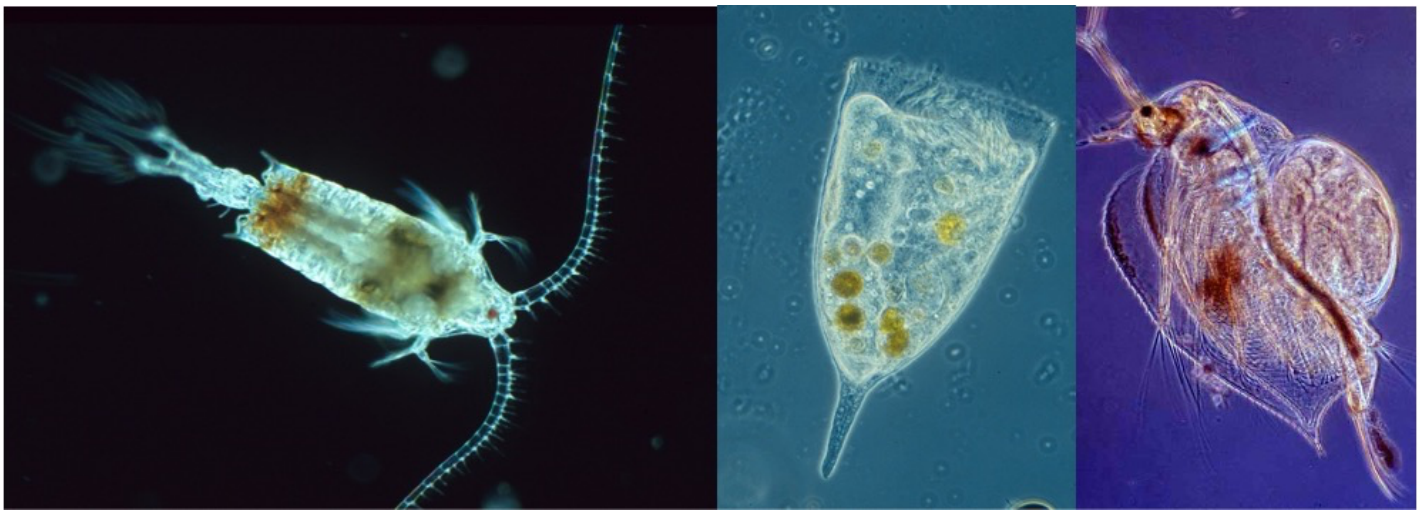
Plankton Ocean
A journey to the world of plankton and the life in the ocean

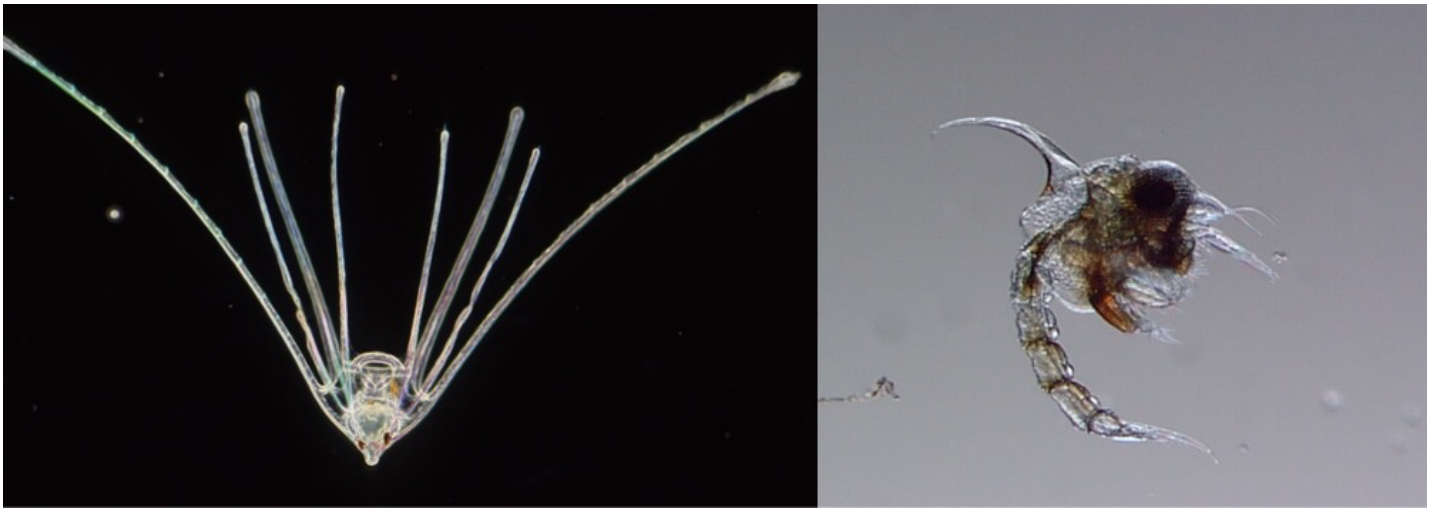
Holoplankton and meroplankton: two strange names to describe ordinary creatures

We, biologists, tend to use Greek or Latin roots when choosing a name. This habit leads to some very curious and strange cases, such as the two that concern us today, holoplankton and meroplankton. From previous posts, we already know that plankton refers to something that it is drifting. But what do the two last prefixes mean? Both "holo" and "mero" come from Greek; the first means "complete" and the second "part of". No, this does not mean that some are whole beasts and others just factions. This actually means that a holoplankton organism spends its entire life cycle on plankton and that a meroplankton organism spends only part of it.



Members of the holoplankton. From left to right, the copepod *Centropages typicus*, the cladoceran *Penilia avirostris*, and the tintinnid ciliate *Favella* sp.

We know of holoplankton organisms from previous posts: copepods, cladocerans, many protozoa, some species of jellyfish (such as *Pelagia noctiluca*), salps, etc. But meroplankton may sound more unfamiliar to us. But this is not entirely true. In fact, we see many meroplankton organisms in the fish market, and even when we go to the beach. Starfish, sea urchins, crabs, and sea snails have larval stages in the plankton. Some of these larvae are very strange and do not remind their adult representatives.



Members of meroplankton. Left, a larval stage of a brittle star. Right, a crab larva

Others bear a closer resemblance between adults and larvae. For example, many fish species spend part of their larval life in plankton. A very curious case in fish is that of flatfish, such as turbot and sole, which I explain in a previous post. Many jellyfish also reproduce by strobilation from benthic polyp stages. Even some protists, such as many dinoflagellates that produce harmful algal blooms (the so-called red tides), can encyst and spend much of their life cycle in sediment outside of plankton.

As you can see, there are many meroplankton organisms, and they are well known. Holoplankton are also numerous; remember that copepods are probably the most abundant multicellular animals on the planet and that there are viruses, bacteria, and protists in the holoplankton's basket.

Albert Calbet 16 de March de 2022 General Edit

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