



Bocas ARTS



Video transcript

How to dissect a sea anemone

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- In this video, I'm going to show you how to dissect a sea anemone.
- Because sea anemones are relatively simple animals, they have few characters, and the systematics of the group is based on the anatomy and histology of the polyp.
- The systematics of sea anemones is based on characters such as structures in the column, the number and arrangement of tentacles, but it is mainly based on the internal characters that we need to dissect the animal to see.
- For this, the best way to proceed is to start with a cross section of the animal.
- The arrangement of the mesenteries is one of the main characters to identify a sea anemone.
- We also need to see if these mesenteries are perfect or imperfect, this means if they reach the actinopharynx, and then with that, we need to do our section on the level of the actinopharynx.
- The actinopharynx is more or less in the upper half of the animal, so proceed with a cross section at that level.
- We do not really need to do a cross section all the way, but just enough so we can see the animal.
- It's important to start with a cross section because this will show the complete numbers of mesenteries. Determining their number and arrangement could be easier than if you perform a longitudinal section of the animal.
- Once you have a section of the actinopharynx level, you can proceed on sectioning the upper half or distal part of the animal in order to observe the marginal sphincter muscle.
- Here we have our actinopharynx, and all these walls are the mesenteries.
- We need to count all the mesenteries and see how many of these reach the actinopharynx and how many do not. We also need to observe the distribution of the gametogenic tissue.
- The marginal sphincter is that thick circular muscle that helps the anemone close the oral disc.
- This muscle is situated on the margin of the anemone.
- In some cases this muscle can be observed from a gross-dissection, but in most cases, histology is necessary to locate the muscle.
- To observe the distribution of fertility in the mesenteries, we need to go to the lower part, the proximal part of the anemone. Because that is where the gametogenic tissue is.
- So in this case, we need to make a second cut, lower in the column.
- Once we have our animal sectioned, we can put it in water in order to make the observations easier.

- Depending on the size of the animals, these observations can be done without a compound scope, but most of the time we need to use a compound scope.
- Now our job is to determine how many pairs of mesenteries we have, how many of them reach the actinopharynx, where are the siphonoglyphs, and all the other characters that are necessary to identify a sea anemone.

