

PERSONAL PROFILE

Name : **Dr. NAYAN ROY**
Designation : *Associate Professor of Zoology*
Department : ZOOLOGY
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Google Scholar ID: <https://scholar.google.co.in/citations?user=8KwVZvAAAAAJ&hl=en>
Google Scholar Citation: 867 (h-index: 17.0; i10-index: 22.0)
Research Gate Citation: 506 (h-index: 12); https://www.researchgate.net/profile/Nayan_Roy3/2
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Live DNA: <http://livedna.org/91.8933>
Scopus ID: <https://www.scopus.com/authid/detail.uri?authorId=57203881446>
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Web of Science: <https://www.webofscience.com/wos/author/record/Id=HLP-9102-2023>
Link to Personal website: <https://nayan909.wixsite.com/nayanroy909>
Vidwan ID: <https://vidwan.inflibnet.ac.in/profile/547064/NTQ3MDY0>



Academic Information:

Academic Score:

Name of Examination	Name of the Board	Year of Passing	Division	Percentage of Marks
M.P.	W.B.B.S. E	2001	1 ST	81.75%
H.S.	W.B.C.H.S. E	2003	1 ST	72.70%
B.Sc. (ZOOH)	B.U.	2006	1 ST	61.62%
M.Sc. (ZOOLOGY)	B.U.	2008	1 ST	75.50%

- ❖ **M. Sc. Special Paper:** Ecology & Environment
- ❖ **M. Sc. Project Work:** “Preliminary observations of diversity and food web of mosquito immature and its insect predators in rice-fields” with Hossain, A. and Dutta, M.; 2008 under T. C. Banerjee and G. Aditya, Department of Zoology, The University of Burdwan.

❖ **Special Qualifications:**

1. **National Eligibility Test** (NET, June, 2008): CSIR (JRF), Roll No.-317112 (Life Sciences)
2. **State Level Eligibility Test** (SET, 2008): Roll No.-G140801 (SC) (Life Science)
3. **Ph.D. Course Work** in Zoology, 2010-2011, Roll No. CW ZOO/2011/28, from Department of Zoology, University of Burdwan.
4. **Ph.D. on Plant-insect interactions** from Burdwan University from 02.01.2009 to 20.08.2013 & Ph D. Registration No: Regn /Zoo/Sc/380. Dated: 02/06/2011.
5. **Ph.D. thesis** entitled “**Phytochemicals in the sunflower *Helianthus annuus* L. (CV. PAC-36) and their role in the interactions with defoliator, *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae)” **awarded on 20th February 2014.** [URL: http://hdl.handle.net/10603/121484](http://hdl.handle.net/10603/121484)**

- ❖ **Area of Specialization:** Chemical Ecology of Plant-Insect Interactions & EPM

Doctoral Research:

1. Worked as a CSIR Junior Research Fellow in Department of Zoology, University of Burdwan from 02.01.2009 to 31.03.2010 on “Phytochemicals in the sunflower (*Helianthus annus* L.) and their ecological Implications on the insect herbivore, *Diacrisia casignetum* Kollar” under the guidance of Dr. A. Barik, Department of Zoology, University of Burdwan.
2. Worked as a Part-time Research fellow (from 01.04.2010) under a project entitled “Phytochemicals in the sunflower, *Helianthus annus* L. (cv. PAC-36) and their role in the interactions with defoliator, *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae)” under the guidance of Dr. A. Barik. Department of Zoology, University of Burdwan.

Research Skills:

1. **Technical Skills:** Microscopy (Light, dark field, fluorescence, Confocal and phase contrast), Electron Microscopy (Scanning and transmission), UV-Vis Spectrophotometry, Thermal gravimetric analysis (TGA), Chromatography (CC, TLC, HPLC, GC-FID, GLC, GC-MS and NMR) etc.
2. **Statistical Skills:** Significance tests, ANOVA, Multivariate regression analysis, PCA, Software packages used: SPSS statistical software 16.0, Origin pro7.5, Chem office 2004, etc.
3. **Other Skills:** MS word, Excel, Power point presentation, Photoshop, Corel Draw etc.

Professional activities: Assistant Professor of Zoology (Emp. No. 01020847), M.U.C. Women's College (under The Burdwan University), Department of Zoology, Burdwan-713104, West Bengal, India from 1st April 2010 to Present.

1. Assistant Professor (Stage-I): from 1st April, 2010 to 31st March 2014.
2. Assistant Professor (Stage-II): from 1st April, 2014 to 25th September 2019.
3. Assistant Professor (Stage-III): from 26th September 2019 to 25th September 2022.
4. Associate Professor (Stage-IV): from 26th September 2022 to 31st January 2050.

Minor/ Major Research projects completed/ in progress:

1. Minor Research project: UGC MRP on “Phytochemicals in *Chorchorus capsularis* (cv. Sonali; JRC-321) leaves and their role in the interactions with the defoliator, *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae)” No.F.: PSW-025/13-14 dated: 18-Mar-2014 (Rs. 3,25,000/-). Work done: 18.03.14-31.03.16. Final Report Received: 11.04.2016.
2. Major Research project: WBDST approved on “Green Pest Management (GPM) of *Spilosoma obliqua* Walker (Lepidoptera: Arctiidae): a major pest of Sesame (*Sesamum indicum* L., cv. Rama).” File No.: ST/P/S&T/1G-29/2018; Memo No.: 214 (Sanc.) ST/P/S&T/1G-29/2018 Date: 19/02/2019 (Rs. 6,80,000/-). Work done: 25.05.19-25.05.22. PCC received by PI: 17.10.2022.

❖ Professional/Educational Experience:

1. Orientation Programme (94th) at ASC, University of Burdwan, 24th January to 20th February, 2014.
2. Refresher Course (2nd RC in Biological Science) at ASC, University of Burdwan, 23rd September to 13th October, 2015.
3. Refresher Course (RC in Environmental Science & Disaster Management) at ASC, Ranchi University, 12th September to 25th September, 2019.
4. Refresher Course (RC in Environmental Science) at ASC, University of Burdwan, 9th February to 22nd February, 2021.
5. Malaviya Mission Teacher Training Centre [Formerly Ugc-Hrdc] The University of Burdwan NEP Orientation and Sensitization – 7 from (05.03.2024 to 14.03.2024), Program ID: [MMC-110-2024-MAR-A-00428].

❖ **Academic Membership:**

- ⌘ Life member of **Zoological Association, Burdwan**, from 2010 (Reg. No. S0054165 of 2024-25 Dated: 13/12.24; WB ACT XXVI of 1961).
- ⌘ Life member of **ASSOCIATION FOR ADVANCEMENT OF ENTOMOLOGY** (Reg. No. 146/75) from 2019.

❖ **Journal Editorial Board Member:**

1. *Journal of Entomology and Zoology Studies* (Associate Editor from 13/08/2014)
2. *International Journal of Fauna and Biological Studies* (Associate Editor from 12/03/2015)
3. *International Journal of Pure & Applied Biosciences* (Associate Editor, 2016)
4. *International Journal of Zoology Studies* [UGC Approved] (Associate Editor from 2017)
5. *International Journal of Entomology Research* [UGC Approved] (Associate Editor from 2017)
6. *Journal of Biological Science* [Science Alart] (Technical Editor from 28/2/2017)
7. *International Journal of Zoological Research* [Science Alart] (Technical Editor from 28/2/2017)
8. *International Journal of Animal Research* [USA] (Associate Editor from 2017)
9. *Journal of Entomology* [Science Alart] (Technical Editor from 26/1/2018)
10. *International Journal of Agricultural Research* [Science Alart] (Technical Editor from 26/1/2018)
11. *International Journal of Biological Chemistry* [Science Alart] (Technical Editor from 26/1/2018)
12. *International Journal of Agricultural, Environment and Bioscience* (Associate Editor from April, 2018)
13. *International Journal of Biology Research* [UGC Approved] (Associate Editor from 2017)
14. *International Journal of Biotechnology and Bioscience* [UGC Approved] (Associate Editor from 2017)
15. *National Journal of Advance Research* [UGC Approved] (Associate Editor from 2017)
16. *International Journal of Advance Scientific Research* [UGC Approved] (Associate Editor from 2017)
17. *International Journal of Advance Research and Development* [UGC Approved] (Associate Editor from 2017)
18. *International Journal of Applied Research* [UGC Approved] (Associate Editor from 2017)
19. *International Journal of Multidisciplinary Research and Development* [UGC Approved] (Associate Editor from 2017)
20. *National Journal of Multidisciplinary Research and Development* [UGC Approved] (Associate Editor from 2017)
21. *Annals of Ecology and Environmental Science* (Associate Editor from 2018 Apply 04/5/18)
22. *International Journal of Recent Scientific Research* [UGC Approved] (Associate Editor from 2018 Apply 11/5/18)

➤ **Reviewer of the Journal:**

1. *Journal of Threatened Taxa*

2. *Proceeding of the Zoological Society (Springer)*
3. *ENTOMON*
4. *Research on World Agricultural Economy*
5. *Journal of the Entomological Research Society*
6. *International Journal of Entomology*
7. *Ethnobotany Research and Applications*
8. *Uttar Pradesh Journal of Zoology*
9. *Journal of Plant Breeding and Crop Science*
10. *Pakistan Journal of Biological Science*
11. *Journal Of Agricultural Science and Technology (Iran)*
12. *Journal of Entomology and Zoology Studies*
13. *Research on World Agricultural Economy*
14. *Israel Journal of Entomology*
15. *Journal of Agricultural Studies*
16. *Journal of Experimental Agriculture International*
17. *Journal of Advances in Biology & Biotechnology*
18. *International Journal of Environment and Climate Change*
19. *Indian Journal of Entomology*
20. *Environmental Sustainability (Springer)*
21. *ENTOMOLOGIA HELLENICA*
22. *CONSCIENTIA JOURNAL, Krishnagar Government College, Krishnagar, W.B., India*

❖ **Seminar Organized:**

1. Organizing committee member of UGC sponsored national seminar on Resurgent vector-borne diseases and climate change: a threat to mankind on 15th & 16th December, 2010 in Department of Zoology, Maharajadhiraj Uday Cahand women's college, Burdwan, West Bengal, India.
2. Academic committee member of an International Conference (Web based) on Engineering biotic interactions in the light of social applicability on 7-9th August, 2020 in Department of Botany, Maharajadhiraj Uday Cahand women's college, Burdwan, West Bengal, India.
3. Convener of a state level webinar on "Mosquito Borne Diseases, Their Control and Perspectives of Environmental Health on 4th September, 2020 in Department of Zoology, Maharajadhiraj Uday Cahand women's college, Burdwan, West Bengal, India.

❖ **Academic Activities:**

1. BU UGBS (Add hoc) Zoology Member 2017-18
2. BU UGBS (Add hoc) Nutrition Member 2019-20
3. BU UG Exam (Zoology Hon and Gen) Moderator, Question setter from 2010 to present
4. BU UG Exam (Zoology Hon and Gen) Examiner, Scrutineer, Reviewer from 2010 to present
5. BU UG Exam (Nutrition Hon) Moderator, Question setter from 2010 to present
6. BU UG Exam (Nutrition Hon) Examiner, Scrutineer, Reviewer from 2010 to present

7. BU UG Exam (Biochemistry Hon) Question setter from 2016 to present
8. BU UG Exam (Biochemistry Hon) Examiner from 2016 to present
9. KNU UG Exam (Zoology Hon and Gen) Question setter from 20118 to present
10. SKBU UG Exam (Zoology Hon and Gen) Question setter from 2020 to present
11. NSOU UG Exam (Zoology Hon Prac) External Examiner from 2014 to present
12. NSOU UG Exam (Food Processing Hon) Examiner from 2016 to present

❖ **Invited Lecture:**

1. Delivered a lecture on “Animal Behaviour” on 23rd May, 2021 (10 AM-11 AM) in the “**Faculty Exchange Programme**” (May 10-June 19, 2021) organized by the Department of Zoology, Bejoy Narayan Mahavidyalaya, Itachuna, Hooghly-712 147, West Bengal, India.

❖ **UG Research Guidance (Project Work):**

1. Under Graduate (Zoology Hon’s) project on “Particulate Matter Air Quality Mapping Using Thin Plate Technique” in 2011-2012.
2. Under Graduate (Zoology Hon’s) project on “Air Quality Mapping by Suspended Particulate Matter (PM) in Urban and Rural Areas Road side and Interior side of Burdwan District” in 2012-2013.
3. Under Graduate (Zoology Hon’s) project on “Zooplankton diversity in fresh water pond ecosystem” in 2013-2014.
4. Under Graduate (Zoology Hon’s) project on “Control strategy of a stored grain pest, *Sitophilus oryzae* by UV irradiation” in 2014-2015.
5. Under Graduate (Zoology Hon’s) project on “Control strategy of a stored grain pest, *Calosobruchus maculatus* by different physical means” in 2015-2016.
6. Under Graduate (Envs) project on “Air Pollution by Road Vehicles” in 2011-2016 (for 6 years).
7. Under Graduate (Zoology Hon’s) project on “Control strategy of a stored grain pest, *Sitophilus oryzae* by different botanicals” in 2016-2017.
8. Under Graduate (Zoology Hon’s) project on “Control strategy of a stored grain pest, *Calosobruchus maculatus* by different botanicals” in 2017-2018.
9. Under Graduate (Zoology Hon’s) Review on “Modern approaches of pest management” in 2017-2018.
10. Under Graduate (Zoology Hon’s) Review on “Evolution of pesticides for pest management” in 2017-2018.
11. Under Graduate (Zoology Hon’s) Review on “Stored grain pests and their management” in 2017-2018.
12. Under Graduate (Zoology Hon’s [Sem II]) Review on “Larval forms of Echinoderms” from 2018 onward.
13. Under Graduate (Zoology Hon’s [Sem V CBCS]) Project on “Parasite Biology and Infestation” from 2018 onward.
14. Under Graduate (Zoology Hon’s [Sem II NEP]) PPT on “Animal behavior of any two Fauna” from 2023 onward.

❖ **PhD Research Guidance: Recognized as a Research Guide (Supervisor) leading to Ph.D. degree by Burdwan University No. R-PhD/ Registration/Sc/Zoo/126; Dated:07/12/2021**

1. Bio-ecology and management of *Leptocorisa acuta* (Thunberg, 1783) (Hemiptera: Alydidae) by **Souren Dutta** under Dr. Asif Hossain, Assistant Professor, SKBU, from 2015. Submitted in June 2024.
2. Population ecology and green management of the fruit fly *Bactrocera dorsalis* (Hendel) (Diptera: Tephritidae) by **Bratatee Sardar** from BU, 02.07. 2022.
3. Population ecology and integrative management of *Sitotroga cerealella* (Olivier) (Lepidoptera: Gelechiidae) by **Neha Chowdhury** from BU under S. Pal, Associate Professor, Hooghly Mohsin College, Hooghly and Nayan Roy, Associate Professor, MUCWC, Burdwan from 02.07. 2022.
4. Population Ecology and Green Management of a generalist semilooper pest, *Anomis sabulifera*, Guenée 1852 (Lepidoptera: Erebidae) by **Naznin Kamar** from SKBU Under Biplob Kr. Modak, Professor, SKBU and Nayan Roy, Associate Professor, MUCWC, Burdwan from 01.02. 2022.

❖ **UG Skill Development Add-on Course: 2015-2018**

Course on “Household stored grain pest management through green approaches”

❖ **Technical exposure:**

- Designing of new insect management strategies
- Mass rearing of insects for nutritional and population ecology study
- Biological and demographic studies of insects
- Biochemical studies of host plants and insects
- Solvent extraction, purification and analysis of phytoconstituents
- TLC (Thin Layer Chromatography), Column chromatography, Spectrophotometry,
- GC-FID, IR, GC-MS and their quantification from chromatogram
- New biorationals formulation and application
- Computer skills: MS Office
- Knowledge of statistical software – SSPS.

❖ **Research Interest:**

- Crops and Weed management
- insect pest management
- Insect ecology, behaviour and biology
- Insect demography, population dynamics, nutritional ecology
- Alternate of pesticides
- Triple E concept of pest management, ET concept
- IPM, GPM, AESA-IPM, EPM, ESS-EE-ESGPM

❖ **Strengths:**

- Quick learner who enjoys keeping current with new developments.
- Able to produce quality work on time and within budget.
- Competent, organized and dependable.
- Statistical analysis of data and writing skills

Biography: With immense interest in animal science, I have achieved my B.Sc. in Zoology from Hooghly Mohasin College under University of Burdwan in 2006 and M.Sc. in Zoology with specialization in Ecology & Environment from Department of Zoology, University of Burdwan in 2008. In the mean time, I have qualified the CSIR-NET (JRF) and SET in Life Sciences in 2008. I have started my journey in research as a CSIR Junior Research Fellow in Department of Zoology, University of Burdwan from 02.01.2009 to 31.03.2010 and completed my doctoral works as a part-time research fellow from 01.04.2010 to 22.08.2013. I have concentrated my research on chemical ecology of plant-insect interactions. I have completed my Ph. D. from the Department of Zoology, university of Burdwan, under the supervision of Dr. Anandamay Barik (Assistant Professor). During my course of research, I have published research papers in different peer-reviewed international and national journals from 2010 to 2013. I have appointed as an Assistant Professor, Department of Zoology, M.U.C. Women's College, Burdwan, W. B., India from 01.04.2010 and look forward to fruitful years of teaching and research in different fields of chemical ecology of plant-insect interactions. My area of specialization is Chemical Ecology of Plant-Insect Interactions and climate smart pest management (CSPM). Actually, chemical ecology examines the role of chemical interactions between living organisms and their environment, as well as the consequences of those interactions on the ethology, ecology-based applications for agricultural, such as protecting crops from pests and preventing the spread of disease. In due course of my research work, I am well acquainted with laboratory techniques on phytochemical analysis including isolation, chemical characterization and estimation as well as assessing their role in plant-insect interactions. I am equally efficient in field work for find out the biodiversity, pest biology including their behavioral ecology, allelopathy and green nanotechnology. I have a standing interest in how plants and insects interact and how they have affected each other in their growth and development. Herbivorous insects and green plants together make up over half of all known biodiversity. I am trying to find the range of behaviors shown by insects to unravel the complexity of their interactions with plants. The demographic study and nutritional ecology of the insect pest may help their ecological management in future. The potential for studying these topics in India is enormous toward applied issues for pest control as well as for fundamental ecology. I have extensively studied the top-down and bottom-up regulation of some crop plant by their defoliators. I am also working on the allelopathic effects of plants and synthesize metallic nanoparticles in green synthesis approach. Recently, he is very much concerned the insect pest management rather their control through the use of demography and nutritional ecology along with trap cropping system through CSPM strategy for sustainable CSA and human welfare.

Teaching Experience: The goal for a teacher is to spread new information among students, not just memorizing particulars, but to teach them how to think. This is absolutely possible only when both teacher and students are enjoying what they are learning. My teaching interest largely revolves around my research interests including Ecology, Biodiversity, Conservation Biology, Taxonomy, Ethology, Embryology, Physiology, Biochemistry, Genetics etc. I always try to stimulate the minds of my students and they also inspire me more during class room discussions. I like talking about my field and laboratory into my class room teaching to implant my students in real context. I want the students to develop interest and awareness on importance of Ecosystem and Biodiversity along with their functions for our sustainability.

Research Experience:

Past Research activity: In due course of my research work, I was concerned with phytochemical analysis including isolation, chemical characterization and estimation as well as assessing their role in plant-insect interactions. I have also worked on the allelopathic effects of plants and synthesize metallic nanoparticles (MNP) in green synthesis approach. Firstly, I have worked as a CSIR Junior Research Fellow in Department of Zoology, University of Burdwan from 02.01.2009 to 31.03.2010 on “Phytochemicals in the sunflower (*Helianthus annus* L.) and their ecological implications on the insect herbivore, *Diacrisia casignetum* Kollar” under the guidance of Dr. A. Barik, Department of Zoology, University of Burdwan. Secondly, I have worked as a Part-time Research fellow (from 01.04.2010) under a project entitled “Phytochemicals in the sunflower, *Helianthus annus* L. (cv. PAC-36) and their role in the interactions with defoliator, *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae)” under the guidance of Dr. A. Barik. Department of Zoology, University of Burdwan.

Present Research activity: I am working on biodiversity, pest biology including their behavioral ecology, allelopathy and green nanotechnology. I have a standing interest in - how plants and insects interact and how they have affected each other in their growth and development. Herbivorous insects and green plants together make up over half of all known biodiversity. I am trying to find the range of behaviors shown by insects to unravel the complexity of their interactions with plants. I am also studying on pest nutritional ecology and population dynamics of a specific pest-crop system which will help to develop a particular ET for judicious use of different control measures by ecologically sustainable agriculture as a part of EPM.

Future research plan: I have wide research interest and most of my studies have largely focused on insect-plant interaction. I would like to expand my horizon related to chemical ecology of plant-insect interactions for pest management. I have a great interest on top-down and bottom-up regulation of some crop plant by their pests. I am also interested in demographic study and nutritional ecology of the insect pest that may help their ecological management in future. Ultimately it may help me in finding a new approach of agro ecosystem analysis (AESAs) based ecological pest management (EPM) for climate smart agriculture (CSA) to human welfare. The new concept of using ecosystem services and green pest management (GPM) leads to the development of ecosystem service based ecological engineering for ecological pest management (ESS-EE-EPM) which will be environmentally safe agricultural technique ever used. It will lead triple- E (Environmental, Ecological and Economical) sustainability for any kind of pest management in near future. Population dynamics-based study of pest and defenders will provide the better understanding for application of their better sustainable management. The potential for studying these topics in India is enormous toward applied issues for CSPM as well as CSA for ecologically sustainable agriculture.

I am looking potential students and collaborators with allied research interest for innovative research. Please feel free to inform me (nayan909@gmail.com) with new ideas and proposals.

❖ List of Publication:

1. **Nayan Roy** and Barik, A. (2010). The role of volatiles in tritrophic interactions. *Environment and Ecology*. 28(1): 352–355. ISSN 0970-0420
2. Basu, M., **Nayan Roy** and Barik, A. (2010). Seasonal abundance of net zooplankton correlated with physico-chemical parameters in a fresh water ecosystem. *International Journal of Lakes and Rivers*. 3(1): 67–77. ISSN 0973-4570
3. **Nayan Roy** and Barik, A. (2010). Green synthesis of silver nanoparticles from the unexploited weed resources. *International Journal of Nanotechnology and Applications*. 4(2): 95–101. ISSN 0973-631X

4. **Nayan Roy** and Barik, A. (2010). Allelopathic potential of *Ludwigia adscendens* (L.) on germination and seedling growth of green gram, *Vigna radiata* (L.) cultivated after rice. *Agricultural Science Digest*. 30(3): 192–196. ISSN 0253-150X
5. **Nayan Roy**, Basu, M. Chattopadhyay C. and Barik A. (2011). Allelopathic effects of rice field weed, *Ludwigia adscendens* (L.) on germination and seedling growth of three economic crop plants. *International Journal of Horticulture and Crop Science Research*. 1(1): 15–20. ISSN 2249-4243
6. **Nayan Roy**, Laskar, S. and Barik, A. (2012). The attractiveness of odorous esterified fatty acids to the potential biocontrol agent, *Altica cyanea*. *Journal of Asia-Pacific Entomology*. 15(2): 277–282. ISSN 1226-8615 (Elsevire Pub.)
7. **Nayan Roy** and Barik, A. (2012). The Impact of Variation in Foliar Constituents of Sunflower on Development and Reproduction of *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae). *Psyche*. vol. 2012: Article ID 812091, 9 pages. <https://doi.org/10.1155/2012/812091>. ISSN 0033-2615
8. Mukherjee, A., Sarkar, N., **Nayan Roy** and Barik, A. (2012). Green Approach of Gold Nanoparticle Synthesis from Sunflower Leaf. *International Journal of Nanotechnology and Applications*. 6 (2): 89–96. ISSN 0973-631X
9. **Nayan Roy** and Barik, A. (2012). Alkanes used for host recognition by the arctiid moth *Diacrisia casignetum* Kollar. *Journal of Entomological Research*. 36(4): 345-50. ISSN 0378-9519
10. **Nayan Roy**, Laskar, S. and Barik, A. (2012). Determination of n-alkane profile through developmental state of sunflower leaves. *The South Pacific Journal of Natural and Applied sciences*. 30: 72-76. ISSN 1838-837X
11. **Nayan Roy** and Barik, A. (2013). Influence of four host plants on feeding, growth and reproduction of *Diacrisia casignetum* (Lepidoptera: Arctiidae). *Entomological Science*.16(1): 112-118. <https://doi.org/10.1111/j.1479-8298.2012.00546.x>. ISSN 1479-8298 (Wiley Pub.)
12. **Nayan Roy**, Laskar, S. and Barik, A. (2013). Amino acids through developmental stages of sunflower leaves. *Acta Botanica Croatica*, 72(1): 41-51. <https://doi.org/10.2478/v10184-012-0009-5>. ISSN 0365-0588
13. **Nayan Roy**, Chattopadhyay, C. and Barik, A. (2013). Assessing the Attractiveness of Odorous Esterified Fatty Acids to Arctiid Moth, *Diacrisia casignetum* Kollar. *The Ecoscan*. 3: 87-91. ISSN 0974-0376
14. **Nayan Roy** and Barik, A. (2014). Long-chain fatty acids: Semiochemicals for host location by the insect pest, *Diacrisia casignetum*. *Journal of the Kansas Entomological Society*. 87(1): 22-36. ISSN 0022-8567
15. **Nayan Roy** (2014). Role of *Chorchorus capsularis* phytochemicals on the feeding dynamics of *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae). *Journal of Entomology and Zoology Studies*. 2 (4): 227-236. ISSN 2349-6800
16. **Nayan Roy** (2015). Life table and population parameters of *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae) on jute, *Chorchorus capsularis* (cv. Sonali; JRC-321), leaves. *International Journal of Fauna and Biological Studies*. 2(3): 23-29. ISSN 2347-2677
17. **Nayan Roy** (2015). Host phytochemicals in regulation of nutritional ecology and population dynamics of *Podontia quatuordecimpunctata* L. (Coleoptera: Chrysomelidae). *International Journal of Horticulture*. 5(4): 1-11. <https://doi.org/10.5376/ijh.2015.05.0004>. ISSN 1927-5803
18. **Nayan Roy**, Chowdhury, P., Dutta, S., Garain, R. and Das, T. (2015). Air quality analysis by suspended particulate matter in urban and rural areas of burdwan district. *JAST –A reviewed multidisciplinary research journal*. 1(1):88-91. ISSN:2395-4353
19. **Nayan Roy**, Nag, D. and Chowdhury, S. K. (2015). Bottom up Phytosynthesis of Silver Nanoparticles and Their Antimicrobial Activity. *Biomaterial and Biomedicine*. 5(37): 1-14. <https://doi.org/10.5376/bb.2015.05.0037>.
20. Dutta, S. and **Nayan Roy** (2016). Life table and population dynamics of a major pest, *Leptocoris acuta* (Thunb.) (Hemiptera: Alydidae), on rice and non-rice system. *International Journal of Pure & Applied Bioscience*. 4(1):199-207. <http://dx.doi.org/10.18782/2320-7051.2202>. ISSN: 2320 – 7051
21. Sen, D., Dey, P., Pal, K., Mondal, R., Sain, A. and **Nayan Roy** (2016). Potency of UV Irradiation in Management of Rice Weevil, *Sitophilus oryzae* L. *JAST –A reviewed multidisciplinary research journal*. 2(1):61-67. ISSN:2395-4353
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23. **Nayan Roy** (2016). Life table of a bio-control agent *Altica cyanea* on the weed, *Ludwigia adscendens*. *FOCUS: An annual multidisciplinary refereed journal*. 7: 135-144. ISSN: 2278-1501
24. **Nayan Roy** (2017). Life Table and Nutritional Ecology of *Epilachna vigintioctopunctata* Fab. (Colioptera: Coccinellidae) on Three Host Plants. *International Journal of Horticulture*. 7(2): 7-19. <https://doi.org/10.5376/ijh.2017.07.0002>. ISSN 1927-5803
25. Mukherjee M., Mondal S., Biswas D., Das D. and **Nayan Roy** (2017). Eco-friendly and Sustainable Management of Pulse Beetle, *Callosobruchus maculatus* Fabr. *JAST –A reviewed multidisciplinary research journal*. 3(1):14-27. ISSN:2395-4353

26. Dutta S. and **Nayan Roy (2017)**. Population Dynamics and Host Selection of a Major Pest, *Leptocorisa acuta* (Thunb.) in primary and secondary hosts. ***Proceedings on UGC-SAP sponsored national seminar, KU***, Pp. 22-25. ISBN: 987-81-9-32401-2-0.
27. **Nayan Roy (2018)**. Population Dynamics Study for Triple-E Sustainable Management of a Major Pest, *Leptocorisa oratorius* Fabricius (Hemiptera:Alydidae). ***International Journal of Entomology Research***. 3(2): 152-158. ISSN: 2455-4758
28. Dutta, S. and **Nayan Roy (2018)**. Host preference and population dynamics of a Major Pest, *Leptocorisa acuta* (Thunb.), for their Ecological Management. ***International Journal of Biology Research***. 3(2): 31-39. ISSN: 2455-6548
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32. **Nayan Roy (2019)**. Life table and economic threshold concept for ecologically sustainable management of *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae) on Jute. ***Entomon***. 44(2): 103-110. <https://doi.org/10.33307/entomon.v44i.436>. ISSN: 0377-9335.
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34. **Nayan Roy (2020)**. Population ecology and ETs based time series for climate smart pest management of *Spilosoma obliqua* Walker. ***Entomon***. 45(1): 15-30. <https://doi.org/10.33307/entomon.v45i1.500>. ISSN: 0377-9335
35. Dutta, S., Hossain A. and **Nayan Roy (2020)**. Population ecology and economic thresholds for sustainable management of *Leptocorisa acuta* (Thunb.) on three rice cultivars. ***Annals of Entomology***, 38(01-02): 55-76. <https://connectjournals.com/01462.2020.38.55>. ISSN 0970-3721
36. **Nayan Roy (2020)**. Green management of rice weevil, *Sitophilus oryzae* L. (Coleoptera: Curculionidae) by new botanicals. ***Journal of Entomological Research*** 44(4): 565-574. <https://doi.org/10.5958/0974-4576.2020.00095.X>. ISSN: 0378-9519
37. **Nayan Roy (2020)**. Modern Strategies of Integrated Pest Management: A Review. ***JAST –A reviewed multidisciplinary research journal***. 4(1):1-12. ISSN:2395-4353
38. **Nayan Roy (2021)**. Population dynamics and economic thresholds-based time series for smart pest management of sesame. ***International Journal of Tropical Insect Science***. 41: 2573-84. PP1-12. <https://doi.org/10.1007/s42690-021-00437-3>. **IF: 0.774 (5yr IF: 1.071; 2020)**. ISSN: 1742-7584 (**Springer Pub.**)
39. **Nayan Roy (2021)**. Two-sex life table and host preference studies of *Bactrocera dorsalis* Hendel (Diptera: Tephritidae). ***Entomon***, 46(1): 11-24. <https://doi.org/10.33307/entomon.v46i1.582> E. ISSN: 0377-9335
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41. **Nayan Roy (2021)**. Population Dynamics and Nutritional Ecology Based Economic Threshold Calculation for Sustainable Management of *Spilosoma obliqua* Walker on Sesame Cultivars. ***Tropical Ecology***. 62: 653-61. ID 179. **IF: 0.850 (5yr IF: 1.137; 2020)**. <https://doi.org/10.1007/s42965-012-00179-w>. e-ISSN:0564 3295 (**Springer Pub.**)
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48. **Nayan Roy (2022)**. Behavioral Pattern of Generalist and Specialist Insect Pests to Brassicaceous Leaf Cuticular n-Alkanes and Free Fatty Acids. *Arthropod-Plant Interactions*. 16: 537-551. IF: 1.6 (2022). <https://doi.org/10.1007/s11829-022-09917-w>. ISSN- 1872-8855. (Springer Pub.) ACCEPTED 22.11.2022
49. Dutta, S. and **Nayan Roy (2022)**. Review on Bionomics and Management of Rice Stem Borer. *Journal of Entomology and Zoology Studies*. 10(5): 301-310. <https://doi.org/10.22271/j.ento.2022.v10.i5d.9071>. ISSN 2349-6800. ACCEPTED 28.08.2022
50. **Nayan Roy (2022)**. Life Table Based ETs and Time Series for Sustainable Management of *Spilosoma obliqua* Walkar on Jute. *Journal of Tropical Agriculture*. 60(2): 165-175. <https://jtropag.kau.in/index.php/ojs2>. ISSN: 0971-636X [Accepted on 04.12.2022]
51. Chowdhury S. K., **Nayan Roy**, Banerjee M. and Basnett D. (2023). Plant growth promotion and antifungal activities of the mango phyllosphere bacterial consortium for the management of Fusarium wilt disease in pea (*Pisum sativum* L.). *Plant Science Today*. 10(3): 220-234. <https://doi.org/10.14719/pst.2267>. eISSN: 2348-1900 [Accepted on 17.02.2023]
52. Neha Chowdhury, Bratatee Sardar and **Nayan Roy (2023)**. Pest status and management strategies for *Sitotroga cerealella* (Olivier) (Lepidoptera: Gelechiidae). *Journal of Applied Entomologist*, 3(2):06-17. ISSN 0931-2048 [Accepted on 06.04.2023].
53. Souren Dutta, Neha Chowdhury, Bratatee Sardar and **Nayan Roy (2023)**. Trap crop selection and economic threshold based ecological management of *Spilarctia obliqua* Walker (Lepidoptera, Erabidae) for sesame. *ENTOMON*, 48(2): 241-252. <https://doi.org/10.33307/entomon.v48i2.893>; Article No. ent. 48208. [Accepted on June 2023].
54. Dutta, S., Hossain A. and **Nayan Roy (2023)**. Bioecology and Management of Major Insect Pests of Rice in West Bengal. *Indian Journal of Entomology*. 86(1): 300-318. Online published Ref. No. e23949. <https://doi.org/10.55446/IJE.2023.1349>. ISSN : 0367-8288. [ACCEPTWED MAY 2023]
55. Bratatee Sardar, Neha Chowdhury and **Nayan Roy (2023)**. Pest bioecology and management strategies for *Bactrocera dorsalis* (Hendel) (Diptera: Tephritidae). *Journal of Applied Entomologist*. 3(2):18-25. ISSN 0931-2048 [Accepted on 06.04.2023].
56. Chowdhury Swapan Kumar, Swagato Mukherjee, **Nayan Roy (2023)**. An Ethno Botanical Perspective of Sustainable Prevention of Covid-19. *International Journal of Research in Academic World (IJRAW)*. 2(7):162-176. E-ISSN: 2583-1615. Accepted: 26/July/2023.
57. **Nayan Roy (2023)**. A Review on Evolution of Pesticides from 18th Century *JAST –A reviewed multidisciplinary research journal*. 5(1):73-86. ISSN:2395-4353.
58. Priyajit Chatterjee, Souren Dutta, Neha Chowdhury, Bratatee Sardar, Swapan Kumar Chowdhury and **Nayan Roy (2024)**. A comprehensive review on plant based green synthesis and applications of metallic nanoparticles. *The Pharma Innovation Journal*, 13(7): 118-132. <https://dx.doi.org/10.22271/tpi>. Online ISSN: 2277-7695, Print ISSN: 2349-8242.
59. Neha Chowdhury, Bratatee Sardar and **Nayan Roy (2024)**. Performance of Angoumois Grain Moth, *Sitotroga cerealella* (Lepidoptera: Gelechiidae) on Different Hosts in Varied Storage Conditions: A Review. *Biology Bulletin Reviews* [Communicated on 26.9.24; Accepted 22.11.2024, Springer]

❖ **Book Chapter:**

1. Roy, N. (2018). Agro Ecosystem Analysis and Ecosystem Service based Ecologically Sustainable Management of Rice Field Weed, *Ludwigia spp.*, by its Classical Bio-control Agent *Altica cyanea* Weber. In: ENV Books (**Plant Response to Environmental Stress**), **Page: 60-89 (Chapter-5)**; **Edited by:** Dr. Alka Chauhan; Dr. Pawan Kumar 'Bharti' and Dr. Avnish Chauhan; **Edition: 2018**; **Publisher by:** Discovery Publishing House Pvt. Ltd. New Delhi (India). **ISBN: 93-86841-58-4**.
2. Roy, N. (2020). Population dynamics-based triple-E sustainable management of a major stored grain pest *Sitophilus spp.* (Coleoptera: Curculionidae) in India. In: ENV Books (**EXPERIMENTAL ANIMAL SCIENCE: BIRDS AND INSECTS; EB/2020/1451-1460/EAS**),

Page: 166-198 (Chapter-08; section-II); Edited by: Dr. Manoj Kumar Arya and Dr. Pawan Kumar 'Bharti' Edition: 2020; Publisher by: Discovery Publishing House Pvt. Ltd. New Delhi (India). ISBN: 93-88854-46-2.

❖ **Book Review:** Roy, N. (2018). INSECT PESTS OF CROPS by S Pradhan, First Edition; ISBN: 978-81-237-1118-8

❖ **Seminar Presentations:**

1. Roy, N. and Barik, A. (2009). Volatile Signaling: Talking-Tree. Presented in: 16th West Bengal State Science & Technology Congress, 28th February-1st March, 2009 at University of Burdwan; ROY-25, p 498.
2. Roy, N. and Barik, A. (2010). Fatty acid composition in weed parts, *Ludwigia adscendens* L. and assessing their role in the attraction of a biocontrol agent, *Altica cyanea* (Weber). Presented in: Golden Jubilee International Seminar on “Researches in Zoology-Basic and Applied”, March 17-19; ORAL E7; P98.
3. Hossain, A., Roy, N., Kundu, M. and Aditya, G. (2010). Deciphering predators and mosquito prey links: food webs of rice-fields. Presented in: UGC sponsored national seminar on Resurgent vector-borne diseases and climate change: a threat to mankind on 15th & 16th December, 2010 in Department of Zoology, Maharajadhiraj Uday Cahand women’s college, Burdwan, ORAL; P22.
4. Roy, N., Chattopadhyay, C. and Barik, A. (2013). Assessing the Attractiveness of Odorous Esterified Fatty Acids to Arctiid Moth, *Diacrisia casignetum* Kollar. Presented in: NASEED-2013 on 25–27 January 2013 at Sambalpur University. *Published in: The Ecoscan*, 3: 87-91.
5. Roy, N. (2013). Effects of Three Host-Plants on Larval Growth and Adult Fecundity of the Arctiid Moth *Diacrisia casignetum* Kollar (Lepidoptera: Arctiidae). Presented in: UGC-DRS Seminar on “Bioprospecting of Natural Products” held on 05 and 06th December, 2013 in Department of Zoology, University of Burdwan, Burdwan.
6. Roy, N. (2016). Nutritional ecology and host preference of a major pest, *Diacrisia casignetum* Kollar. Presented in: 23rd West Bengal State Science & Technology Congress, 28-29 th February, 2016 at Presidency University, Kolkata. Animal science 01.
7. Roy, N. (2016). Population Dynamics and Life Table of *Altica cyanea*: A Classical Bio-control Agent of Rice Field Weed, *Ludwigia spp.* Presented in: 1st Regional Science & Technology Congress-2016, 7-8th November, 2016 at Bankura Christian College, Bankura, in Burdwan Division, West Bengal, Zoology Section.
8. Roy, N. (2016). Green Management of a Major Pest *Diacrisia casignetum* Kollar. Presented in: 1st Regional Science & Technology Congress-2016, 13-14th November, 2016 at NIRRT, Kolkata, in Presidency Division, West Bengal, Environment section.
9. Dutta S. and Roy N. (2016). Population Dynamics and Host Selection of a Major Pest, *Leptocorisa acuta* (Thunb.) in primary and secondary hosts. Presented in: UGC-SAP sponsored national seminar on Effect of Climate Change on Faunal Diversity organized by Department of Zoology, University of Kalyani, Kalyani, West Bangal on 27th Feb 2017 in Taxonomy and Environment section as Poster Presentation.
10. Dutta S. and Roy N. (2016). Relationship of Nutritional Factor and Population Dynamics of a Major Pest, *Leptocorisa acuta* (Thunb.) Presented in: UGC sponsored national seminar at RU as Poster Presentation.

11. Dutta S. and Roy N. (2017). Population Dynamics of Major Pest, *Leptocorisa acuta* (thumb) in Primary and Secondary host. Presented in Government of West Bengal Sponsored National Seminar on Current Trends in Plant & Microbial Research (CTIPMR) on 23rd March 2017 at Department of Botany, Raiganj University, Raiganj, Raganj Uttar Dinajpur, West Bengal, India as Poster Presentation.
12. Dutta S. and Roy N. (2017). Host Phytochemicals and Nutritional Ecology of a Major Pest, *Leptocorisa acuta* (Thunb.). Presented in: International “Science Seminar” Jointly Organised by Burdwan Raj College and Indian Chemical Society on 10th October 2017 as Poster Presentation.
13. Dutta S. and Roy N. (2017). Population Dynamics of a Major Pest, *Scipophaga incertulus* Walker (Pyralidae: Lepidoptera). Presented in: 2nd Regional Science & Technology Congress-2017, 16-17th November, 2017 at BU, West Bengal, Animal science and Fishery section as Poster Presentation.
14. Monali Mukherjee², Shreya Mondal², Debarati Biswas^{2#}, Debaspriya Das² and Nayan Roy^{1*} (2017). Integrated Pest Management (IPM) of Pulse Beetle, *Callosobruchus maculatus* Fabr. Presented in: 2nd Regional Science & Technology Congress-2017, 16-17th November, 2017 at BU, West Bengal, Animal science and Fishery section as Poster Presentation.
15. Roy, N. (2017). Life Table and Economic Threshold Concept for Ecological Management of Bihar Hairy Caterpillar on Jute. Not presented in: 2nd Regional Science & Technology Congress-2017, 16-17th November, 2017 at BU, West Bengal, Environment section as Oral Presentation.
16. Dutta S. and Roy N. (2017). Life Table of a Major Pest *Scipophaga incertulus* (Walker) Presented in: International Science Seminar on Science: Past, Present and Future; Organised by Syamsundar College & Indian Chemical Society on 12th December 2017 as Oral Presentation.
17. Dutta S. and Roy N. (2017). Population Dynamics for Triple-E Sustainable Management of a Major Pest, *Leptocorisa acuta* (Thunb.), Presented in: 19th Odisha Biggyan “O” Paribesh Congress (OBPC) -2017, 25-26th November, 2017 at KIIT University, Bhubaneswar, India, Biological Sciences as Poster Presentation.
18. Dutta S. and Roy N. (2017). Population Dynamics and Ecological Management of a Major Pest, *Leptocorisa acuta* (Thunb.). Presented in: 2nd Regional Science & Technology Congress-2017, 14-15th December, 2017 at KU (Southern Region), West Bengal, Agriculture Science as Poster Presentation.
19. Dutta S. and Roy N. (2017). Population dynamics of a Major pest of *Scipophaga incertulus*. Presented in: 2nd Regional Science & Technology Congress-2017, 16-17th November, 2017 at BU (Western Region), West Bengal, Agriculture Science as Poster Presentation.
20. Roy, N. (2017). A Classical Bio-control Agent *Altica cyanea* Weber for Ecological Management of Rice Field Weed, *Ludwigia spp.* Presented in: 2nd Regional Science & Technology Congress-2017, 14-15th December, 2017 at KU, West Bengal, Agriculture Science as Oral Presentation.
21. Dutta S. and Roy N. (2018). Life table and ecological management of rice black bug, *Scotinophara coarctata*. Presented in: 3rd Regional Science & Technology Congress-2018, 12-13th December, 2018 at DEC (Northern Region), West Bengal, Agricultural Science as Oral Presentation.
22. Dutta S. and Roy N. (2018). Population dynamics and ecological management of rice brown planthopper, *Nilaparvata lugens* (Stal). Presented in: 3rd Regional Science & Technology Congress-2018, 18-19th December, 2018 at BGC (Southern Region), West Bengal, Agricultural Science as Oral Presentation.
23. Dutta S. and Roy N. (2018). Population dynamics based ecological management of rice green leafhopper, *Nephotettix nigropictus* Stal. Presented in: 3rd Regional Science & Technology Congress-2018, 20-21st December, 2018 at SKBU (Western Region), West Bengal, Agricultural Science as Oral Presentation.

24. Roy, N. (2018). E³ Strategy for Ecological Management of Bihar Hairy Caterpillar of *Diacrisia casignetum* Kollar on White Jute. Presented in: 3rd Regional Science & Technology Congress-2018, 18-19th December, 2018 at BGC (Southern Region), West Bengal, Animal Science as Poster Presentation.
25. Roy, N. (2018). E³ Strategy Based Triple-E Sustainable Management of *Diacrisia casignetum* Kollar on two types of Jute. Presented in: 3rd Regional Science & Technology Congress-2018, 20-21st December, 2018 at SKBU (Western Region), West Bengal, Environmental Science as Oral Presentation.
26. Dutta S. and Roy N. (2019). Population dynamics based ecological management of rice green leafhopper, *Chilo polychrysus* (Meyrick) Presented in: 4th Regional Science & Technology Congress-2019, 13-14th December, 2019 at BU (Western Region), West Bengal, Animal Science as Poster Presentation.
27. Roy N. (2022). Climate Smart Agriculture of Sesame through Trap Crop Selection and Ecological Management of *Spilosoma obliqua* Walker. Presented in: 5th Regional Science & Technology Congress-2022, 6-7th January, 2022 at BU, West Bengal. EN-30 Oral Presentation.
28. Neha Chowdhury, Sarmila Pal and Nayan Roy (2024) Bionomics and management strategies of a stored grain pest, *Sitotroga cerealella* (Olivier) (Lepidoptera: Gelechiidae). International seminar on 'Bio-Resources: Use and Sustainable Management' organized by department of Botany, Maharajadhiraj Uday Cahand women's college, Burdwan, In collaboration with Anthropological survey of India, 9-10 February, 2024, MUCWC/IS/OP-3, Page-10.
29. Dutta S., Hossain A. and Roy N. (2024). Semiochemical based management of Gandhi bug, *Leptocorisa acuta* (Thunb. 1783) (Hemiptera: Alydidae). Presented in: National level seminar from Genome to Organism Part III on 27-28th Feb., 2024 [Dutta PH Zoo Purulia (2)]. Sponsored by West Bengal Biodiversity Board: Organized by Department of Zoology in association with Department of Botany, SKBU, Purulia-723104.
30. Neha Chowdhury, Sarmila Pal and Nayan Roy (2025). **Angoumois grain moth, *Sitotroga cerealella* (Olivier): Bioecology and Management.** Presented at the **7th Regional Science and Technology Congress 2024-25 (Region-3)**, scheduled to be held on **January 10-11, 2025**, at **Rampurhat College, Rampurhat, West Bengal.**
31. Bratatee Sardar and Nayan Roy (2025). **Influence of host diversity on the ecology and control of the Oriental fruit fly *Bactrocera dorsalis* (Hendel) (Diptera: Tephritidae).** Presented at the **7th Regional Science and Technology Congress 2024-25 (Region-3)**, scheduled to be held on **January 10-11, 2025**, at **Rampurhat College, Rampurhat, West Bengal.**

❖ *Seminar, Conference, Symposium and Workshop Attained:*

1. Workshop on Methylene blue reductase test & acid-fast staining on February 28, 2007; Department of Zoology, University of Burdwan.
2. International conference on frontier of mathematics and applications on January 16-18, 2008; Department of Mathematics, University of Burdwan.
3. 16th West Bengal State Science & Technology Congress, 28th February-1st March, 2009 at University of Burdwan.
4. UGC sponsored state-level seminar on Application of spectroscopy: atomic to molecular systems on March 20-21, 2009 at Department of chemistry, Vivekananda mahavidyalaya, Burdwan.

5. International seminar on biological thoughts: micro to the macro on February 9, 2010 in Department of Zoology, University of Calcutta.
6. National seminar on recent trends in biotechnology on 11-12 March, 2010 Organized by the Department of Biotechnology, University of Burdwan, Burdwan.
7. Golden Jubilee International Seminar on “Researches in Zoology-Basic and Applied” on March 17-19 in Department of Zoology, University of Burdwan, Burdwan.
8. National seminar cum exposition on modern microscopes and their applications on 08-09 April, 2010 in university science instrumentation centre, University of Burdwan, Burdwan.
9. UGC sponsored national seminar on Resurgent vector-borne diseases and climate change: a threat to mankind on 15th & 16th December, 2010 in Department of Zoology, Maharajadhiraj Uday Chand women’s college, Burdwan, West Bengal.
10. UGC sponsored Two-day international seminar on Global warming on 23-24 November, 2011 in Burdwan Raj College, Burdwan.
11. UGC sponsored national seminar on women & society in colonial India: debates and Discourses on 29-30 November, 2011 in Department of History, Maharajadhiraj Uday Chand women’s college, Burdwan, West Bengal.
12. UGC sponsored national seminar on Challenges of biology in the 21st century on 1st-2nd December, 2011 in Department of Botany, Maharajadhiraj Uday Chand women’s college, Burdwan, West Bengal.
13. National seminar on Application of statistics in industry, social and biomedical sciences on 30th March, 2012 in the Department of Statistics, University of Burdwan.
14. National seminar on Ecology, Environment and Development (NASEED-2013) on 25-27th January, 2013 in the P. G. Department of Environmental Sciences, Sambalpur University, Jyoti Vihar-768 019, Odisha (India).
15. UGC-DRS Seminar on “Bioprospecting of Natural Products” held on 05 and 06 th December, 2013 in Department of Zoology, University of Burdwan, Burdwan.
16. UGC sponsored national seminar on Frontier in Chemistry on 4th and 5th December, 2013 in Department of Chemistry, Maharajadhiraj Uday Chand women’s college, Burdwan, West Bengal.
17. International symposium on combating climate change in C40 megacities on 22nd April, 2015 at Kolkata organized by SAFE and others.
18. “Bird Photography Workshop-2016” on January 12 to 14, 2016, organized by Nature Club (CANOPY), Bejoy Narayan Mahavidyalaya in association with WWF; Itachuna, Hooghly.
19. 23rd West Bengal State Science & Technology Congress, 28-29th February, 2016 at Presidency University, Kolkata.
20. 1st Regional Science & Technology Congress-2016, 7-8th November, 2016 at Bankura Christian College, Bankura, in Burdwan Division, West Bengal.
21. 1st Regional Science & Technology Congress-2016, 13-14th November, 2016 at NIRRT, Kolkata, in Presidency Division, West Bengal.
22. UGC-SAP sponsored national seminar on Effect of Climate Change on Faunal Diversity, on 27th Feb 2017, organized by Department of Zoology, University of Kalyani, Kalyani, West Bengal.
23. 2nd Regional Science & Technology Congress-2017, 16-17th November, 2017 at BU, West Bengal.
24. 2nd Regional Science & Technology Congress-2017, 16-17th November, 2017 at BU, West Bengal.
25. 19th OBPC -2017, 25-26th November, 2017 at KIIT University, Bhubaneswar, India.

26. 2nd Regional Science & Technology Congress-2017, 14-15th December, 2017 at KU, West Bengal.
27. 2nd Regional Science & Technology Congress-2017, 14-15th December, 2017 at KU, West Bengal.
32. 3rd Regional Science & Technology Congress-2018, 18-19th December, 2018 at BGC (Southern Region), West Bengal.
33. 3rd Regional Science & Technology Congress-2018, 20-21st December, 2018 at SKBU (Western Region), West Bengal.
34. 4th Regional Science & Technology Congress-2018, 23-24th December, 2019 at MAKAUT, West Bengal.
35. 5th Regional Science & Technology Congress-2022, 6-7th January, 2022 at BU, West Bengal.

❖ **Webinar attended:**

1. National webinar on “Copyright: unravelling the confusions of academe” organized by Rabindra Mahavidyalaya, West Bengal, India, on 10th June, 2020.
2. National webinar on “Post Pandemic Teaching-Learning Method: A Paradigm Shift” organized by Bhairab Ganguly College and Sree Chaitanya College, West Bengal, India, on 14th June, 2020.
3. National webinar on “Struggle for coexistence: Effect of Anthropocene non-human life forms” organized by Sonamukhi College, West Bengal, India, on 20th June, 2020.
4. National webinar on “Covid-19: Facts and Facets” organized by Sarat Centenary College, West Bengal, India, on 26th June, 2020.
5. National webinar on “Walk through the Covid-19 Pandemic: viewing by the Lenses of Researchers and Commoners” organized by Rabindra Mahavidyalaya, West Bengal, India, on 26-27th June, 2020.
6. National webinar on “COVID 19: Immuno-informatics for disease diagnosis and next generation vaccine designing” organized by Bankura Sammilani College, West Bengal, India, on 29th June, 2020.
7. National webinar on “Reflection of Bangladesh Liberation War, 1971” organized by Probhu Jagabandhu College, West Bengal, India, on 30th June, 2020.
8. International webinar on “Covid-19: Pandemic.....” organized by SSLNT Mahila Mahavidyalaya, Jharkhand, India, on 22nd June, 2020.
9. National webinar on “Current Challenges in Biology” organized by Rabindra Mahavidyalaya (RMV), Champadanga, West Bengal, India, on 1-3rd and 10th July, 2020.
10. National webinar on “Recent Advance in Biological Research” organized by Midnapore City College, West Bengal, India, on 2nd September, 2020.
11. National webinar on “Public Policy and Governance in Indian Context” organized by Ranaghat College West Bengal, India, on 3rd August, 2020.
12. National webinar on “Impact of Covid-19 on Indian Economy.....” organized by Sonamukhi College, Bankura, West Bengal, India, on 3rd August, 2020.
13. National webinar on “Dengue and its Prevention” organized by Sammilani College, Bankura, West Bengal, India, 4th August, 2020.
14. National webinar on “Impact of virus and vector.....” organized by Krishnanagar Govt. College, West Bengal, India, on 5th August, 2020.
15. National webinar on “Bacterial Concrete - A Journey from Greenhouse to Green Home” organized by Shyampur Siddheswari Mahavidyalaya, Howrah, West Bengal, India, on 5th August, 2020.
16. National webinar on “Role of guidance and career.....” organized by Mankar College, West Bengal, India, on 5-6th August, 2020.
17. National webinar on “Mental Stability in Covid-19 Pandemic.....” organized by Prabhu Jagatbandhu College, West Bengal, India, on 6th August, 2020.
18. National webinar on “Climate Change & Human Health” organized by Ananda Chandra College, West Bengal, India, on 7th August, 2020.
19. National webinar on “Gender, Epidemics and health.....” organized by K. K. Das College, West Bengal, India, on 7th August, 2020.
20. National webinar on “Covid-19: Molecular aspects and its possible managements” organized by Kalna College, West Bengal, India, on 7-8th August, 2020.

21. National webinar on “Organic Living” Organized by Durga Mahavidyalaya Raipur, West Bengal, India, on 8th August, 2020.
22. National webinar on “Understanding of some philosophical.....” organized by Rishi Bankim Chandra College for Women, West Bengal, India, on 8th August, 2020.
23. National webinar on “Misinformation, fake news.....” organized by Derozio Memorial College, West Bengal, India, on 10th July, 2020.
24. National webinar on “Disaster Management & Communication: Challenges & Opportunities” Organized By Ramakrishna Sarada Mission Vivekananda Vidyabhavan, West Bengal, India, on 10th August, 2020.
25. National webinar on “Administrative Affairs Thrusting Upon Promotion of College Teachers / Librarians Under Cas” organized by City College, West Bengal, India, on 11th July, 2020.
26. National webinar on “Glimpses of Bengal Rural Society: The Colonial Experiences” organized by Prasanta Chandra Mahalanobis Mahavidyalaya, West Bengal, India, on 14th July, 2020.
27. National webinar on “Indian Economic Policy and Populism” organized by MUC Women’s College, Burdwan, West Bengal, India, on 14th August, 2020.
28. International webinar on “Recent Advances in Biological Sciences” organized by Oriental Institute of Science and Technology, West Bengal, India, on 7-8th August, 2020.
29. National webinar on “Digital Transformation in Higher Education” organized by Asannagar Madan Mohan Tarkalankar College, West Bengal, India, on 17th July, 2020.
30. National webinar on “Social Constrains in Pandemic Situation” organized by Amdanga J.K. Mahavidyalaya, West Bengal, India, on 18th July, 2020.
31. International webinar on “COVID 19: The Biggest Threat.....” organized by Netaji Mahavidyalaya, Arambagh, West Bengal, India, on 18-19th July, 2020.
32. National webinar on “Awareness programme on the use of online E-resources” organized by BRM Govt. Law College, Guwahati, India, on 19th August, 2020.
33. National webinar on “Role of medicinal plants.....” organized by Kolhan University, Jharkhand, India, on 20th July, 2020.
34. National webinar on “Care Women’s Health for A Brighter Future” organized by MUC Women’s College, Burdwan, West Bengal, India, on 22nd July, 2020.
35. National webinar on “Psychological and social.....” organized by Dum Dum Motijheel College, West Bengal, India, on 22nd August, 2020.
36. National webinar on “Nurturing Innovations: From Academia to Society” organized by Gour Mahavidyalaya, West Bengal, India, on 22nd August, 2020.
37. National webinar on “Foundation of Ode with A Case Study” organized by City College, West Bengal, India, on 24th July, 2020.
38. National webinar on “Food for life: Nutrition strategies to prevent diseases” organized by Hooghly Women’s College, West Bengal, India, on 24-25th July, 2020.
39. National webinar on “Recent Advances in Chemical Sciences” organized by Hooghly Women’s College, West Bengal, India, on 25-26th August, 2020.
40. National webinar on “Impact of Covid-19.....” organized by Victoria Institution (College), West Bengal, India, on 26th July, 2020.
41. International webinar on “The eve of world nature conservation day” organized by Gushkara Mahavidyalaya, West Bengal, India, on 28th July, 2020.
42. National Quiz contest on “NSS & NYKS” organized by Bankura Sammilani College, West Bengal, India, on 28-31st August, 2020.
43. Global webinar series on “Environment and Emergencies In The Face Of Covid-19: What You Need To Know In A Pandemic Context” organized by UNEP, India, on 29th July, 2020.
44. National webinar on “Astronomy in Radio Wavelengths” organized by Midnapore City College, West Bengal, India, on 29th August, 2020.
45. National webinar on “COVID 19: The Science and Impact of it on the Society” organized by MUC Women’s College, Burdwan, West Bengal, India, on 29th August, 2020.
46. International webinar on “CHEMSPIRATION 2020” organized by B.B. College, West Bengal, India, on 30th July, 2020.
47. Ten Days Faculty Development Programme (FDP) on “Museum and Archives, Art and Architecture and Tourism” organized by Probhu Jagabandhu College, West Bengal, India, on 10-19th July, 2020.
48. Participated in “Spit free India Movement” organized by EPSON, India, on July-August, 2020.
49. National webinar on “Recent Advancement in Biological Research” organized by Midnapore City College, West Bengal, India, on 2nd September, 2020.
50. National webinar on “Covid-19 and Social Stigma: Psychological Quest and Administrative Challenges” organized by Govt. General Degree College, Singur, West Bengal, India, on 27th August, 2020 and 2nd September, 2020.

51. National webinar on “Mosquito Borne Diseases, Their Control and Perspectives of Environmental Health” organized by MUC Women’s College, Burdwan, West Bengal, India, on 4th September, 2020.
52. National webinar on “Emerging Trends in.....Concerns” organized by Galsi Mahavidyalaya, Burdwan, West Bengal, India, on 7th September, 2020.
53. National webinar on “Recent Trends and Developments in Chemistry” organized by Kalna College, Burdwan, West Bengal, India, on 10th September, 2020.
54. National webinar on “Tribal Democratic Movements and Research Methodology” organized by Department of Political Science, MUC Women’s College, Burdwan, West Bengal, India, on 20th September, 2020.
55. National webinar on “Women, Healthcare And Pandemics In India: Lessons From The Past” organized by Maharani Kasiswari College, West Bengal, India, on 20th September, 2020.
56. International webinar on “A modern outlook in Molecular Biology and Environmental Modelling – Now and Beyond” organized by Department of Zoology, Government General Degree College, Mohanpur, West Bengal, India, on 20th September, 2020.
57. International webinar on “*Coxiella sp.* And Lysosome.....” organized by Panchakot Mahavidyalaya, Purulia, West Bengal, India, on 22nd September, 2020.
58. International webinar on “National education policy.....” organized by Gangadharpur Sikshan Mandir, Howrah, West Bengal, India, on 25th September, 2020.
59. International webinar on “The Search for King Solomon’s Ring in the New Age of Behavioral Neuroscience” organized by Department of Zoology, Michael Madhusudan Memorial College, Durgapur on 4th October, 2020.
60. National webinar on “World Environment Day 2021” organized by Eco Club & IQAC, Bankura Sammilani College, West Bengal, dated 05.06.2021.
61. National webinar on “Ecosystem Restoration: Striving Towards Sustainability” organized by the Department of Geography under the aegis of Internal Quality Assurance Cell, Banwarilal Bhalotia College, Asansol, West Bengal, India, held on 5th June, 2021.
62. Two-day state level webinar on “Cas, Wbhs & Other Service Benefits for College Employees” organized by Department of Zoology, Women’s College, Kolkata, in collaboration with Bhairab Ganguly College, Kolkata on 8th and 9th June, 2021.
63. State level webinar on “Gateway to Career Diversification and Prospects” organized by Department of Zoology, Krishna Chandra College, Hetampur, Birbhum under the Strengthening Component of DBT-STAR College Scheme, Dept of Biotechnology, Ministry of Science and Technology, Govt of India on 13th July, 2021.
64. National webinar on “Snake, Superstition and Science” organized by Department of Zoology, Bijoy Narayan Mahavidyalaya, West Bengal, India, held on 2nd August, 2021.
65. State Level webinar on “West Bengal Government Health Scheme” organized by Govt Degree College, Chapra, West Bengal, India, held on 8th September, 2021.
66. One-day International Workshop on “Multiple debatable issues..... Sustainable Development” organized by Chandernagore College, Hooghly, West Bengal, India, held on 26th September, 2021.
67. International Webinar on “Understanding the basics of making the other planets habitable for living organisms- by visiting inside the central campus of ISU, France” Organized by Department of Botany in association with Department of Physics & IQAC Jhargram Raj College, Govt. of West Bengal, held on 19th January, 2022.
68. One-day International Webinar on “Contribution of Women Scientists in Academia & Industry” organized by the department of Chemistry in collaboration with Internal Quality Assurance Cell (IQAC), Ghatal Rabindra Satabarsiki Mahavidyalaya, held on 8th March 2022 (Tuesday 10 AM to 3 PM).
69. National webinar on Sustainability in forest ecosystem, biodiversity and future scenario on the eve of ‘*International Day of Forests*’ organized by Sree Chaitanya Mahavidyalaya, West Bengal, India, held on 21st March, 2022.
70. One Day National Level Webinar on “In-situ Depth profiling for radon concentration contained by underground soil gas: Experimental set-up and Measurement protocols” organized by Kalna College, Department of Chemistry on 30.08.2022.

Other Information:

Leisure activities: Popularization of science, fighting against superstition and animal cruelty, photography and close look to the nature.

Favorite Journals: Journal of chemical ecology, Journal of insect science, Journal of insect physiology, Journal of nanotechnology and application, Journal of allelopathy, Journal of plant-insect interaction, etc.

Favorite Books: Ecology, Chemical Ecology, Insect Ecology, Insect Demography, Behavioral ecology, Principles of Biochemistry, Principles of Genetics, Embryology, Evolution, Physiology, etc.

About me: I have my Ph.D. in Zoology, university of Burdwan, under the supervision of Dr. Anandamay Barik (Assistant Professor) and presently appointed as an Assistant Professor, Department of Zoology, M.U.C. Women’s College, Burdwan, W.B., India. In due

course of my research work, I became well acquainted with laboratory techniques on phytochemical analysis including isolation, chemical characterization and estimation as well as assessing their role in plant-insect interactions. I am equally efficient in field work for find out the biodiversity, pest biology including their behavioral ecology, allelopathy and green nanotechnology. I have a standing interest in how plants and insects interact and how they have affected each other in their growth and development. Herbivorous insects and green plants together make up over half of all known biodiversity. I am trying to find the range of behaviors shown by insects to unravel the complexity of their interactions with plants. The demographic study and nutritional ecology of the insect pest may help their ecological management in future. The potential for studying these topics in India is enormous toward applied issues for pest control as well as for fundamental ecology. I have extensively studied the top-down and bottom-up regulation of some crop plant by their defoliators. I am also working on the allelopathic effects of plants and synthesize metallic nanoparticles in green synthesis approach. Recently, I am very much concerned the insect pest management rather their control through the use of demography and nutritional ecology along with trap cropping system through climate smart pest management (CSPM) strategy, a branch of Integrated Pest Management (IPM) for sustainable CSA and human welfare.

Signature



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