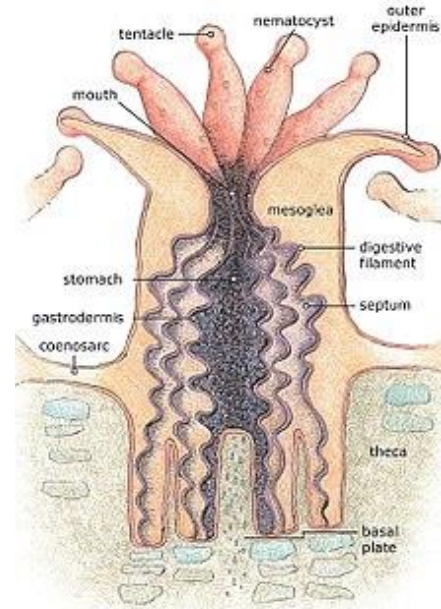
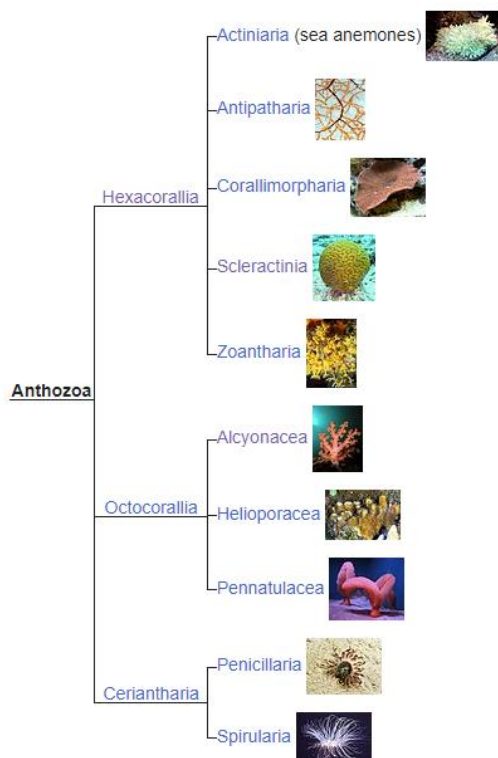


General recommendations for Anthozoa Phylum

Anthozoa is a class of marine invertebrates which includes the sea anemones, stony corals and soft corals. They are distinguished by polyps with radial partitions or mesenteries projecting from the body wall into the gastrovascular cavity.

Anthozoa is subdivided into three subclasses: Octocorallia, Hexacorallia and Ceriantharia, which form monophyletic groups and generally show differentiating reflections on symmetry of polyp structure for each subclass.



Sampling

After collection (by hand, dredge/trawl, brushing), specimens are maintained in ambient seawater containers. At this step, specimens are identified with:

- sampling date
- station number
- name species / taxon
- "GENOME" label (to indicate that this specimen will follow the ATLASea cold chain)

For big colony of corals of Scleractinia, it must be take by hand and not a big piece to not damage the habitat.

After dredging or trawling, soft coral may be in poor condition, it must be processed quickly.

A lot of Cnidaria are CITES.

Photography

Ideally, images should be taken in the highest quality resolution (macro lens recommended) and where no voucher specimen parts are retained the pictures will serve as voucher and should include identifying features.

Specimen will be photographed in a glass container with sea water.

Water should be clean and changed between each specimen.

If possible, discuss with the taxonomist to find out the important morphological elements to see, and therefore to photograph.

Sometimes, shaking the coral may allow the tentacles to comes out. Do it carefully.

Take a general photo of the solitary specimen or the colony.

Take closer look for the tentacles and the polyps.

With the specimen, one picture is taken with a **scale**, the **code identifier** (e.g. ATLASea QR code, specimen **MNHN-IK** barcode) and the station label.

Dissection for DNA barcoding and Genome Sequencing

1. Specimens must be sampled and frozen while still **alive**. For colonial taxa, ensure sampling of an **individual colony**.
2. **Remove** all visible contaminants and **epibionts**, including any substrate, although gut contents and symbionts will remain (wash and gently brush in FSW).
3. Depending on species and conditions, tissue sampled may be the **polyps**.
4. Dissect :
 - a. 10 pieces (approx. **300 mg** each). Cut each piece into smaller before putting them in separate tubes (with unique identification labels) ⇒ for **flash-freezing** in liquid nitrogen.
 - b. 10 pieces (approx. **300 mg** each) put in **ethanol** 98% and stored at -20°C.
5. Weight the tubes and scan the barcode on the log sheet.

Actiniaria (solitary): individual tentacle or piece of column tissue.

Alcyonacea (colonial): section of polyp tissue ('small amount') – dependent on polyp size. Blot to remove excess seawater and mucus.

Corallimorpharia (Corynactis; solitary but clonal): tentacle(s) or piece of column tissue, size dependent. Ceriantharia (solitary): individual tentacle or piece of column tissue.

Pennatulacea (colonial): section of polyp or polyp leaf.

Scleractinaria (solitary or colonial): polyp tissue (for barcoding), larger specimens – tissue from mesentery (section of gastrovascular cavity); small specimens – 'entire sector' including skeleton submerged in lysis buffer).

Zoantharia (colonial): polyp tissue (suggestion).

Backup/Biobanking:

1. Dissect at least 1 and up to 10 pieces in separate tubes (with unique identification labels).
2. 10 tubes by specimen
3. Tubes should be flash-frozen in a liquid nitrogen.

Voucher & Taxonomic Assignation samples:

Voucher will be storage at MNHN.

1. Keep the leftover organism, as many hard parts/tissues as possible or another individual from the same population and checked by a taxonomist as belonging to the same species.
2. Place the barcode **MNHN-IK** identifier and the station label with the organism in tube/container.
3. Put 75-80% ethanol in the tube/container. There must be 10 times the volumes of specimen in alcohol.
4. Put the tube/container with the others specimens in the ATLASea barrels for shipment to the MNHN.