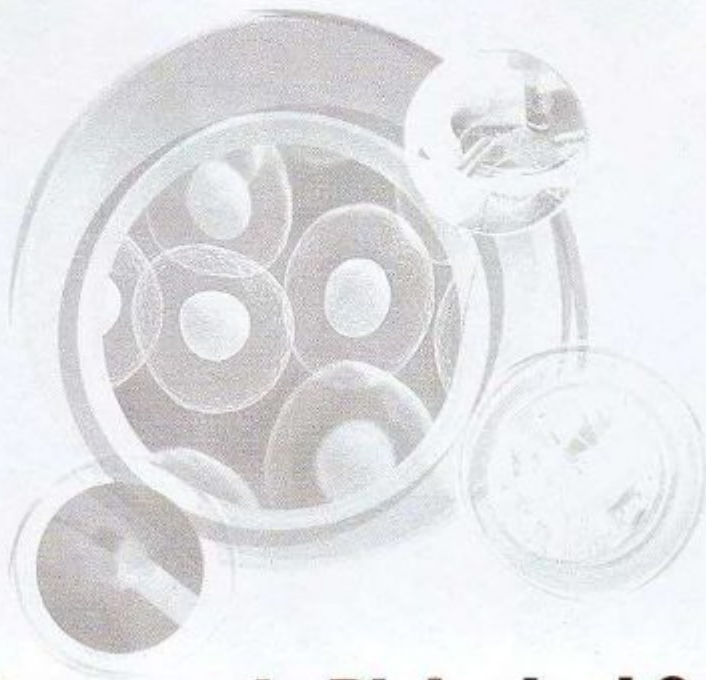
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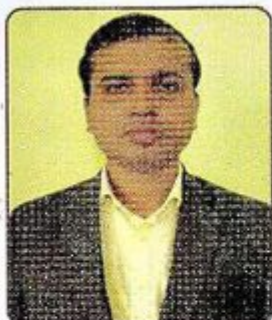
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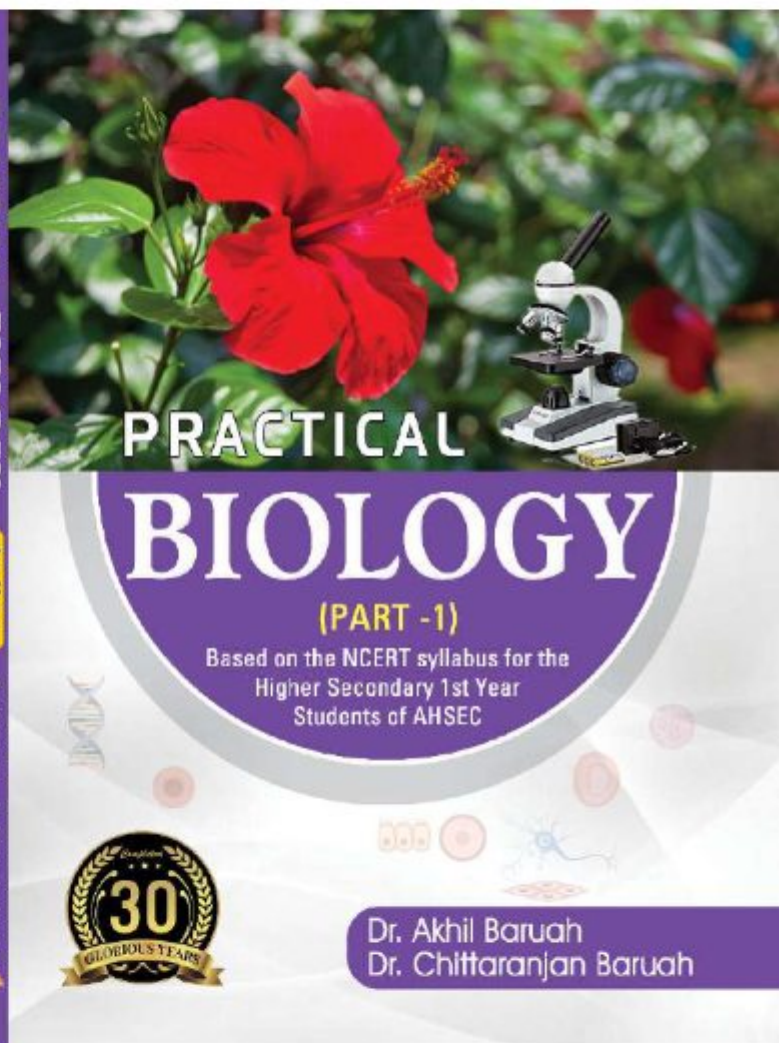
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