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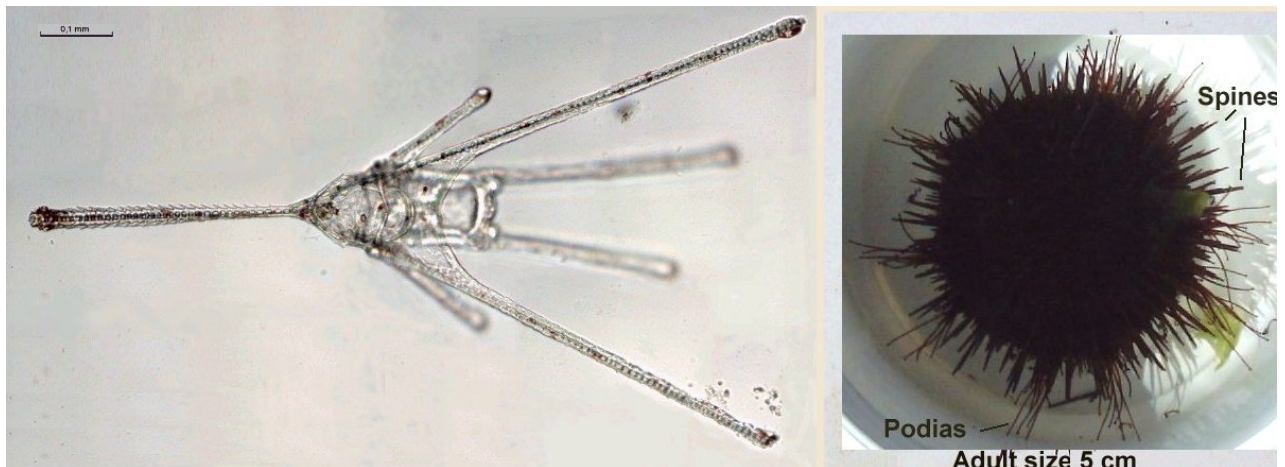
SOME BEAUTIFUL LARVAE FROM MARINE PLANKTON (REVISITED)

by Jean-Marie Cavanihac France

Sixteen years ago (link below) I made an article about a similar subject. But since, I have taken more interesting pictures to share with *Micscape* readers! They demonstrate how metamorphosis can modify the appearance of marine creatures! Larvae are more mobile than adults which become sessile later, and allow them to disseminate their descendants.

Examples below show marine plankton larvae which are (at least for me!) more beautiful than the adult forms. All pictures are made from living specimens.

One of my favourite subjects: the sea urchin! As you can see the adult is covered with spines and not very attractive! The *Pluteus* larva has an arrow shape, covered by hairs used to displace it, with oral arms forward to collect micro algae.

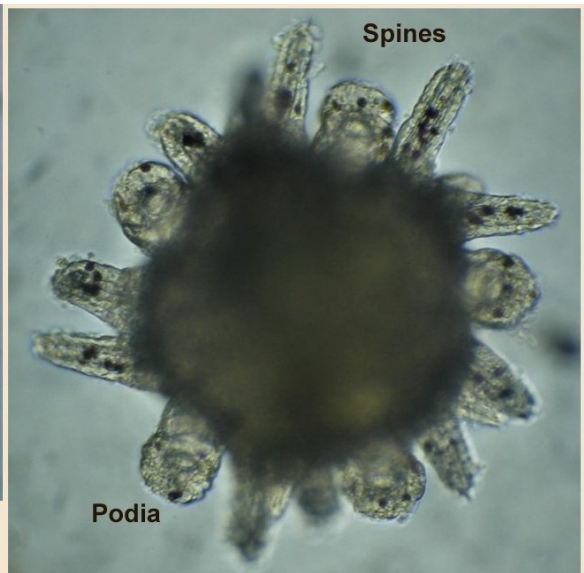


Here is an *Echinocardium cordatum* larva and an adult (probably not the same species).

And below a more common species: *Strongylocentrotus* (polarized light showing calcareous arms on the left picture) and a young adult showing the new spines and the first adhesive podia used for displacements.



Sea urchin larva



Young adult

Tunicates are filtering organisms sucking sea water through a current siphon and filtering it with ciliated gills to catch nutritive particles.

Below Ascidian larva (probably *Clavelina*) and a young adult: ciliated gills are clearly visible and the siphon on the right side on the lower picture.



Tunicate larva

Young adult

Another tunicate: *Botryllus*. Right picture shows larva starting and beginning metamorphosis.



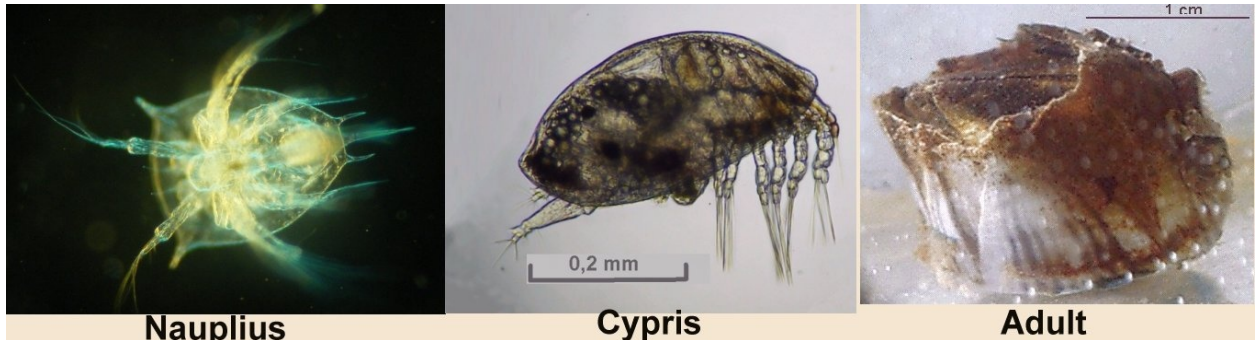
Botryllus larva



first stage of metamorphosis

Left side picture: Young adult showing siphons and, at right side colony of adults (probably *Botryllus schlosseri*).

Balanus: May be the less sympathetic organism because the adult has calcareous plates which are very cutting when handled! Nauplius larva become a cypris form which cannot eat, then it glues itself to a rock in the adult form.



In fact I have some remorse to present *Balanus* as it's such an ugly creature! Look at the animation in the [past article](#) to see elegant movements to catch plankton.

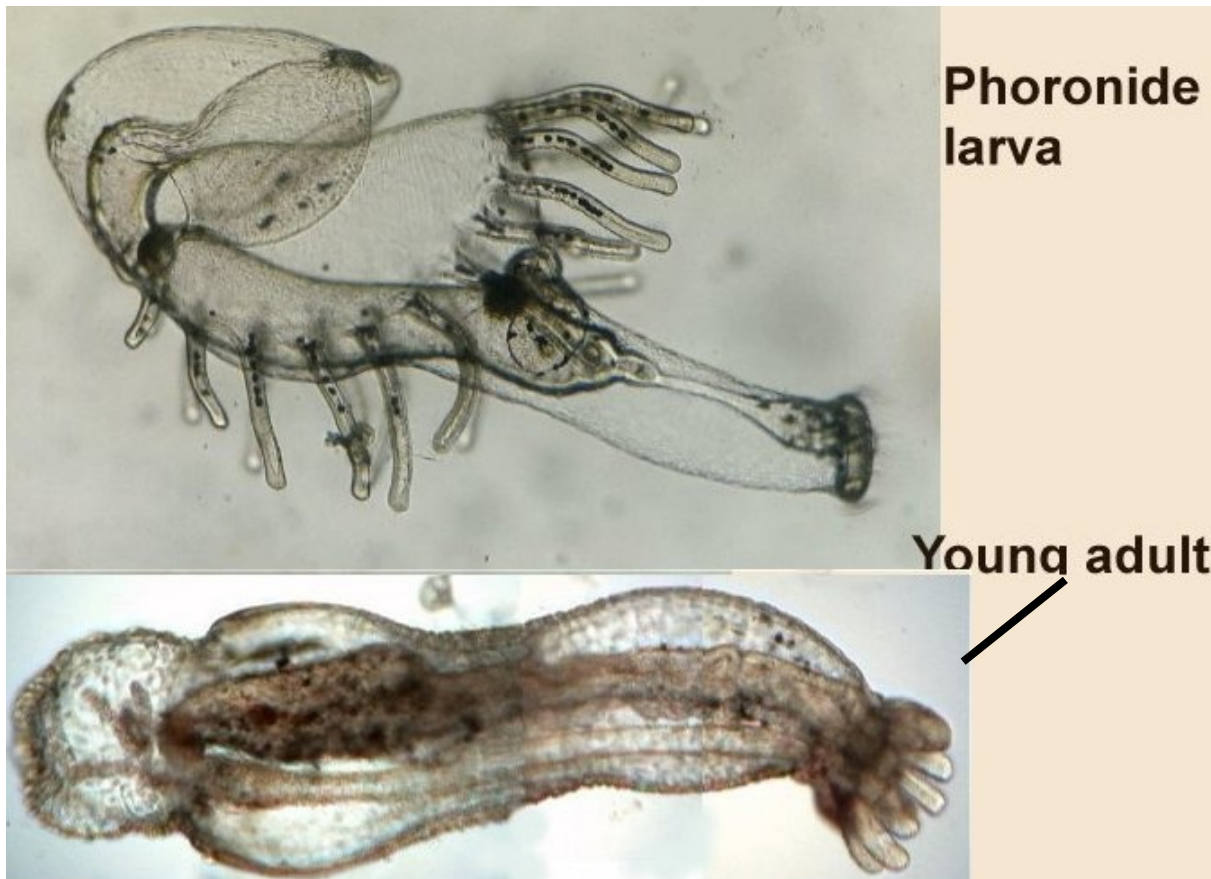
Crabs have two larval stages: Zoea stage then a megalops stage. The first stage of a *Porcelanosa* crab is shown below. In fact *Porcelanosa* is closer to the lobster family! Large appendices are used like flotation aids (scale bar is 0,1 mm).



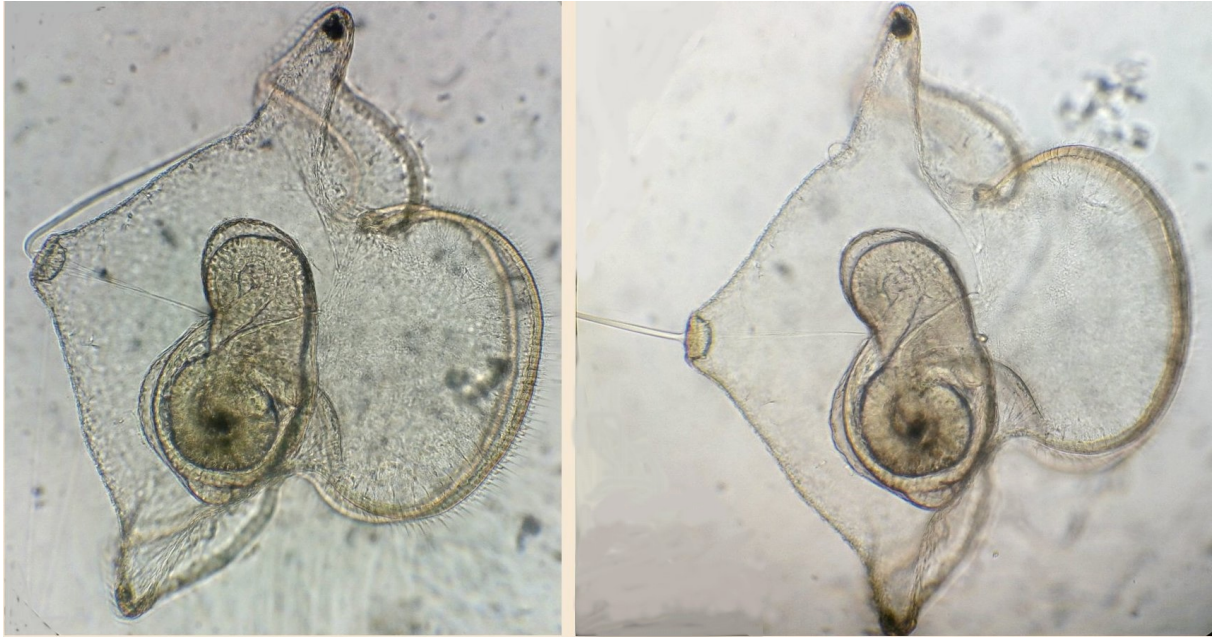
BONUS! A creature I have **never found** during 20 years of sampling plankton:
Amphioxus (lancelet) larva.



Very strange is the larva of a phoronid worm (also called horseshoe worm because its lophophore looks like a...horseshoe!) . Larva I have sampled became a young adult in my Petri dish and I remember I could see two blood vessels in which red cells were circulating. To be honest, the two pictures below are not from the same specimen, and probably not the same species too!



A final worm: Nemertea larva: *Pillidium* (Nemertea also called ribbon worm, the largest species can reach 55 meters long!) Two pictures with two levels of focus showing ciliated bands and the young worm growing like a dark mass in the larval center. Sorry I don't have a picture of an adult form but you can easily find it on the Web!



Comments to the author are welcomed, email – micromars1 AT orange DOT fr

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