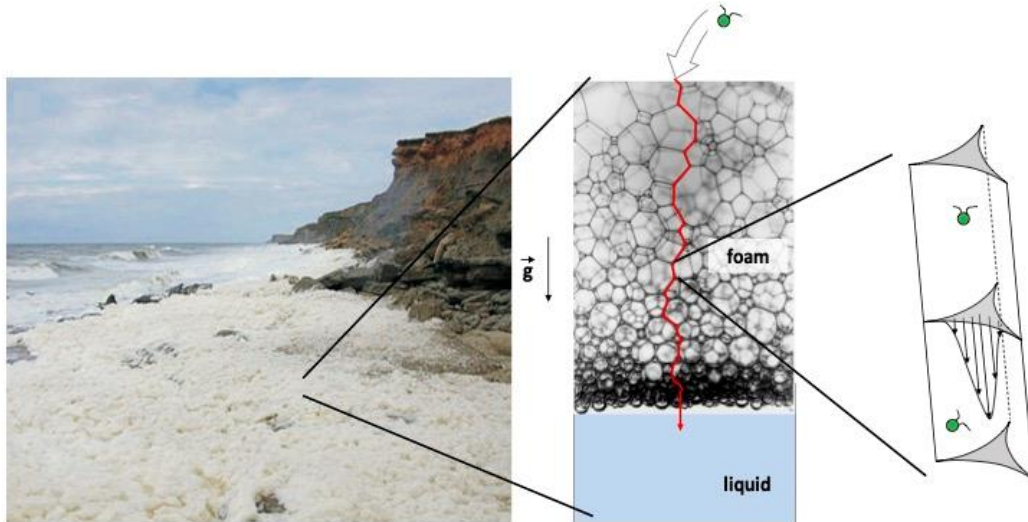


Marine foam: capture of phytoplankton in foam.

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A massive formation of stable sea foam is regularly observed on certain coastlines. These naturally occurring foams are associated with a loss of phytoplankton biomass and biodiversity in the seawater. We are investigating whether the phytoplankton advected into the foam during its formation remains trapped in the complex network of internal channels in the foam.

In this talk, I will present experiments carried out in the laboratory to study the retention in a liquid foam of a model phytoplankton organism: the unicellular alga *Chlamydomonas reinhardtii* (CR), which is bi-flagellate and therefore motile. We measured the escape dynamics of CR cells from the foam. A comparison between live and dead cells shows that live CR cells tend to be retained in the foam. Finally, I will discuss the microscopic mechanisms that can lead to this entrapment, which raises the question of the transport of microswimmers in confined and environments under flow.