



REPORT

DST-SERB Sponsored National Seminar

**Theme: RECENT ADVANCES IN BIOLOGICAL SCIENCES:
BIODIVERSITY & HUMAN WELFARE**

November 18–19, 2022

Organized By:

DEPARTMENT OF ZOOLOGY, DARRANG COLLEGE, TEZPUR, ASSAM

In collaboration with

**ZOOLOGICAL SOCIETY OF ASSAM & IQAC-DARRANG COLLEGE,
TEZPUR**

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The Indian subcontinent is experiencing diverse environmental conditions while accommodating a rich biodiversity pertaining to varied habitats. A cluster of stresses and strains pose threats to biodiversity by way of anthropogenic and natural hazards, which drive the changes in habitat and those of the environment at large. But there are certain unique phenomena of biodiversity that bear a direct impact on human existence as well as on the economic scenario of the country.

Sustainable human development is about living on earth without taking more than can be naturally replaced. It is about good health, good living conditions, and long-term wealth creation for everybody. All these things must occur within the carrying capacity of the planet. To understand sustainable development, think about its three pillars: "economic wealth," "social equity," and "environmental health," or, in other words, "profit," "people," and "planet." All three are linked to each other. In other words, any development has to be not only economically sound but also beneficial to social equity and environmental health. The outbreak of COVID-19 caused by the novel coronavirus SARS-CoV-2 and various speculations about the origin of this virus have attracted more attention to bio-risk concerns in synthetic biology because of its potential power and uncertainty in the synthesis and engineering of living organisms.

In consideration of this broad base, the Department of Zoology, Darrang College, Tezpur, has organised the "*National Seminar on Recent Advances in Biological Sciences: Biodiversity & Human Welfare,*" where the following issues were addressed for the purpose of evolving certain recommendations on key issues:

- Biodiversity and its sustenance, and the impact of climate change
- Improving fish and fisheries, with a special emphasis on aquaculture and the status of aquaculture bodies, with a special emphasis on the Ramsar Sites and their current status.
- Applied Zoology: sericulture, apiculture, lac culture, vermiculture, etc.
- Indigenous traditional techniques, ethnobiology, and biotechnology for the sustainable and eco-friendly status of the concerned issues
- Mosquito- and vector-borne diseases and their impact, with special emphasis on malaria, dengue, etc.
- General discussions on the ongoing advances in different fields of biology: cell and molecular biology, genetics, immunology, microbiology, bioinformatics, bioremediation, physiology, biochemistry, endocrinology, and entomology.
- Animal taxonomy and animal behaviour
- Systems Biology and Multi-Omics in Health and Diseases

Population growth and conservation of natural resources often go anti-parallel, particularly on the Asian continent. The global food security challenge is straightforward: by 2050, the world must feed two billion more people, an increase of a quarter from today's global population. The demand for food will be 56 percent greater than it was in 2010.

It has been our humble endeavour to publish the research findings of our resource conservation efforts in order to expedite the conservation and protection of an environment. We are grateful to the contributors of this paper for their valued support. The editors hope these articles can provide useful information for biodiversity conservation and natural resource management. The Organizing Committee would like to express heartfelt gratitude to all of the faculty members, research scholars, and students from over 50 Indian institutions who submitted abstracts to this DST-SERB sponsored national seminar; the Organizing Committee has chosen 101 papers for presentation at the seminar. It is indeed an inspiration for us that several reputed research institutes and universities have participated in this seminar; some notable institutes are JNU, University of Delhi, Calcutta University, Punjab University, Sikkim University, Gangtok, Maharaja Sriram Chandra Bhanja Deo University (erstwhile North Orissa University), Utkal University, Tamil Nadu Forest Department, Kerala University of Fisheries and Ocean Studies, Central University of South Bihar, Gauhati University, Dibrugarh University, Cotton University, ICAR-CIFRI, Tezpur University, Bodoland University, University of Science and Technology, Meghalaya, and Assam Don Bosco University.

Under such a background, the Department of Zoology, Darrang College, Tezpur, in collaboration with the Zoological Society of Assam (ZSA) and IQAC-Darrang College, Tezpur, has successfully organized the National Seminar on the theme "***Recent Advances in Biological Sciences: Biodiversity & Human Welfare***" from November 18th to November 19th, 2022, at the Darrang College premises.

Successful completion of the national level seminar at Darrang College

participation of over 50 higher education institutes

The Department of Zoology, Darrang College, Tezpur, in collaboration with the Zoological Society of Assam (ZSA) and IQAC Darrang College, Tezpur, has successfully organised a two-day long national seminar on the theme "*Recent Advances in Biological Sciences: Biodiversity & Human Welfare*" from November 18th to November 19th, 2022, at the Darrang College premises. A good number of luminaries from all parts of the country will attend the event. Many high-quality papers were presented, and esteemed participants from around 50 higher education institutes, universities, and organisations actively participated.

The seminar, which began with the college theme song performed by the students of the college, was inaugurated by Dr. Biren Das, Registrar, Tezpur University. Shri Deba Kumar Mishra, Deputy Commissioner, Sonitpur District; Shri Priyabrata Lahkar, President, Zoology Society, Assam; Dr. Joishankar Hazarika, Former Principal of the College; Dr. Paresh Goswami, Former Professor; and Dr. Jyotikamal Hazarika, Principal, Tezpur College, graced the occasion as special guests. **Professor Parimal Chandra Bhattacharjee**, former professor and head of the Department of Zoology at Gauhati University, delivered the keynote address, and former head dean of the Faculty of Science, Dr. Prasanta Kumar Saikia, and present head professor Dr. Jogen Chandra Kalita delivered the plenary talk. The brief introductions to the speakers were given by Dr. Sweta Mahanta, Assistant Professor, Department of History; Ritu Sharma; and Julie Bairagi, Assistant Professor, Department of Zoology.

The distinguished guests and special speakers were felicitated by Binita Das, Head, Department of Zoology; Abhijit Das; Dr. Rabindra Hazarika; Dr. Chittaranjan Baruah; Dr. Nabanita Medhi; Julie Bairagi; Ritu Sharma; Parismita Devi; Dr. Momi Das; and Dr. Sangeeta Baruah, respectively. Former professor Upendra Nath Sharma, president of the college's governing body, lit the lamp at the beginning of the event. Julie Bairagi, Assistant Professor, Department of Zoology, College, performed Ganesh Vandana. Principal Dr. Palashmani Saikia delivered the welcome address at the function hosted by Dr. Swapnali Kakati, Coordinator, IQAC Darrang College. Dr. Chittaranjan Baruah, convener of the seminar, has introduced the concept note on the main theme of the seminar. Dr. Baruah has highlighted in his concept note that "*the National Seminar will be an effective platform for identifying the challenges to biodiversity and finding solutions to problems confronting sustainable human welfare.*"

Dr. Balendra Kumar Das, Pro Vice Chancellor, University of Science and Technology Meghalaya, has addressed the participants while releasing the abstract of the seminar after a brief introduction by Parismita Devi, an assistant professor in the zoology department of the college. Similarly, the Deputy Commissioner of Sonitpur District, Shri Deba Kumar Mishra, released the souvenir of the seminar and gave a valuable speech.

Researchers from various states of India presented research papers. Dr. Balendra Kumar Das, Deputy Vice Chancellor, USTM; Dr. Prasanta Kumar Saikia, Professor, Department of Zoology, Gauhati University; Prof. Dr. Robin Dole, Head of the Department of Molecular Biology and Biotechnology, Tezpur University; and Pankaj Hazarika, Associate Professor, Department of Chemistry, Darrang College, chaired over the parallel sessions of oral presentations.

Dr. Chittaranjan Baruah, convener, and Dr. Palash Mani Saikia, president, of the seminar, informed the audience that the main motto of the seminar is to create awareness among the people, improve

research culture among the faculty members, research scholars, and students, and use discussion on biodiversity research to spread scientific skills and a passion for biodiversity conservation among the young generation. The seminar also aims to uncover the future scope of this subject and increase the level of confidence among young generations for human survival through biodiversity resources in our country.

The organising committee had chosen 107 papers for presentation at the seminar. Several reputed research institutes and universities have participated in this seminar; some notable institutes are JNU, University of Delhi, Calcutta University, Punjab University, Sikkim University, Gangtok, Maharaja Sriram Chandra Bhanja Deo University (formerly North Orissa University), Utkal University, Tamil Nadu Forest Department, Kerala University of Fisheries and Ocean Studies, Central University of South Bihar, Gauhati University, Dibrugarh University, Cotton University, ICAR-CIFRI, Tezpur University, Bodoland University, University of Science and Technology, Meghalaya, and Assam Don Bosco University.

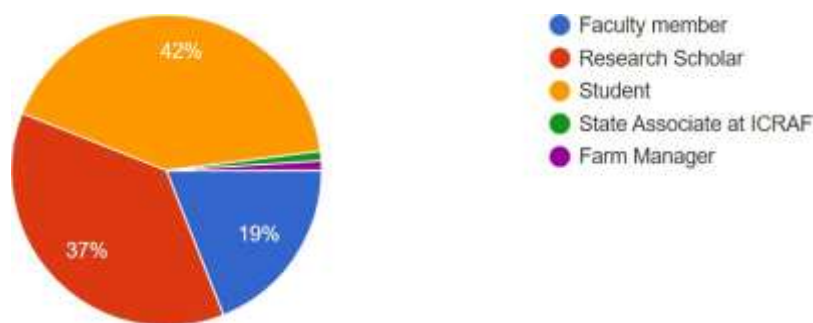
On the second day, plenary talks were given by Prof. Dhirendra Kumar Sharma, Director TCRP Foundation and Former Head of the Department of Zoology, Gauhati University; Dr. Ashok Kumar Mallik of Maharaja Sri Ramachandra Bhanj Deo University, Odisha; Professor Jatin Sharma of Bodoland University; and Dr. Surjit Giri, Doctor, Dimou Model Hospital, Sivasagar.

Professor Jogen Chandra Kalita, Head of the Department of Zoology at Gauhati University, has given his feedback, saying, "*It was a wonderful programme you organised after the terrible COVID-19 pandemic period.*"

Along with participation and paper presentation certificates, session-wise best presentations have been awarded in the valedictory session in the presence of Dr. Surajit Giri, Dr. Jyotikamal Hazarika, Dr. Palashmini Saikia (principal), Dr. Jatin Sarma, Dr. Swapnali Kakaty, Coordinator of IQAC, and Binita Das, Head of the Department of Zoology, and more than 200 audience members. Nazrana Sultana Begum of Assam University says Silchar has received the best poster presentation award. In the oral presentation category, Abhishek Patel (Department of Environmental Science, Central University of South Bihar), Himadri Kalita (Department of Zoology, Guwahati College), Rajashree Deka (Gauhati University), and Romi Singha (Assam University, Silchar) have received the best presentation award in different technical sessions.

The seminar has ended with great success.

Organization of responses (107 papers) of DST-SERB National Seminar



The major organizations participated.

1. JNU
2. University of Delhi
3. Calcutta University
4. Punjab University
5. Sikkim University, Gangtok
6. Maharaja Sriram Chandra Bhanjadeo University
7. Utkal University
8. Tamil nadu forest department
9. Kerala university of fisheries and ocean studies
10. Central University of South Bihar
11. Dibrugarh University
12. Cotton University
13. ICAR-CIFRI
14. Tezpur University
15. Gauhati University
16. Bodoland University, Kokrajhar, Assam
17. University of science &Technology, Meghalaya
18. Darrang College
19. Handique Girls' College
20. Bodoland University
21. Nowgong College (Autonomous)
22. Biswanath College of Education
23. Dept. of Biotechnology, Bodoland University, Kokrajhar, Assam-783370
24. Assam University, Diphu Campus
25. Assam Don Bosco University
26. N.N.Saikia College
27. Department of Biotechnology, Assam University, Silchar, Assam
28. Birjhora Mahavidyalaya
29. Guwahati College
30. Pragjyotish College
31. Assam down town University
32. Majuli College
33. Pragjyotish College, Guwahati, Assam
34. Rajiv Gandhi University, Rono Hills, Doimukh (itanagar), arunachal Pradesh (india)
35. Biswanath College
36. Assam downtown university

37. Kaliabor College
38. ICRAF
39. Assam University Diphu Campus
40. South Salmara College, South Salmara
41. Govt. Sericulture Farm, Mangaldai

News reported on the SERB-sponsored National Seminar organised by the Department of Zoology, Darrang College



Discussion on biodiversity, human welfare organised

CORRESPONDENT

TEZPUR, Nov 20: A two-day national seminar on 'Recent advances in biological sciences: Biodiversity and human welfare' held at Darrang College here concluded on Saturday.

Inaugurated by Tezpur University Registrar Dr Biren Das on Friday, the seminar was organised by the Department of Zoology of Darrang College in collaboration with its IQAC cell and the Zoological Society of Assam. Sponsored by DST, SERB, Government of India, the seminar was attended by over a hundred faculties, students and researchers from leading educational institutions of the country, including Jawaharlal Nehru University, Delhi University, Calcutta University, Punjab University, Sikkim University, Utkal University,

Gauhati University, Dibrugarh University, besides renowned universities and researchers of the Tamil Nadu forest department.

Dr Biren Das, in his inaugural speech said that the subject of the seminar is an important one and its outcome would hopefully be positive for the educational sector of the country.

At the very outset, Dr Upendra Nath Sarma, chairman, Darrang College governing body, started the programme by lighting a lamp while Dr Palashmani Saikia, Principal of Darrang College, welcomed the guests and participants.

The coordinator of the seminar, Dr Chittaranjan Barua, began the proceedings with a speech. Attending the programme as the guest of honour, Deba Kumar Mishra, Deputy Commissioner of

Sonitpur, also delivered a speech and welcomed the guests to this historic city.

The seminar was also attended by Dr Balendra Kr Das, VC, USTM; Priyabrata Lahkar, chairman, Zoological Society of Assam; Dr Parimal Chandra Bhattacharya, retired Head of the Dept of Zoology, GU; Dr Jogen Chandra Kalita, Head, Dept of Zoology, GU; Dr Prasanta Kr Saikia, retired HoD Zoology, GU; Dr Dharendra Kr Sarma, retired HoD Zoology, GU; Dr Ashoke Kr Mullick, Maharaja Sriram Chandra Bhanja Deo University, Odisha; Dr Jatim Sarma, Bodoland University; Dr Surajit Giri, Dimou Model Hospital, Sivasagar; Dr Robin Doley, Head, MBBT, TU; Dr Rajan Sarma, Dept of Statistics, GU, and Dr Jyoti Kamal Hazarika, Principal, Tezpur College.

देनिक पूर्वोदय

जय प्रकाश अग्रवाल, तेजपुर

दरंग कॉलेज में दो दिवसीय संगोष्ठी का समापन

तेजपुर, 20 नवंबर (पू.सं.)। देश के विभिन्न राज्यों के कॉलेज-विश्वविद्यालयों की दो दिवसीय संगोष्ठी का आयोजन असम जूलॉजिकल सोसायटी के सहयोग से जूलॉजी विभाग, दरंग कॉलेज तेजपुर द्वारा किया गया। 'जैविक विज्ञान में हालिया प्रगति : जैव विविधता और मानव कल्याण' पर आयोजित राष्ट्रीय स्तर की संगोष्ठी का उद्घाटन शुक्रवार को तेजपुर विश्वविद्यालय के रजिस्ट्रार डॉ. बरिन दास ने किया, जिसमें विशिष्ट अतिथि के रूप में शोणितपुर जिला उपायुक्त देव कुमार मिश्रा उपस्थित थे। संगोष्ठी का आयोजन विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार और विज्ञान एवं इंजीनियरिंग परिषद द्वारा प्रायोजित किया गया, जिसमें जवाहरलाल नेहरू विश्वविद्यालय, दिल्ली विश्वविद्यालय, कलकत्ता विश्वविद्यालय, पंजाब विश्वविद्यालय, सिक्किम विश्वविद्यालय, उत्तरी उड़ीसा विश्वविद्यालय जैसे विभिन्न प्रमुख शिक्षा संस्थानों के प्रोफेसरों के अलावा



सौ से अधिक गौहाटी विश्वविद्यालय, डिब्रूगढ़ विश्वविद्यालय और तमिलनाडु वन विभाग से आए शोधकर्ता, छात्र और शोधकर्ताओं ने भाग लिया। संगोष्ठी में देश भर के शिक्षाविदों ने चर्चाओं में अपने विचार रखे। वहीं

शोधकर्ताओं ने अपने-अपने शोध-पत्रों का पाठ किया। शनिवार को समारोह का सफल समापन दरंग कॉलेज तेजपुर के जूलॉजी विभाग के छात्र-छात्राओं द्वारा आयोजित रंगारंग सांस्कृतिक कार्यक्रम के साथ हुआ।

আজিৰ পৰা দৰং মহাবিদ্যালয়ত ৰাষ্ট্ৰীয় পৰ্যায়ৰ আলোচনা চক্ৰ

পাঠ কৰা হ'ব শতাধিক গৱেষণা-পত্ৰ

তেজপুৰ ৰু বিশেষ প্ৰতিনিধি, ১৭ নৱেম্বৰ ৰু তেজপুৰৰ ঐতিহ্যমণ্ডিত দৰং মহাবিদ্যালয়ৰ প্ৰাণীবিজ্ঞান বিভাগৰ দ্বাৰা মহাবিদ্যালয়খনৰ অভ্যন্তৰীণ মান মূল্যায়ন কোষ আৰু অসম প্ৰাণীবিজ্ঞান সমিতিৰ সহযোগত অহা ১৮ আৰু ১৯ নৱেম্বৰত দুদিনীয়া কাৰ্যসূচীৰে 'Recent Advances in Biological Sciences. Biodiversity and Human Welfare' শীৰ্ষক এখন ৰাষ্ট্ৰীয় পৰ্যায়ৰ আলোচনা চক্ৰৰ আয়োজন কৰা হৈছে। ভাৰত চৰকাৰৰ বিজ্ঞান আৰু প্ৰযুক্তিবিদ্যা বিভাগ আৰু বিজ্ঞান আৰু অভিযান্ত্ৰিক পৰিষদৰ পৃষ্ঠপোষকতাত অনুষ্ঠিত হ'বলগীয়া আলোচনা চক্ৰখনত দেশৰ বিভিন্ন অগ্ৰণী শিক্ষানুষ্ঠান যেনে জৱাহৰলাল নেহৰু বিশ্ববিদ্যালয়, দিল্লী বিশ্ববিদ্যালয়, কলিকতা বিশ্ববিদ্যালয়, পঞ্জাব বিশ্ববিদ্যালয়, ছিকিম বিশ্ববিদ্যালয়, উত্তৰ ওড়িশা বিশ্ববিদ্যালয়, উৎকল বিশ্ববিদ্যালয়, গুৱাহাটী বিশ্ববিদ্যালয়, ডিব্ৰুগড় বিশ্ববিদ্যালয় আদিৰ অধ্যাপক, গৱেষক, ছাত্ৰ-ছাত্ৰী আৰু তামিলনাড়ু বন বিভাগৰ গৱেষকসকলে এশৰো অধিক গৱেষণা-পত্ৰ পাঠ কৰিব। অসমৰ মুখ্যমন্ত্ৰী ড° হিমন্ত বিশ্ব শৰ্মা আৰু শিক্ষা মন্ত্ৰী ডাঃ ৰণোজ পেগুৱে ইতিমধ্যে শুভেচ্ছাবাণী প্ৰেৰণ কৰা আলোচনা চক্ৰখনত ডাঃ ৰণোজ পেগুক মুখ্য অতিথি আৰু গুৱাহাটী বিশ্ববিদ্যালয় আৰু কটন

বিশ্ববিদ্যালয়ৰ উপাচাৰ্যদ্বয় ক্ৰমে ড° প্ৰতাপজ্যোতি সন্দিকৈ আৰু ড° ৰমেশ চন্দ্ৰ ডেকাই বিশিষ্ট অতিথি হিচাপে অংশগ্ৰহণ কৰা কথা। তেজপুৰ বিশ্ববিদ্যালয়ৰ পঞ্জীয়ক ড° বীৰেন দাসে উদ্বোধন কৰিব লগা আলোচনা চক্ৰখনত গুৱাহাটী বিশ্ববিদ্যালয়ৰ প্ৰাণীবিজ্ঞান বিভাগৰ অৱসৰপ্ৰাপ্ত মুৰব্বী অধ্যাপক ড° পৰিমল চন্দ্ৰ ভট্টাচাৰ্য, বৰ্তমানৰ মুৰব্বী অধ্যাপক ড° যোগেন চন্দ্ৰ কলিতা, প্ৰাক্তন মুৰব্বী অধ্যাপক তথা বিজ্ঞানগুৰু ড° প্ৰশান্ত কুমাৰ শইকীয়া, প্ৰাক্তন মুৰব্বী অধ্যাপক ড° ধীৰেন্দ্ৰ কুমাৰ শৰ্মা, ওড়িশাৰ মহাৰাজা শ্ৰীৰামচন্দ্ৰ ভঞ্জ দেও বিশ্ববিদ্যালয়ৰ অধ্যাপক ড° অশোক কুমাৰ মল্লিক, বড়োলেণ্ড বিশ্ববিদ্যালয়ৰ অধ্যাপক ড° যতীন শৰ্মা আৰু শিৱসাগৰ ডিমৌ আদৰ্শ চিকিৎসালয়ৰ চিকিৎসক ডাঃ সুৰজিৎ গিৰিয়ে ভাষণ প্ৰদান কৰিব। তদুপৰি তেজপুৰ বিশ্ববিদ্যালয়ৰ আণৱিক জীৱ বিজ্ঞান আৰু জৈৱপ্ৰযুক্তি বিভাগৰ মুৰব্বী অধ্যাপক ড° ৰবীন দলে, গুৱাহাটী বিশ্ববিদ্যালয়ৰ পৰিসংখ্যা বিজ্ঞান বিভাগৰ সহযোগী অধ্যাপক ড° ৰাজন শৰ্মা আৰু ইউ এছ টি এমৰ উপ-উপাচাৰ্য ড° ব্ৰহ্মেশ কুমাৰ দাসে আলোচনা চক্ৰখনত পৌৰোহিত্য কৰিব। আলোচনা চক্ৰৰ কাৰ্যবিৱৰণী গ্ৰন্থখন অসম বিজ্ঞান, প্ৰযুক্তিবিদ্যা আৰু পৰিৱেশ পৰিষদৰ পৃষ্ঠপোষকতাত প্ৰকাশ কৰাৰ প্ৰস্তাৱ আগবঢ়াইছে।

Report and Video links:

1. Video link: <https://www.facebook.com/AgnigarhNews/videos/382102890737533>
2. Darrang College Song by Students of Zoology:
<https://www.facebook.com/darrangcollegepage/videos/pcb.5608732139220746/533522501640248>
3. Bhakti Bandana by Juli Bairagi

<https://www.facebook.com/darrangcollegepage/videos/pcb.5608732139220746/842626090313274>

4. National Seminar on Recent Advances in Biological Sciences: Biodiversity and Human Welfare organised by the Department of Zoology Darrang College, Tezpur on 18th & 19th Nov. 2022 :
Bhakti Bandana by Juli Bairagi & Darrang College Song by Students of Zoology

<https://www.facebook.com/watch/?v=842626090313274>

5. <https://fb.watch/gUkfR8-V9Y/>
6. NEWS LINKS: [National seminar inaugurated at Darrang College - The Hills Times](#)
7. Brochure: [1665809431.pdf \(darrangcollege.ac.in\)](#)

P. Saikia

P. Saikia
President

Binitadas

B. Das
Vice-President

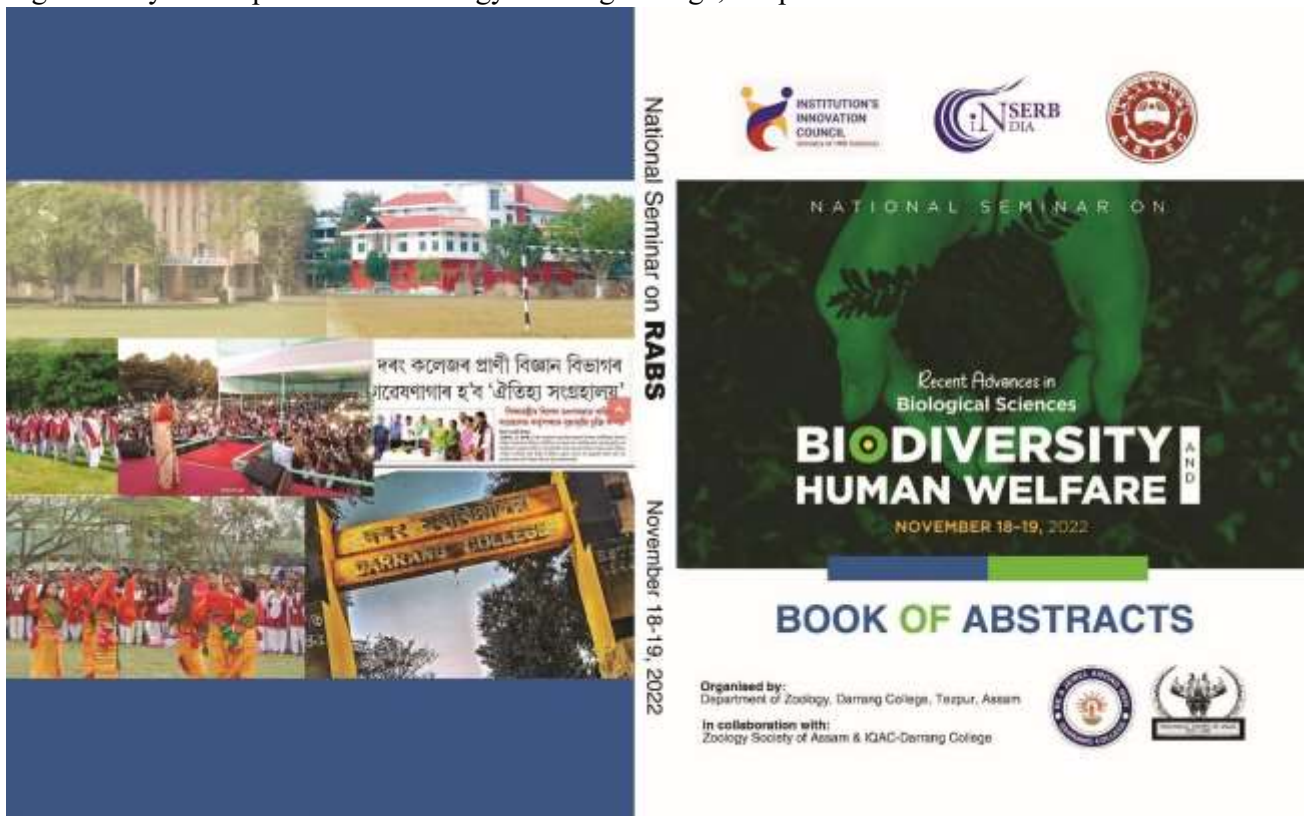
Dr. Chittaranjan Baruah

Dr. Chittaranjan Baruah
Convener

Date: 30-01-2023



National Seminar on Recent Advances in Biological Sciences: Biodiversity and Human Welfare organised by the Department of Zoology Darrang College, Tezpur on 18th & 19th Nov. 2022 :



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NATIONAL SEMINAR ON
Recent Advances in
**BIOLOGICAL SCIENCES:
BIODIVERSITY & HUMAN WELFARE**

November 18-19, 2022

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Sample certificate



A two-day national seminar on ‘Recent Advances in Biological Sciences: Biodiversity and Human Welfare’ was held in Darrang College.

Palash

P. Saikia
President

Binitadas

B. Das
Vice-President

Chittaranjan Baruah

Dr. Chittaranjan Baruah
Convener

Date: 30-01-2023