

DEPARTMENT OF ZOOLOGY



Dr. Hem Raj Surya

M.Sc., M.Phil., Ph.D., UGC- JRF, CSIR- JRF. SLET

ABOUT THE DEPARTMENT

The Department of Zoology, established in 2004 along with the commencement of science stream in the college. The department helps to train students to respond to the global challenges and the needs of the Indian society in particular, through education in the areas of General Biology, Invertebrate and Vertebrate Zoology; Animal Developmental Biology, Genetics, Evolutionary biology, Reproductive Biology, Applied Zoology, General Physiology and Insect Vectors and Diseases.

The faculty is well trained for both offline & online teaching mode and are regularly participating in Faculty Development Programs, National / International Seminar & Conferences in India and abroad. The faculty has published quality research work in journals & books of international fame and published many text books. The department has well equipped laboratory with all sophisticated instruments & chemicals need for the course practical work. Well maintained Zoology Museum in the department housing many specimens and models. There is a well kept upgraded departmental library, faculty room for staff and smart class rooms with personal computers & power point projectors. Active learning strategies such as tutorial classes, group discussions, assignments, presentations and seminars are emphasized. Learning in the field is accomplished through regular educational excursions specially for the skill enhancement courses in zoology like apiculture, sericulture and aquaculture which gives an insight to students regarding various career options through zoology. Recognizing the essential roles of science and biology in the lives of citizens today and tomorrow, we emphasize biological literacy in our teaching and outreach programs.

VISION


The department promote a broad knowledge about the biology of animals, evolution and their environments. The holistic development of the students and inculcate the core values of life, science education, respect for nature and concern for ethical values among students by developing scientific attitude. It will make them able to contribute effectively for their welfare and society in this dynamic era.

MISSION

Our mission is to offer high quality education dedicated to building minds with social and moral responsibility. We are committed to educating the students beyond the confines of a class room to make them better individuals and develop their personalities, enabling them to face the challenges of the modern world.

OBJECTIVES

- To develop research aptitude and a scientific advancement.
- To facilitate higher education and research in Zoology.
- Conducting educational tour to giving exposure to the students by visiting Animal park, dairy industry, Sericulture, fisheries, poultry forms, zoo etc.
- To motivate students to conduct seminars, workshops on the topics included in the curriculum. It will help in achieving academic excellence and exposure.
- To provide a comprehensive training in theoretical and practical Zoology and Environmental Biology to students.
- To equip students with adequate practical skills that will enable them function productively in society.
- To produce leadership in science and technology.
- To sensitize human society for animal welfare, conservation and protection of biodiversity.
- To provide quality education in offering skill based programs in the field of apiculture, aquaculture, sericulture and medical diagnostics and motivate the students for self-employment in applied branches in Zoology.

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Contact info Mobile: 9816095440 Email: suryahemraj@gmail.com	Teaching Experience : 14 Years Specialization in Entomology
Research Publications:	
<ol style="list-style-type: none"> 1. Mattu, V.K., Raj, H. and Thakur, M. L. (2012). Foraging behavior of honeybees on apple crop and its variation with altitude in Shimla hills of Western Himalaya, India. <i>Int. J. of Sci. and Nat.</i> 3(2): 296-301. ISSN 2229 – 6441 http://www.scienceandnature.org/IJSN_Vol3(2)2012.php 2. Thakur, M. L., Mattu, V. K., Raj, H. etc. (2010). Avifauna of Arki Hills, Solan (Himachal Pradesh), India. <i>Indian Birds</i> 5(6): 162-166. ISSN 0973 – 1407 https://indianbirds.in/pdfs/IB_5.6.162-166.pdf 3. Raj, H., Mattu, V. K. and Thakur, M. L. (2012). Pollinator diversity and relative abundance of insect visitors on apple crop in Shimla hills of Western Himalaya, India. <i>Int. J. of Sci. and Nat.</i> 3(3): 507-513. ISSN 2229 – 6441 http://www.scienceandnature.org/IJSN_Vol3(3)2012.php 4. Mattu, V.K. and Raj, H. (2013). Quantitative and qualitative effect of honeybee pollination on apple crop in Shimla hills of Western Himalaya, India. <i>Int. J. of advance Bio. Res.</i> 3(3) 2013: 354-359. ISSN 2250 – 3560 http://www.scienceandnature.org/IJABR_Vol3(3)2013.php 5. Raj, H. and Mattu V. K. (2014). Diversity and Distribution of Insect Pollinators on Various Temperate Fruit Crops in Himachal Himalaya, India. <i>International Journal of Science and Nature</i>, 5 (4): 626-631. ISSN 2229 – 6441 http://www.scienceandnature.org/IJSN_Vol5(4)2014.php 6. Raj, H. and Mattu V.K. (2016). Bee Pollination and Pollinator Friendly Management Practices in Himachal Himalaya, India. <i>Global J. Bio. & Biotech.</i>, 5 (1): 88-94. http://www.scienceandnature.org/GJBB_Vol5(1)2016.php ISSN 2278 – 9103, COSMOS IF- 4.125 (2015) 7. Raj, H. (2017). Various threatening factors to the biodiversity of insect pollinators in Himachal Himalaya, India. <i>IJSAR</i>, 4(7): 22-35. ISSN 2394 – 2401 https://www.ij sar.in/archiveslist.aspx?id=35 8. Raj, H. (2021). Challenges Faced by Farmers in Beekeeping and Bee Pollination in Himachal Himalaya, India. <i>Asian Journal of Advances in Research</i>. 4(1): 890-897. https://www.mbimph.com/index.php/AJOAIR/article/view/2405 9. Raj, H. (2021). Farmers' Perception on Insect Pollinators Decline and Conservation Methods in Himachal Himalaya, India. <i>Journal of Applied Life Sciences</i> 	

International, 24(12), 29-38.

DOI: 10.9734/jalsi/2021/v24i1230276

10. Raj, H. (2024). Economic Importance of Honey Bees and Farmers' Awareness about Beehive Products in Shimla Hills of Himachal Pradesh, India. In Press: *Utter Pradesh Journal of Zoology*

Book Publications:

1. **Medical Diagnostics**(2018): UG (SEC) 3rd Semester in HP University. Publication: *S. Vinesh& Co., Jalandhar.*
2. **Sericulture**(2018): UG (SEC) 5th Semester in HP University Jammu University. Publication: *S. Vinesh& Co., Jalandhar.*
3. **Apiculture**(2018): UG (SEC) 4th Semester in HP University Jammu University. Publication: *S. Dinesh & Co., Jalandhar.*
4. **Aquarium Fish Keeping** (2019): UG (SEC) 6th Semester in HP University. Publication: *S. Vinesh& Co., Jalandhar.*
5. **Insects, Vectors and Diseases** (2020): UG (DSE) 6th Semester in HP University. Publication: *S. Vinesh& Co., Jalandhar.*
6. **Aquatic Biology** (2021): UG (DSE) 3rd year in HP University. Publication: *S. Vinesh& Co., Jalandhar.*
7. **Biomolecules & Physiology of life sustaining systems** (2022): Practical manual for B.Sc. Ist Sem. Jammu University. Publication: *S. Vinesh& Co., Jalandhar.*
8. **Basics in Cell Biology** (2023): Practical manual for B.Sc. 2nd Sem. Jammu University. Publication: *S. Vinesh& Co., Jalandhar.*
9. **Ornamental fish and aquarium making II**(2023): Minor paper UG-2nd Semester Cluster University Jammu. Publication: *S. Vinesh& Co., Jalandhar.*
10. **Ornamental fish and aquarium making I**(2023): Minor paper UG-1st Semester Cluster University Jammu. Publication: *S. Vinesh& Co., Jalandhar.*
11. **Environmental Biology/ Ecology and Environment-** (2023): Practical manual for B.Sc. 3rd sem. (Major/Minor). University of Jammu. Publication: *S. Vinesh& Co., Jalandhar.*
12. **Evolutionary Biology** (2023): Practical manual for B.Sc. 3rd sem. University of Jammu. Publication: *S. Vinesh& Co., Jalandhar.*
13. **Ornamental fish and aquarium making III**(2023): Minor paper UG-3rd Semester Cluster University Jammu. Publication: *S. Vinesh& Co., Jalandhar.*
14. **Diversity of Non- Chordata and Principle of Genetics.**(2024): Practical Manual UG-2nd semester(Major). Cluster University Jammu. In Press:Publication: *S. Vinesh& Co., Jalandhar.*

Conferences/ Seminars/ Workshops :

1. Relative abundance and foraging ecology of *Apis cerana* and *Apis mellifera* in pollinating pear flowers. International Workshop on Integrated Beekeeping Development in South Asian Countries, New Delhi (2006)
2. Threats to entomofauna and pollinator friendly management practices in Himachal Himalaya. National Conference on Issues and Challenges in Contemporary World-2015, IEC University, Baddi, Distt. Solan (2015)
3. Economic importance of honey bees and farmers' awareness about beehive products in

Shimla Hills of Himachal Pradesh, India. National Conference on "Biodiversity Loss and Climate Change: Two faces of the same coin", Which is scheduled to be held on 3rd December 2023, at Rabindranath Tagore Government College Sarkaghat, Distt. Mandi (H.P.).

4. Honey as an incredible food and ayurvedic medicine for long and healthy life. International Conference on Communicating Health, Happiness Longevity for Sustainable Growth held on 2-4 Dec. 2023 at Govt. College, Anni Distt. Kullu.
5. Traditional Agricultural Techniques for Sustainable Agriculture in Himachal Himalaya, India. Third SSHP International Conference, Development in Mountains: issues, challenges and solutions held on 11-12 Dec., 2023 at Govt. College, Darlaghat, Distt. Solan.

Orientation/Refresher/ FDP/ PDP/ Trainings :

1. Induction Training Program organized by SCERT, Solan (2012).
2. In Service Training Program organized by SCERT, Solan (2015).
3. Orientation Programme 131- HP University, Shimla (2019)
4. SWAYAM ARPIT online refresher course for CAS promotion (2019)
5. Online Two – Week Refresher Course in “ZOOLOGY” from Ramanujan College, University of Delhi 15 – 29 December, 2021
6. Online One week FDP on “ICT- tools for Teaching and Learning” from Ramanujan College, University of Delhi 16-22 January, 2023.
7. Online One week PDP on Professional Development Programme on Implementation of NEP 2020 For University and College Teachers. IGNOU NEP-PDP :Swayam. June 12-20, 2023.

Administrative Responsibilities :

1. College Bursar
2. Convener of RUSA, UGC and Discipline committee
3. PTA Secretary