

## ARMS Retrieval

### Materials:

- 1 clean recovery crate (milk crate) lined with 100-microns nytex mesh
- 2 hooked elastic cords
- 1 battery operated bubbler with tubing and air stone
- 1 hammer
- 1 chisel
- Zip ties
- 1 dive knife or dive scissors
- 1 tub big enough to contain the ARMS with lid cleaned with 10% bleach and rinsed
- 1 clean bucket
- 1 40-microns plankton net
- Optional: water pump

### Procedure:

1. On the boat or shore, fill the clean tub with filtered sea water using the bucket (or water pump) and the plankton net. Be careful not to touch the water with bare hands to avoid introducing exogenous DNA.
2. Place the operating bubbler in the water
3. Underwater, take photographs of the ARMS and surroundings before retrieval
4. To orientate the ARMS, you can mark a corner of the ARMS facing the direction of your choice using a zip tie
5. Carefully place the mesh-lined milk crate on top of the ARMS, making sure to not disturb the communities living inside the unit
6. If organism growths prevent you from securely attaching the crate, you can carefully trim the organisms with the dive knife
7. Secure the milk crate with the bungee cords
8. Remove the anchoring system
9. Bring the ARMS back to the surface, invert the unit so that the base plate is facing upwards and lift the ARMS off the water. Water will drain off the unit through the mesh so that no animals will escape
10. Place the unit immediately in the aerated water tub. Ensure that all the ARMS layers are submerged. Process the ARMS unit as soon as possible.

## Illustrations:



Preparation of the recovery bin where the retrieved ARMS will be placed. Filtering seawater through a 45- $\mu$ m mesh.

Securing the crate on top of the ARMS with bungee cords. Removing the anchors to retrieve the unit.



The ARMS is lifted upside down out of the water and placed in the recovery bin with the filtered seawater. Bubblers are added for oxygenation.