



Video transcript

Nemerteans Taxonomy Methods

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- Nemerteans are positively thigmotactic, negatively phototactic, and positively geotactic, which means that most species of benthic nemerteans lead a cryptic mode of life hiding underneath stones, in crevices of rocks, among kelp holdfasts, algal turfs or among root masses of sea grass.
- This makes it difficult to find nemerteans.
- In parts of the world with substantial intertidal zones, one can find nemerteans by turning rocks in the intertidal, by examining rock crevices, or by digging in the mud or sand flats.
- Subtidal nemerteans can be collected by dredging, but it is best done by SCUBA diving.
- First, you might want to take a picture of the site and of the type of substratum that you are about to collect.
- In warm parts of the world, many species of nemerteans are associated with coral rubble.
- What you are looking for is dead coral rubble that is fairly three-dimensional and porous to allow a variety of fauna to inhabit it.
- When collecting, avoid damaging live coral, place the piece of rubble into a Ziploc bag and close the bag.
- This will prevent smaller nemerteans from washing out of the rubble as you are bringing it up to the surface.
- Place the Ziploc bag inside a catch bag.
- A catch bag full of coral rubble can be pretty heavy and difficult to swim with.
- So, to raise it up to the surface, it can be helpful if you can buckle it up to a rope and have someone up in the boat help you raise it to the surface.
- Once in the boat, take the rubble out of the Ziploc bags and place it into bins or buckets filled with some seawater to prevent them from drying out.
- Back at the lab, place rubble into bins or buckets, fill them with seawater so that the level of the water is approximately 5 cm or more above the level of the rubble.
- And now you wait.

- As the water becomes de-oxygenated, the worms change their behavior and they become positively phototactic and negatively geotactic coming up to the surface.
- Check the surface of the water periodically, every hour or so, for the next one or two days.
- The first nemerteans usually appear an hour or two after the rubble is submerged.
- It's helpful to have a flashlight to look for the worms on the surface.
- Pick up the nemerteans from the surface using a pipette with a large bore and quickly move it into a bowl so they don't get stuck on the pipette.
- Nemerteans can be distinguished from other worms in the sample such as annelids by their smooth gliding movements, by lack of appendages or segments.
- There can be quite a few different species in a single sample.

