

## The importance of *Lanice conchilega* reefs in trophic linkages on intertidal sandy beaches

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In recent years, the interest in disentangling food webs in marine environments is growing due to an increasing demand for a sustainable use of aquatic resources. Moreover, the presence of healthy and abundant food webs is crucial to ensure the survival of species. Monitoring the status and the trends of marine food webs is essential in order to collect information needed to assess the current situation and implement the necessary conservation measures. A marine species which was shown to be very useful within a conservation context is *Lanice conchilega*. This tube-building polychaete can form dense populations, often called biogenic reefs, which promote benthic community change and constitute feeding grounds for secondary consumers.

Our research aims at unravelling the trophic relation between *L. conchilega* reefs in intertidal sandy beaches and both lower and higher trophic levels, taking into account spatial and temporal variability. Therefore, an extensive sampling campaign was organised along the Northeast Atlantic coast. Three major intertidal sampling areas, comprising *L. conchilega* reefs, were selected in such a way as to include a latitudinal gradient: (1) the bay of the Mont Saint-Michel (Lower Normandy, France); (2) Boulogne-sur-Mer (Northern France); and (3) Ameland (the Wadden Sea, the Netherlands). At every site, organisms belonging to all trophic levels (except birds) were sampled; ranging from primary producers (microphytobenthos) up to epibenthic fauna (e.g. flatfishes).

The first step in disentangling the *L. conchilega* food web comprises stomach content analyses of predators and stable isotope analysis of all trophic levels (producers, primary and secondary consumers) of the food web. This will allow for the creation of a conceptual food web. In a second step, links between trophic levels will be quantified by Linear Inverse Modelling.