

58TH

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EMBS
EUROPEAN
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SYMPOSIUM

THE BOOK OF ABSTRACTS

58 EMBS Symposium

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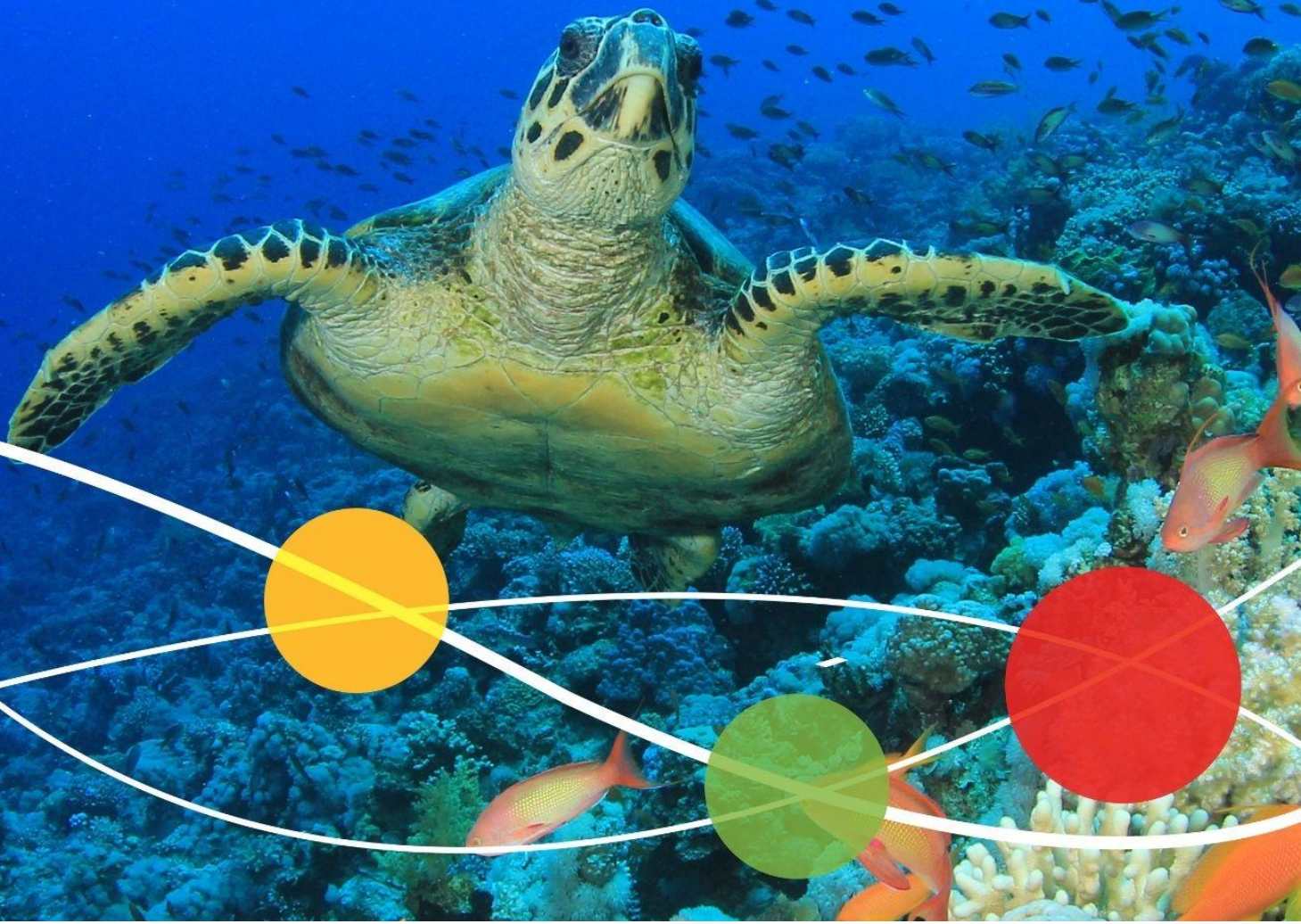


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This booklet serves as your guide to the symposium, providing key information about the sessions, speakers, and events. We hope it helps you navigate the exciting opportunities for collaboration and learning throughout the conference.

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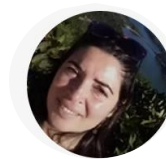
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71. Identifying a Suitable Digestion Protocol for Microplastic Extraction from Octocoral Tissues

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Monitoring microplastic pollution requires standardized methodologies. Data on microplastic occurrence in anthozoans is scarce and often rely on unvalidated protocols. This study aims to develop a newly validated digestion protocol for efficiently isolating microplastics in octocorals. Two existing protocols were adapted and evaluated for efficiency in digesting bamboo coral *Isidella elongata* tissues. The most efficient protocol involves NaClO and HCl, and its effects were assessed on polyethylene, polypropylene, and polystyrene particles down to 50µm. Validation tests provided the evaluation of recovery rate and alterations in size, morphology, and polymer composition. After digestion, 87.6% of particles were recovered, 77.2% of which preserved their integrity. Minor average size deviations were reported; discoloration, degradation and deformation were negligible, while fragmentation was common in polystyrene. FT-IR spectral analysis confirmed the preservation of polymers composition. Results suggest the proposed protocol as a reliable and replicable methodology for future microplastic investigations in octocorals.

72. Assessment of energy consumption and genotoxicity after exposure to TBT and microplastics in *Mytilus galloprovincialis*

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Microplastics are ubiquitous in the marine environment, and adsorption of TBT may exacerbate their combined effects on biota. We investigated whether MP is a possible vector for the transfer of TBT in *Mytilus galloprovincialis* by exposing mussels to MP (50 mg/L), TBT (0.001 mg/L), MP+TBT (0.02 mg TBT/g MP) in seawater for 21 days. TBT concentrations were higher in mussels exposed to MP+TBT. Significant DNA damage was observed in haemocytes after 7 and 14 days in the TBT and MP-TBT groups compared to control mussels without pollutants. No significant effect on ETS activity was observed during the experiment. Our results suggest that MP may be a vector for the transfer of TBT into mussels and enhance genotoxic effects. Adsorption of TBT to MP can enable remobilisation of TBT despite a high specific gravity and increased bioavailability via ingestion of adsorbed TBT on MP.

73. The Italian fouling community: port NIS peracarida with new records

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The aim of this work was to inquire into the variability and dynamism of peracarid fauna in the key sites of the Palermo and Trapani ports, both highly anthropised located in the central Mediterranean and facing two protected marine areas, Ustica Island and Aegadian Archipelago. We sampled the fouling communities growing on submerged ropes in 2024 and 2025 and identified 734 peracarids belonging to 15 different species. Of these species, 6 were NIS or cryptogenic species. New records of NIS from this work are *Laticorophium baconi* (Shoemaker, 1934) in both Trapani and Palermo and *Jassa slatteryi* Conlan, 1990 and *Caprella scaura* Templeton, 1836 in Trapani. The sampled sites showed an ample variety of peracarid species occupying the available trophic niches of a community characterized by NIS suspension-feeders.