



ST. XAVIER'S COLLEGE, MAPUSA GOA

Report of Activity conducted in the Academic Year 2026-27

Name of Activity	Hands-on Training on "Dissection and Detection of Microplastics in Mangrove Clams"
Date/ Duration	30 th September, 2026
Venue	School of Biological Sciences & Biotechnology, Goa University
Name of organizing Department/Cell	Department of Microbiology in collaboration with the Microbiologists' Society, India
In collaboration with	
Name/s of Faculty Co-ordinator	Dr. Trelita de Sousa
Stratum of Event	College
Name & details of Resource Person/s if any	Dr. Avelyno D'Costa, Assistant Professor in the Discipline of Zoology, School of Biological Sciences & Biotechnology, Goa University
Report	Objectives To provide hands-on training on the dissection of mangrove clams, microscopic observation of their gills and gut, and the detection and documentation of microplastic fibres. Brief Description For their T.Y. project, Ms. Varija Chari, Ms. Ayushi Nemlekar, Ms. Pallavi Dangui, Ms. Mekisha Rato, and Ms. Shreya Naik, are working with bacteria associated with microplastics found in Mangrove Clams. Dr. Avelyno demonstrated the opening and dissection of the clams, showed the different anatomical parts, and explained their respective functions. Special attention was given to the gills and gut, as these organs were observed to contain a higher number of microplastic particles and fibres. The students were then taken to the Optical Instrument Laboratory and shown the mounting and observation of the dissected samples under the stereomicroscope. Dr. Avelyno also explained the importance of quality control while detecting microplastics in biological samples. He discussed the various limitations and difficulties involved in microplastic analysis, including the possibility of contamination during sample collection, preparation, and observation. He also explained measures that can be taken to minimize contamination and improve the reliability of the observations. Furthermore, he introduced the students to the preparation and observation of microplastics under the fluorescence microscope. Outcomes The students were provided with hands-on training and valuable practical knowledge with respect to the dissection of mangrove clams, microscopic observation of their gills and gut, and the detection and documentation of microplastic fibres. Overall, the

	session was an informative and enriching experience for the students enabling them to correlate theoretical knowledge with practical laboratory work that will help them with their project work. Number of beneficiaries: 05
Brochure/Poster	NA
Photographs	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/10/Photos-of-Hands-on-Training-on-Dissection-and-Detection-of-Microplastics-in-Mangrove-Clams-1.pdf
List of participants with signatures	NA
Certificate	NA