High diversified benthic habitats in a tidal Mediterranean sub-tropical environment: the case of the Gulf of Gabès (Tunisia)

The Gulf of Gabès on the southern coasts of Tunisia in the central part of the Mediterranean is a very shallow basin, characterized by semidiurnal tides, attaining a range of 2.3 m during spring tides. The intertidal zone was covered by extended *Zostera (Zosterella) noltei* Hornemann, 1832 beds mainly developed around the Kneiss Islands while tidal channels ensured the water circulation in this sub-tropical environment with very low freshwater input and high summer temperature. In spite of protected conventions, the area remained under high human pressures: overfishing, and the impact of the pollution of the phosphate industry. Intensive sampling in both intertidal and shallow subtidal zones during annual cycles permitted to identify a rich macrofauna which increase considerably the species known in this eastern part of the Mediterranean Sea. More than 50 species are added for the Tunisian fauna. Moreover, patterns of diversity are analysed with the sediment types, presence or absence of *Zostera noltei* seagrass bed, and human pressures. The list of the collected species are compared with those of surrounding areas in both Western and Eastern Mediterranean Sea.

Keywords: macrofauna, tidal environment, Mediterranean Sea, soft-bottom habitats

<u>Fersi Abir¹</u>, Mosbahi Nawfel¹, Bakalem Ali², Pezy Jean-Philippe³, Baffreau Alexandrine³, Neifar Lassad¹, Jean-Claude Dauvin^{3*}

¹Laboratoire de Biodiversité et Ecosystèmes Aquatiques, Faculté des Sciences de Sfax, Université de Sfax, BP 1171, 3038, Sfax, Tunisie

² Ecole Nationale Supérieure Agronomique (ENSA), Avenue Hassan Badi, 16200 El Harrach, Algiers, Algeria ³ Normandie Univ., UNICAEN, CNRS, UMR 6143 M2C, Laboratoire Morphodynamique Continentale et Côtière, 2-4 Rue des Tilleuls, 14000 Caen, France

*Corresponding author: Jean-Claude Dauvin, Normandie Univ., UNICAEN, CNRS UMR 6143, jean-claude.dauvin@unicaen.fr