

F. ROSANO¹, C. D'IGLIO², P. GALLI¹, N. SPANÒ^{2,3}, M. ALBANO⁴,
G. CAPILLO^{2,3}, S. SAVOCA^{2,3}

¹Department of Earth and Environmental Sciences (DISAT), University of Milano-Bicocca, Italy.

²Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy.

³Sea in Health and Life s.r.l., Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy.

⁴Department of Veterinary Sciences, University of Messina, Italy.

EXPLORING BRACHYURAN CRABS ECOLOGICAL ROLE IN MALDIVIAN CORAL REEFS: PRELIMINARY RESULTS FROM ECOCRAB PROJECT

The Maldives archipelago, located in the Indian Ocean, host one of the world's most biodiverse marine ecosystem, dominated by tropical coral reefs. These are characterized by a huge diverse assemblage of marine fauna, with a wide spectrum of species including Brachyuran crabs. Among these, those belonging to the superfamily Cryptochiroidea, and to the Grapsidae and Ocypodidae families, play a pivotal role in the maintenance of biodiversity and ecosystem stability. These decapods mainly inhabit the intertidal and subtidal coastal habitats, taking refuge among rocks, corals, and algae. While some species burrow into sandy substrates (as Ocypodidae) or inhabit the rocky littoral shore (as Grapsidae), those belonging to the Cryptochiroidea superfamily live associated with corals (inside domicile openings) and echinoderms. Here is presented the PhD research project ECOCRAB aiming to investigate the Brachyuran fauna inhabiting the coral reefs and littoral habitats of the Faafu atoll (Maldives archipelago). In two scientific surveys performed during the 2024, several coral reef sites near Magoodhoo island (Faafu atoll) were investigated through underwater visual census. Domicile openings of cryptochirids were visualized during SCUBA diving and photographed in situ. Samples of the colonized corals were collected and transported in "MaRHE Center" laboratory, where all the associated macrozoobenthic fauna were identified. The preliminary analyses on 38 of the collected coral samples showed the presence of 7 cryptochirids specimens belonging to four species, along with 60 other crustaceans, polychaetes, and bivalves. Given the increasing threats to coral reefs posed by climate change and human activities, the present research aims to improve the understanding of the ecology of the investigated brachyurans, and their role as potential bioindicators of reef health.