

The oceans cover 70% of our planet and are abundant with microscopic, invisible life forms, which have been capturing our imagination since the green algae *Spirogyra* was first observed by Antony van Leeuwenhoek in 1674. This vast biodiversity was further unraveled by Ernst Haeckel following the HMS *Challenger* expedition at the end of the 19th century. But much remained unseen and, thus, unknown.

Recent advances in microscopy and imaging methods now offer us new possibilities to further investigate, describe, and understand the largest biotope on Earth. Written by an international team of experts, this is the first and only compendium to focus specifically on the imaging needs of marine biologists. As such, it presents well-known methods ranging from macrophotography right down to nanometric diatom frustules analysis, but also such novel techniques as light sheet and optical projection microscopy, as well as promising applications, including X-ray tomography.

The definitive resource for every marine biologist, whether a student or an established researcher.

A companion website with additional video material is available on:
[www.wiley-vch.de/home/Imaging Marine Life](http://www.wiley-vch.de/home/Imaging_Marine_Life)

From the contents:

- Underwater imaging
- Macrophotography
- Electron Microscopy
- Confocal Microscopy
- Holographic Microscopy
- Light Sheet Fluorescence Microscopy
- Optical Projection Tomography
- X-ray and related tomographic approaches



Emmanuel G. Reynaud has been Stokes Lecturer in Biology at University College Dublin, Ireland, since 2009. He received his Master's degree in molecular biology from the Victor Segalen University of Bordeaux, and his doctorate in biology from the University Paris XI-Orsay, France. Following this, he carried out his post-doc research at the European Molecular Biology Laboratory in Heidelberg, Germany, where he joined Prof. Ernst H. K. Stelzer's Light Microscopy Team as a scientist for the development of new optical methods applied to biology. Dr. Reynaud established and coordinates the TARA Oceans Marine biology Imaging platform (T.A.O.M.I.). He spent a few months aboard the schooner, TARA, as part of a 2.5 year circumnavigation of the globe to collect and analyze plankton communities worldwide. His current research interests include applications of light sheet fluorescence microscopy to zoology, cell and marine biology, as well as underwater 3D coral imaging.

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