

Daniela Zeppilli

Institut français de recherche pour l'exploitation de la mer (Ifremer)
Marine Biologist

Deep-sea diving in meiofauna tiny wonderland

The deep oceans are the last, scarcely accessible frontier of our planet. The tiny world of meiofauna is essential to the proper functioning of deep-sea ecosystems, is an excellent environmental indicator and can also have applications in industry, including the discovery of molecules of biomedical interest. We need to understand and protect this tiny world that keeps plenty of secrets, secrets that perhaps one day will be useful for us. A remote small universe to great discoveries.

"We still have so much to discover and learn from these tiny deep-sea animals. To unveil this invisible life to the general public is one of my main missions."

Biologist - with a Ph.D. in Marine Biology and Ecology - Daniela Zeppilli is researcher at the Deep-Sea Lab of the Institut français de recherche pour l'exploitation de la mer (Ifremer) in France. Fascinated by the world that is invisible to the naked eye, she is specialized in nematodes, a microscopic underwater phylum. Her dream as a scientist is to understand the limits of metazoan life on our planet. Four billion years ago our planet was an extreme environment. There are still several extreme ecosystems that exist today where meiofauna is present in surprising abundance and with adaptations that call into question our knowledge of the limits of life. Her research is also aimed at understanding how these animals have been able to resist certain bacteria and extreme conditions. She hopes to discover new groups of peptides or proteins capable of generating a network of communication signals that could be potentially useful in the immune response. For her research, Daniela Zeppilli received the L'Oréal-UNESCO For Women in Science Fellowship in 2014.