

# 'The BIG Questions'

## Lecture Series

### The Oceans Cryptic but Beautiful Life

Prof. Thomas Kiørboe

Centre for Ocean Life, DTU Aqua, Technical University of Denmark

25 January 2018 | 16:00 h

Venue: Large conference room, GEOMAR (Düsternbrooker Weg 20)

Marine life unfolds beneath the surface of the ocean, and the life forms – plankton – that dominate the biological processes in the ocean are microscopic and invisible. When visualized, this life demonstrates a beautiful variety of morphologies and a fascinating diversity of behaviors. While these behaviors and morphologies must be tailored to optimize the Darwinian mission that any organism is confronted with, this connection is not always obvious.

Thomas Kiørboe will visualize the oceans' invisible life, explore how their morphologies and behaviors are adapted to optimize their fitness, and demonstrate how trade-offs between resource acquisition and survival shape plankton communities. A mechanistic understanding of the trade-offs pave the road for the development of trait-based models of marine ecosystems, a novel and potentially 'simple' way to embrace the complexity of ecosystems and assess the effects of environmental change.

The lecture will be light on physics and rich in movies such that everyone should be able to follow and enjoy.

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