



ST. XAVIER'S COLLEGE (AUTONOMOUS)
PALAYAMKOTTAI - 627 002
(Recognized as "College with Potential for Excellence" by UGC &
Accredited by NAAC at A++ Grade with a CGPA of 3.66 out of 4)



ANNUAL REPORT 2022-2023
DEPARTMENT OF ZOOLOGY

Department of Zoology was inaugurated on 25.08.2022. Dr. S. Kalidas, Associate Professor and Head, Department of Animal Science, Manonmaniam Sundaranar University, Tirunelveli was the chief guest and delivered a special lecture on "Bio-prospecting Marine for Human Therapeutics" On 29.07.2022, an online quiz was conducted commemorating the 'International Tiger Day'. Three of the second year PG students, completed a 15-day "Summer Training Programme in Biology (STPB) – 2022" online every day from 6 pm to 8 pm, organized by the Academy of Sciences, Chennai and Department of Microbial Technology, School of Biological Sciences, Madurai Kamaraj University held from 23.07.2022 to 06.08.2022. 8 PG and Ph. D Scholars have presented papers in the DST-CURIE sponsored one-day International Conference on Recent Trends in Biological and Health Science (ICRTBHS' 22) organized by Zoology Department and Research Centre, Sarah Tucker College, Tirunelveli on 22.08.2022. On 27.08.2022, the class representatives, attended "Leadership Training Program for Class Representatives" organized by Student Council, SXC. On 30.08.2022, an online quiz was conducted commemorating International Whale Shark Day. On 04.09.2022 D. RegishRuban Jose (20UZO148) attended Ek Bharat Shreshth Bharat - I Camp at NCC training area, Idyapatti, Madurai from 24.08.2022 to 04.09.2022 conducted by NCC. On 16.09.2022, an online quiz was conducted commemorating the World Ozone Day. On 29.09.2022, the department has conducted its second guest lecture. Dr. R. Soranam, Assistant Professor in the Sri Paramakalyani Centre for Environmental Sciences, Manonmaniam Sundaranar University, Alwarkurichi was the resource person who delivered a scientific lecture on "Biodiversity and its conservation" On 11.10.2022, 17 students from II M.Sc. Zoology visited the Tirunelveli government museum as a part of the Cell and molecular biology & Evolution practical curriculum. On 17.10.2022, 43 III UG students have gone on a field visit to Thirupudaimaruthur Birds Conservation Reserve and Kalakkad Mundanthurai Tiger Reserve in Tirunelveli District as a part of their Ecology practical curriculum. On 23.10.2022, an online quiz was conducted commemorating International 'Snow Leopard Day'. On 28.10.2022, 10 girl students, participated in the State Level Seminar on "Gender Equality and Women Self-Reliance in the Academic Environment: Current

Perspectives” organized by the Department of Animal Science, Manonmaniam Sundaranar University, Tirunelveli. From 19.11.2022 to 26.11.2022, L. Jasmin Fridolin (21UZO127) successfully completed Basic Leadership Camp-2022 in NCC held at Nehru Arts and Science College, Coimbatore. On 11.01.2023 & 12.01.2023, the Department of Zoology organized a two-day national conference on “Recent Progress in Bioprospecting-derived Therapeutic Products”. The conference has allowed 107 oral and poster presentations with 250 participants from 25 Colleges. On 07.02.2023, the department’s Parents’ meeting was conducted.



On 10.02.2023, students from Nesamony Memorial Christian College, Marthandam have visited the Department of Zoology. On 10.02.2023, final year UG students have visited Department of Sericulture in Nannagram and Vermiculture Center in Parasakthi College of Women in Courtallam as a part of their Basic Entomology Practical course. From 08.02.2023 to 12.02.2023, Nellai Life organized Udhayanidhi Stalin Festival Trophy 2023, three first year UG students, won the runner prize. On 12.02.2023, PG students arranged a STAND camp in Cherakulam village. On 13.02.2023, the department has celebrated Darwin’s day and Dr. J. Ronald, Assistant Professor in the Department of Zoology, St. Xavier’s College, Palayamkottai has given a valuable talk on the title “Is Evolution Predictable”. All the final year UG & PG students participated in the discussion. On 17.02.2023, students from Thiyagi Dharmakkan Amirtham College of Arts and Science, Ramanathapuram visited the Department of Zoology. On 24.02.2023, 2 of our PG students participated in the National Seminar on “Recent Trends in Biology” organized by Sri Paramakalyani College, Alwarkurichi and won the Best Paper Award and Best Poster Award respectively. On 27.02.2023, school students from Nadukallur Govt. Hr. Sec. School, PettaiKamarajar Corporation Hr. Sec. School, Ariyanayagipuram Govt. Hr. Sec. School, Pettai Corporation Girls Hr. Sec. School, Suthamalli Govt. Hr. Sec. School and Cheranmahadevi Periyar Govt. Hr. Sec. School visited the Department of Zoology as a part of

“Naan Mudhalvan” College Exposure Visit organized by the NSS of St. Xavier’s College. On 28.02.2023, Zoology association in collaboration with SXC placement cell has arranged an awareness program on competitive examination. Mr. Benjamin Franklin, Member of Tamil Nadu Graduates Federation, Chennai motivated the students highlighting the importance of systematic preparation and cracking of TNPSC exams. On 28.02.2023, to commemorate of National Science Day, the Department of Animal Sciences, Manonmaniam Sundaranar University has conducted various competitions in which 10 of our students have participated and won prizes. On 02.03.2023, 13 students have participated in the State-level Intercollegiate Competitions - Flora Fest 2023 organized by the Department of Botany, VHNSN College, Virudhunagar and won first place in short filmmaking and third place in the poster presentation.

On 03.03.2023, the Zoology Association organized the third Guest Lecture. The resource person Dr. G. Immanuel, Director, Manonmaniam Sundaranar University Post Graduation Extension Centre, Nagercoil & Associate Professor, Centre for Marine Science and Technology, Manonmaniam Sundaranar University, Rajakkamangalam, Kanyakumari delivered a special lecture on the topic “Seaweed biotechnology”

On 07.03.2023, in the International Women’s Day Competition held in the college, three students won prizes. On 10.03.2023, a B.Sc. student was honored with the Best Presenter Award at the International Conference on Sustainable Natural Resource Management: Global Perspectives and Contextualized Action held at St. Ignatius College of Education, Palayamkottai. On 09.03.2023 & 10.03.2023, 3 of our second year students participated in an International Conference on “Emerging trends in biotechnology and bioeconomy” organized by Department of Biotechnology, Manonmaniam Sundaranar University. On 21.03.2023, the Zoology Association successfully completed its activities with Valediction. Dr. L. Ranjith, Senior Scientist, Marine Biodiversity and Environment Management Division, Tuticorin Regional Station, ICAR-CMFRI, Tuticorin delivered a lecture on “Marine biodiversity and conservation aspects”. On 22.03.2023, 14 PG visited Rajiv Gandhi Centre for Biotechnology Trivandrum as a part of their Genetics and Developmental Biology Practical and Methods in Biology.

TABLE.8.a. PAPERS PUBLISHED IN JOURNALS (2022-2023)

S. NO	Name of the Teacher	Name of the Department	Title of the Paper	Name of the Journal	Volume No/ Issue No/ Page No / Year	ISSN No. / e-ISSN No.	Cited in Web of Science / Scopus Indexed/UGC Approved / Not Found in UGC-CARE List	National / International	Impact Factor
1	Dr.P.Selvaraj	Zoology	Phytochemical screening and pesticidal efficacy of phytoecdysteroid fraction of a fern <i>Pityrogramma calomelanos</i> (L.) Link against <i>Spodoptera litura</i> (Fabricius.)	Journal of Biopesticides	15/1/73-81/2022	0974-391X/2230 - 8385	WoS/Scopus	International	
2	Dr.P.Selvaraj	Zoology	Bioefficacy of entomopathogenic fungi <i>Metarhizium anisopliae</i> (Metschn.) Sorokin against the cotton stainer, <i>Dysdercus cingulatus</i> (Fab.) (Hemiptera: Pyrrhocoridae)	Journal of Biopesticides	15/1/59-72/2022	0974-391X/2230 - 8385	WoS/Scopus	International	
3	Babila Jasmine.J	Zoology	To Evaluate Integrated Nutrient Management Practices on Mulberry Growth and Yields Parameters and Biochemical Analysis	(IJARESM)	Volume 10, Issue 10, October-2022,	ISSN: 2455-6211	UGC –CARE list	International	

4	Babila Jasmine.J	Zoology	HAEMOLYMPH BIOCHEMICALS IN RESPONSE TO WOUND HEALING IN FIFTH INSTAR LARVA OF BOMBYX MORI (L)	J. Exp. Zool	a Vol. 26, No. 1, pp. 807-811, 2023	ISSN 0972-0030	UGC –CARE list	National	
5	Dr. P. Raja	Zoology	Effect of probiotic bacteria isolated from the gut of <i>Dawkinsia filamentosa</i> (Valenciennes, 1844) on survival of <i>Channa striatus</i> (Bloch, 1793) fingerlings challenged with <i>Aeromonas hydrophila</i> ,	Journal of Xi'an Shiyou University Natural Science Edition	vol. 18(4), pp. 337-346.	ISSN : 1673-064X	UGC care	International	
6	Dr. P. Raja	Zoology	Synthesis, characterizations and Antibacterial Studies of Chromium trioxide Nanoparticles	International Journal for Modern Trends in Science and Technology	8(01): 252-258	ISSN: 2455-3778	UGC care	International	
7	Dr. T. Pushpanathan	Zoology	Cytotoxic Activity of <i>Ziziphus mauritiana</i> (L.), <i>Solanum lycopersicum</i> (L.), And <i>Aerolana</i> (L.) Juss Leaf Extract using Brine Shrimp Lethality Assay	International Journal of Pharmacy and Biological Sciences	12 (3): 33-37	Online ISSN: 2230-7605, Print ISSN: 2321-3272	Not Found in UGC-CARE List	International	

8	Dr. T. Elizabeth Thangamani Sunitha-	Zoology	BUTTERFLY SPECIES DIVERSITY AND ABUNDANCE IN REDDIYARPATTI HILLS REGION, TIRUNELVELI, TAMILNADU	Sciencia Acta Xaveriana An International Science	Vol. 13 No. 1 pp. 47-56 March 2022	Journal ISSN. 0976-1152	UGC Approved	International	
9	Dr.T.Elizabeth Thangamani Sunitha-	Zoology	BUTTERFLY SPECIES DIVERSITY AND ABUNDANCE IN RAMANATHI DAM, KADAYAM, TENKASI DIST, TAMILNADU	Sciencia Acta Xaveriana An International Science	Vol. 13 No. 1 pp. 65-82 March 2022	Journal ISSN. 0976-1152	UGC Approved	International	
10	Dr.T.Elizabeth Thangamani Sunitha-	Zoology	REPELLENT EFFECT OF PLANT ESSENTIAL OILS AGAINST THE MOSQUITO	Sciencia Acta Xaveriana An International Science	Vol. 13 No. 1 pp. 53-63 March 2022	Journal ISSN. 0976-1152	UGC Approved	International	
11	Dr.T.Elizabeth Thangamani Sunitha-	Zoology	REPELLENT ACTIVITY OF SELECTED ESSENTIAL OILS AGAINST THE MOSQUITO IN TIRUNELVELI, TAMILNADU, SOUTH INDIA	Sciencia Acta Xaveriana An International Science	Vol. 13 No. 1 pp. 09-15 March 2022	Journal ISSN. 0976-1152	UGC Approved	International	

12	Dr. R. Azhagu Raj	Zoology	Assessing avian biodiversity in Swamithoppu saltpan with the fuzzy matrix approach	Journal of Mathematical Problems, Equations and Statistics	4(1): 42-48;	2709-9407	UGC	International	
13	Dr. R. Azhagu Raj	Zoology	Exploring ant diversity with fuzzy logic and python	Journal of Mathematical Problems, Equations and Statistics	4(1): 49-53; 2023	2709-9407	UGC	International	
14	Dr. R. Azhagu Raj	Zoology	Fuzzy combined effect time quantity dependent data matrix for predicting phytal fauna distribution and diversity	International Journal of Statistics and Applied Mathematics	8(2): 09-12; 2023	2456-1452	UGC	International	
15	Dr. R. Azhagu Raj	Zoology	Impact of Household Chemicals on the Ornamental Fish Poeciliaspheps (Valenciennes)	International Journal of Scientific Research in Science, Engineering and Technology	10(2)	2394-4099	-	International	
16	Dr. R. Azhagu Raj	Zoology	Effect of Solar Radiation on Freshwater Fish Puntius bimaculatus (Bleeker) (Cypriniformes: Cyprinidae)	International Journal of Zoological Investigations	2022, Vol. 8, No. 2, 218-222	2454-3055	Web of Science	International	

17	Dr. R. Azhagu Raj	Zoology	Effects on size, optical and antibacterial activity of pristine and Cr-doped NiO prepared by the microwave-assisted method	Materials Today: Proceedings	2022. Vol 49(7), 2867-2871.	2214-7853	Scopus indexed	International	
18	Dr. R. Azhagu Raj	Zoology	Morphologies, crystal structure and antibacterial properties of chromium substituted zinc oxide nanoparticles synthesized by microwave method	Materials Today: Proceedings	2022. Vol 49 (7); 2928-2933	2214-7853	Scopus	International	
19	Dr. R. Azhagu Raj	Zoology	Avifaunal Diversity of Swamythooppu Salt Pan, Kanyakumari, Tamil Nadu, India	International Journal of Zoological Investigations	2022. Vol. 8, No. 1, 138-151.	2454-3055	Web of Science	International	
20	Dr. R. Azhagu Raj	Zoology	Diversity of ants (Hymenoptera: Formicidae) at St. Xavier's College Campus, Palayamkottai, Tamil Nadu, India	International Journal of Zoological Investigations	2022. Vol. 8, No. 1, 98- 106	2454-3055	Web of Science	International	
21	Dr. R. Azhagu Raj	Zoology	Deleterious Effect of Ultraviolet Radiation on Glossogobius giuris: A Short Experimental Study.	Sci	2022, 4 (1); 12.	2413-4155	Web of Science	International	

22	Dr. R. Azhagu Raj	Zoology	Phytal Faunal Diversity In Erayanmanthurai Coast, Kanyakumari District, Tamil Nadu, India	Sciencia Acta Xavieri na	2022. 12(1) 19-30	0976-1152	NASS	International
23	Dr. R. Azhagu Raj	Zoology	Respiratory response of Cirrhinus mrigala (Hamilton, 1822) fingerlings exposed to sub-lethal concentration of Fenvalerate	Journal of Zoology and Applied Biosciences	2022. Vo 17 (1); 33-39		Web of Science	International

TABLE.8.b. – PAPERS PUBLISHED IN CONFERENCE / SEMINAR PROCEEDINGS (2022-2023)

S. No	Name of Teacher	Department	Title of the Paper	Title of the Proceedings	National / International	(Place, Publisher, Year, Page No.)	ISSN / ISBN No.
1	Dr. P. Raja	Zoology	Phytochemical analysis and antibacterial screening of Stigeoclonium sp. Against human pathogens	Sustainable Natural Resource Management: Global perspectives and contextualized action	International	St. Ignatius College of Education	

2	Dr.P.Selvaraj	Zoology	INFLUENCE OF PHYTOECDYSTEROID FRACTION OF PITYROGRAMMA CALOMELANOS (L.) LINK ON THE DIETARY AND NUTRITIONAL INDICES OF SPODOPTERA LITURA (FABRICIUS)	Annual International Conference on Multidisciplinary Research and Innovation (AICMRI 2022)	International	Chennai/ESN publications/2022/55	978-93-95196-36-9
3	Dr.P.Selvaraj	Zoology	BIO-EFFICACY OF METARHIZIUM ANISOPLIAE AGAINST COTTON MEALYBUG PHENACOCCLUS SOLENOPSIS TINSLEY (HEMIPTERA: PSEUDOCOCCIDAE)	Annual International Conference on Multidisciplinary Research and Innovation (AICMRI 2022)	International	Chennai/ESN publications/2022/93	978-93-95196-36-9
4	Dr.P.Selvaraj	Zoology	VARIABLE NUCLEOTIDE SEQUENCES BETWEEN MITOCHONDRIAL ENCODED PROTEIN-CODING GENES OF TRIATOMINAE (HETEROPTERA: REDUVIIDAE)	Annual International Conference on Multidisciplinary Research and Innovation (AICMRI 2022)	International	Chennai/ESN publications/2022/149	978-93-95196-36-9

5	Dr.P.Selvaraj	Zoology	INTERSPECIFIC VARIATIONS IN THE MITOCHONDRIAL ENCODED COX GENES OF THE GENUS TRIATOMA (HETEROPTERA: REDUVIIDAE)	Recent Trends in Bioprospecting – Derived Therapeutic Products	National	Palaymkottai/Dept. of Zoology, SXC/2023/79	
6	Dr. S. Mabel Parimala	Zoology	Syzygium cumini seed extract against MDA-MB-231 (human breast cancer)	Recent technology for sustainable development of insects, microbes and health	International	CIMSER, Loyola College Chennai, 2023, 32	
7	Dr.T.Elizabeth Thangamani Sunitha	Zoology	Comparative study of aminoacid in the different stages of honeybees.	Recent progress in Bioprospecting –derived therapeutic products. Department of zoology	National	Department of zoology(DBT-STAR and DST-FIST) St, Xavier's college, - 2023-129	
8	Dr.T.Elizabeth Thangamani Sunitha	Zoology	. Bacterial examination in spoiled fruits, its isolation, identification,and antibacterial activity of vinegar	Recent progress in Bioprospecting –derived therapeutic products. Department of zoology	National	Department of zoology (DBT-STAR and DST-FIST) St, Xavier's college, -2023-131.	

9	Dr.R.Azhagu Raj	Zoology	Role of IQAC in Student Centered Teaching and Learning process in Higher Education	Role of IQAC in Quality enhancement in Teaching and Learning process in HEI's	National	Rathinam College of Arts and Science Coimbatore, 2022 86-87q	ISBN 97893913 47369
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TABLE 9 - BOOKS / BOOK CHAPTERS PUBLISHED (2022-2023)

S. No	Name of Teacher	Department	Title of the Books / Proceedings	Place, Publisher, Year, Page No.	National / International	ISSN / ISBN No.
1	Dr. T. Pushpanathan	Zoology	Drug Development For Cancer and Diabetes. A path to 2030	Apple Academic Press inc - USA	International	International Standard Book Number -13: 978-1-77188-860-8