



ISOBAR

UNDERSTANDING THE ISOLATION MECHANISMS IN MARINE ISOPODS

The extreme diversity in the living world can be described by applying the concept of biological species, but the process by which the evolutionary tree branches out into new species raises many unresolved questions. Evolutionary biology research has described various types of reproductive isolating barrier that prevent genes flowing between species. Current research is investigating the detail of mechanisms involved in these barriers, with the ultimate aim of understanding how they develop. The ISOBAR project will focus on two isolation mechanisms which have played a fundamental role in diversification in the animal kingdom.

The first mechanism is behavioural isolation, which arises from a preference for conspecific mates. The second mechanism is post-zygotic isolation. Even in the absence of strict behavioural isolation, the flow of genes between species can still be limited due to genetic incompatibilities which reduce the viability and/or fertility of hybrid offspring.

This project will study both the behavioural and post-zygotic isolation mechanisms concurrently in the *Jaere albifrons* complex of marine isopod species. It will employ experimental interbreeding and molecular analysis. This work on a group of directly developing marine invertebrates, in which the role of behaviour can be studied, will be a very helpful addition to empirical studies of speciation in the marine environment – these focus mainly on organisms at a larval stage and no strong behavioural component to speciation.

Partner

Research center

Station Biologique de Roscoff, UMR 7144,
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