Arijit Gangopadhyay (Ganguly) [M.Sc, Ph.D, FSEZR]

Curriculum vitae

Institutional address:
Dept. of Zoology
Achhruram Memorial College
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Home address:
Simantapalli, Santiniketan-731235, Dist. Birbhum, West Bengal, India

DOB: 06/04/1982

About me:

I was born and brought up in the serene environment of Santiniketan, West Bengal, India; the abode of Gurudev Rabindranath Tagore, the first Nobel Laureate from Asia. I have completed my studies from Visva Bharati University, India. After receiving PhD, I joined Rajiv Gandhi University, Arunachal Pradesh, India as a postdoctoral Research Associate where for the first time I got the opportunity to teach postgraduate students, and guide PhD students. Presently I am working as an Assistant Professor of Zoology in the Achhruram Memorial College of the beautiful district Purulia in West Bengal, India. Since 2008, I am involved in doing research in the field of utilisation of insects as food for livestock. I am also interested in biodiversity and conservation of insects and indigenous ornamental fishes.

Teaching interests:

- Invertebrates
- Genetics
- Animal Physiology
- Evolution
- Developmental Biology
- Biostatistics

Research Interests:

- Utilisation of insects as bio-resource (Food and medicine) for human and livestock
- Biodiversity and conservation of insects and their habitat
- Biodiversity, conservation and artificial propagation of indigenous ornamental fishes

Employment:

- **July, 2015** –: **Assistant Professor**, Department of Zoology, Achhruram Memorial College, Jhalda, Dist. Purulia, West Bengal.

- **June, 2014 – July 2015**: **Post Doctoral Research Associate** (RA) in a DBT sponsored RGU-VU Twinning Program, in Dept. of Zoology, Rajiv Gandhi University, Arunachal Pradesh.
  Project Title: "*Resource mapping, conservation and artificial propagation of fish germplasm in Arunachal Pradesh with emphasis on promotion of aquarium fish trade*"

- **Sep. 2013 – Feb. 2014**: **Guest Lecturer**, Department of Zoology, Krishna Chandra college, Hetampur, Dt. Birbhum, West Bengal, India.

Academic record:

- **June, 2013**: **CSIR-UGC National Eligibility Test** (NET) in Life Sciences
- **2013: PhD in Zoology**, Visva Bharati University, India
  Thesis title: *Nutritional evaluation of acridids (Acrididae: Orthoptera) in supplementary diets for ornamental fish*
- **2006: 1st class M.Sc**. with Environmental Biology special paper, Visva Bharati University, India
- **2004**: **1st class B.Sc. (Hons)** in Zoology, Visva Bharati University, India
- **2001: 1st class Pre Degree Examination** in sciences, Visva Bharati University, India
- **1999: 1st class School Certificate Examinations**, Visva Bharati University, India

Fellowships:

- **Feb, 2008 – Jan, 2011:** University fellowship for pursuing PhD, provided by the University Grants Commission (UGC), Govt. of India
- **June, 2014 — July, 2015:** Department of Biotechnology (DBT) fellowship for Post Doctoral Research Associate (RA) in RGU-VU Twining Program

Awards:

- Fellow of the Society of Entomology and Zoology Research **(FSEZR)**

Research Projects:

- Can Kapton tape covering minimise the adverse effects of LED light on the behavioural pattern and life history of flower visiting Indian grasshoppers? (Funded by the Orthopterists' Society)

Technical skills:

(A)Ecological studies:

- Experience in extensive field studies regarding ecology of acridid grasshoppers in forest, grassland and cropland areas of Santiniketan, West Bengal, India.
- Collection and sampling by quadrat method.
- Sampling of hill stream fishes by electrofishing technique.

(B)Rearing of grasshoppers and fishes:

- Rearing of various acridid species in laboratory for different biological and ecological studies.

- Rearing of black mollies in laboratory to study the effects of formulated diets on different biological and reproductive traits.
- Rearing hill stream rheophilic potential ornamental fishes of Eastern Himalayan Hotspot.

(C)Nutrient analysis:

- Estimation of protein by Kjeldahl method.
- Estimation of fat by Soxhlet apparatus.
- Estimation of crude fiber by chemical method of acid and alkali digestion.
- Estimation of ash content by Muffle furnace.

(D)Basic statistics and softwares used:

- Paired t test and unpaired t test.
- One way, two way and multi way Analysis of variance (ANOVA) and Multivariate Analysis of variance (MANOVA) using Microsoft excel and S Plus version 4.0.
- Estimation of biodiversity indices along with PERMANOVA and SIMPER using PAST, version 3.02.
- Ordination analysis (CCA, PCA etc.)

Other research experience:

- Impact of environmental pollutants on orthopteroid entomofauna

Conferences/workshops attended:

(A) Overseas:

1) 10th International congress of Orthopterology, Antalya, Turkey, Jun. 2009

(B) In India:

2) National seminar on environment and development, Kolkata, India, February, 2008

3) National seminar on recent trends in exploration, exploitation and conservation of biodiversity, Darjeeling, India June, 2008

4) Golden jubilee international seminar on researches in Zoology-Basic and applied, Burdwan, India, March, 2010

5) Application of statistical techniques in the natural sciences, Kolkata, December, 2010

6) National workshop on freshwater fish taxonomy, Manipur, September, 2014

7) International conference of Ecology and Environment, Kolkata, March, 2015

8) Exploring the modern approach in biological science: From genome to organism, Purulia, November, 2015

9) Curriculum, pedagogy and learning: Quest for a new paradeigm, Chadernagore, March, 2017

Invited Lectures:

1) Prospects and problems of ornamental fish culture in Arunachal Pradesh. Invited by Fisheries Department, Govt. of Arunachal Pradesh. Balijan, Arunachal Pradesh, November, 2014

2) Fish nutrition with special reference to food insect resources. Invited by Directorate of Cold water Fisheries Research (DCFR), Bhimtal and Rajiv Gandhi University, Arunachal Pradesh. RGU campus, Arunachal Pradesh, January, 2015

3) Potential wild ornamental fishes of Arunachal rivers. Invited by Fisheries Department, Govt. of Arunachal Pradesh. Yupia, Arunachal Pradesh, February, 2015

4) Assessment of ecosystem health of the water reservoirs and surrounding areas in Bagmundi, Purulia with some notes on acridids as indicators of disturbance. In "Two days' workshop cum national seminar on Trends in modern biology: Techniques and applications" Hosted in Visva Bharati, 2019

5) Are cold LED grow lamps really that cool? An acridological perspective. In "National seminar on advancement in Biology in the 21st century". Hosted in Visva Bharati, February, 2020.

Independent thinking, leadership qualities, and capacity to transfer of knowledge:

- Teaching undergraduate students for more than three years
- Guided postgraduate students in conducting experiments and writing dissertation for more than one year
- Mentored PhD students to develop new ideas, design experiments and statistically deal with quantitative data for one year
- Preparation of manuscripts for all published papers in peer reviewed journals
- Delivered lectures as platform presentation in various national and international conferences

Co-curricular activities:

Being a student of Visva-Bharati University from my childhood, I have performed as a singer and actor in many official cultural programs of Visva-Bharati, also I have experience in organizing cultural programs and directing various dramas.

Referees:

Prof. Parimalendu Haldar (PhD Supervisor)
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Prof. Dipak Kr. Mandal (PhD Co-Supervisor)
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Prof. Santanu Ray (Teacher)
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Prof. Debangshu Narayan Das (RA project supervisor)
Department of Zoology
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Phone: 00913602278548/ 00913602278509 (Land)00919436220201 (Cell)
Email:debangshu.das@rgu.ac.in; dndas2011@gmail.com

Detailed List of Publications

As conference abstract

Overseas (10th International congress of Orthopterology— Antalya, Turkey):

1) Haldar, P., Malakar, C. and **Ganguly, A.** 2009. Mercury effects on the development and reproduction of *Oxya fuscovittata* (Marschall). Metaleptea: The newsletter of the Orthopterists' Society. 82.

2) **Ganguly A.,** Malakar, C and Haldar, P. 2009. Study on the nutritional ecology of *Oxya fuscovittata* to obtain a suitable food plant for their successful rearing. Metaleptea: The newsletter of the Orthopterists' Society. 122.

In India:

1) Chakravorty, R., **Ganguly, A** and Haldar, P. 2010. A review of the insect immune system and its importance. Golden jubilee international seminar: Researches in Zoology— Basic and applied. ISBN: 819077418-2. 104-105.

2) **Ganguly, A.,** Chakravorty, R., Mandal., D.K. and Haldar, P. 2010. Potential value of acridids as a low cost protein supplement for fish. Golden jubilee international seminar: Researches in Zoology— Basic and applied. ISBN: 819077418-2. 106-107.

Research publications in peer reviewed Indian journals

1) Anand, H., Das S., **Ganguly, A.,** Haldar,P. 2008. Biomass production of acridids as possible animal feed supplement. Journal of Environment and Sociobiology 5 (2): 181-190.

2) Das M, **Ganguly,A.,** Saha H and Haldar,P. 2008. Estimation of food consumption and growth of common acridid species (Orthoptera:Acrididae) in laboratory condition. Environment and Ecology. 26 (4C): 2252-2254.

3) Ganguly A and Das D. N. 2016. Gut anatomy and food preference of Aborichthys kempi: A potential ornamental stream loach from Arunachal Pradesh. Journal of Environment and Sociobiology 13 (1): 49-54.

Research publications in peer reviewed international journals

1) Anand H, **Ganguly A** and Haldar P. 2008. Potential value of Acridids as high protein supplement for poultry feed. International Journal of Poultry Science. 7 (7):722-725.

2) **Ganguly A,** Malakar C, Anand H, Das S, Das A, Haldar P. 2008. Scanning electron microscopy of egg-surface sculpturing of two common Indian short-horn grasshoppers (Orthoptera, Acrididae).Journal of Orthoptera Research. 17(1): 97-100.

3) Das M, **Ganguly A** and Haldar P. 2009. Space requirement for mass rearing of two common Indian acridid adults (Orthoptera:Acrididae) in laboratory condition. American-Eurasian Journal of Agricultural and Environmental Sciences. 6 (3): 313-316.

4) Malakar C, **Ganguly A** and Haldar P. 2009. Influence of cadmium on growth, survival and clutch size of a common Indian short horned grasshopper, *Oxya fuscovittata.* American-Eurasian Journal of Toxicologic Sciences. 1(1): 32-36.

5) Malakar C, **Ganguly A**, Sarkar A, Haldar P. 2009. Effects of mercury on development of *Oxya fuscovittata* (Marschall) (Orthoptera: Acrididae). Journal of Orthoptera Research. 18(2): 159-164.

6) Das M, **Ganguly A** and Haldar P. 2010. Nutrient analysis of grasshopper manure for soil fertility enhancement. American-Eurasian Journal of Agricultural and Environmental Sciences. 7(6): 671-675.

7) Ganguly A, Chakravorty R, Sarkar A and Haldar P. 2010. Johnsongrass [*Sorghum halepense* (L.) Pers.]: A potential food plant for attaining higher grasshopper biomass in acridid farms. Philippine Agricultural Scientist, 93 (3): 329-336. **SCI IF = 0.368**

8) Das M,**Ganguly A** and Haldar P. 2012. Determination of optimum temperature and photoperiod for mass production of *Oxya hyla hyla* (Serville). Turkish Journal of Zoology, 36(3): 329-339. **SCI IF = 0.585**

9) Das M, **Ganguly A** and Haldar P.2012. Effect of food plants on nutritional ecology of two acridids (Orthoptera: Acrididae) to provide alternative protein supplement for poultry. Turkish Journal of Zoology. 36(5): 699-718. **SCI IF = 0.585**

10) Das M, **Ganguly A** and Haldar P.2012.Annual biomass production of two acridids (Orthoptera: Acrididae) as alternative food for poultry. Spanish Journal of Agricultural Research. 10(3): 671-680. **SCI IF = 0.514**

11) **Ganguly A,** Chakravorty R, Das M, Gupta M, Mandal DK, Haldar P, Ramos-Elorduy J, Moreno JMP. 2013. A preliminary study on the estimation of nutrients and anti-nutrients in *Oedaleus abruptus* (Thunberg) (Orthoptera:Acrididae). International Journal of Nutrition and Metabolism. 5 (3): 50-56.

12) **Ganguly A,** Chakravorty R, Haldar P. 2013. Assessment of consumption, utilization and growth of *Oedaleus abruptus* (Thunberg) and *Spathosternum prasiniferum prasiniferum* (Walker) (Orthoptera: Acrididae) fed with various food plants in laboratory conditions. Annales de la Societe Entomologique de France. 49 (2): 160-171. **SCI IF = 0.539**

13) **Ganguly A,**Chakravorty R, Sarkar A, Mandal DK, Haldar P, et al. 2014. A Preliminary Study on *Oxya fuscovittata* (Marschall) as an Alternative Nutrient Supplement in the Diets of *Poecillia sphenops* (Valenciennes). PLoS ONE 9(11): e111848. doi:10.1371/journal.pone.0111848.**SCI IF = 3.534**

14) Saikia R, **Ganguly A**, Das T, Das DN. 2015. Suspended algal communities in high altitude rice wetlands of Apatani Plateau in Eastern Himalaya. Journal of Biodiversity and Environmental Sciences. 7 (1): 205-214.

15) Darshan A, Kachari A, Dutta R, **Ganguly A**, Das DN. 2016. *Amblyceps waikhomi*, a new species of catfish (Silutiformes:Amblycipitidae) from the Brahmaputra drainage of Arunachal Pradesh, India. PLoS ONE 11 (2): e0147283. Doi:10.1371/journal. pone.0147283. **SCI IF = 3.534**

16) Kumar R, Abujam SK, **Ganguly A,** Das DN. 2016. Fish and fisheries of Sinkin tributary with emphasis on the people's socio-economic dependence in Debang river basin of Arunachal Pradesh, India. Journal of Fisheries Sciences.com. 10 (2): 70-75.

17) Moreno JMPM and **Ganguly A.** 2016. Determination of fatty acid content in some edible insects of Mexico. Journal of Insect as Food and Feed. 2 (1): 37-42.

18) **Ganguly A,** Darshan A, Kumar R, Abujam SK, Das DN. 2018. Relative assessment of diversity of wild ornamental fishes sampled from two river basins of Arunachal Pradesh, India. Journal of Entomology and Zoology Studies 2018; 6(1): 686-690.

Book Chapter:

1) **Ganguly A,** Haldar P. 2018. Nutrients and Anti-nutrients Present in *Oxya fuscovittata* (Orthoptera: Acrididae): Looking beyond Proximate Composition. In: Entomology: Current status and Future Strategies. Astral International Pvt. Ltd. Ganguly A, Naskar K (Eds.), 215-226.

2) **Ganguly A.** 2019. Ornamental ichthyofauna and their food microarthropods in Dikrong river, Arunachal Pradesh in relation to aquarium fish trade. In: Research trends on fish and fisheries in mountain waters of eastern Himalayan region. Notion Press. Das DN, Abujam S, Singh AD (Eds.), 107-116.

Book Published:

1) **Ganguly A. 2017.** Aquarium feed: Grasshopper minilivestock. Astral International Pvt. Ltd. pp. 100.

Edited Book:

1) **Ganguly A**, Naskar K. 2018. *Entomology: Current status and Future Strategies.* Astral International Pvt. Ltd. pp. 274.