Post Dive Sample Handling

INDEEP
Staff Scientist responsible: Fabio De Leo

INDEEP - Larval settlement plates/frames INDEEP (PI: Anna Metaxas, Dalhousie Univ.; Staff Scientist: Fabio De Leo)			
Site/Dives	**Barkley Canyon - PODs 1,2, 3**	**Protocol applies for Dives 1,3,4,7,8,10**	
Brief Description	The experiment aims to collect settling invertebrate larvae on various types of substrates for a global assessment of deep-sea biogeography (i.e. how far animals disperse and which types of habitat they occupy in the deep-sea.		Basically we will recover the old frames (store the collected individual 5 x 5 X 5 cm cubes in 80% Ethanol solution) and re-deploy new ones in the same sites.
Materials	(1) 3 new (35 x 35 x 35 cm) frames (to be deployed at the same sites as the ones that will be recovered)	(2) storage vials (sealable tap-wares) (3) gaffa tape (4) bolt cutters (5) surgical gloves	* INDEEP Frames (PVC) need to be reinforced (a few bolts in the legs) to be able to be handled by the ROV manipulators.
ROV rigging	Milk crate (Biobox will not be used until a later dive).		
Procedure/ROV handling	**(1) RECOVERY** - Locate frames (all frames are near the camera tripods in PODs 1,2,3. Take video before recovery. Carefully place frames in milk crate. **(2) DEPLOYMENT** - Bring frames attached in the ROV (or in milk crate, whichever space available). Place in the locations designated in the diagram below (Figure 2)		
Procedure onboard (pos-recovery)	Ensure preservation boxes, Gaffa tape and bolt cutters are at hand prior to recovery of plates 1) As soon as possible following recovery, using bolt cutters, cut through threaded nylon rod each side of each of the substrate blocks (as indicated on Figure 1, first inset) 2) Handle each block as little as possible to prevent rubbing anything off! Use surgical gloves. 3) Place each block into the appropriate (NOTE LABELS) individual ethanol pre-filled plastic containers provided. These are pre-labelled with rock, plastic, green scrubber and wood (Figure 1). TAKE CARE when opening containers as each one is half-filled with preserving fluid (Ethanol) 4) Ensure each container is snapped closed to make it water tight otherwise the preserving fluid (and animals) will leak out 5) Use Gaffa tape around the seal of each box to ensure no leakage during storage/transit. 6) Unscrew the wood block from the frame and place into the long plastic box provided (labelled wood). Snap closed. Use Gaffa tape around the seal.		
Storage	Store containers in a safe place (action packer ideally in room temperature)		

Figure 1. Cut between blocks with bolt cutters as indicated by the arrows (left). Image in the far right shows the tap-ware containers that will be provided, which will be pre-labelled (by substrate types and replicates) and pre-filled with Ethanol solution.

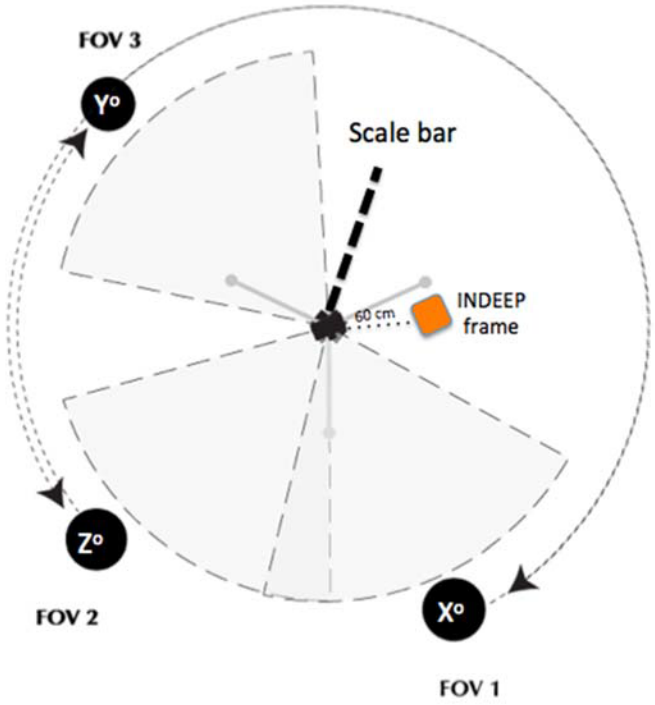

Figure 2. Schematic diagram of a general camera Tripod (e.g., POD1, POD2, POD3). INDEEP frames are positioned near the tripod foot. New frames should be redeployed in the same spots as the current ones. (* Ignore arrows indicating camera panning schedule).

Bait Trap
Staff Scientist responsible: Fabio De Leo

Baited traps (PIs: Marjolaine Matabos, Anna Metaxas, Paul Snelgrove, Staff Scientist: Fabio De Leo)			
Site/Dives	**Barkley Canyon - PODs 1,2, 3**	**Protocol applies for Dives 1,2,3,5**	
Brief Description	The scavenger/baited traps are designed to capture animals that are seen in the video imagery of both stationary cameras and video transects. The collected animals are used for proper taxonomical identification. Animals need to be in as good as possible condition for identification purposes.		
Materials	- 6 Fish/invertebrate traps (4 should suffice but 6 to have spares) - Polypropylene lines with whiffle balls - Diving lead weight (3-5 kg) - Cable ties (tick) - Mesh bags (or Toby tea boys) for bait odour plume		- **Bait** (fish cubes) to be stored at the freezer and thawed at least an hour prior to each dive.
ROV rigging	Milk crate (Biobox will not be used until a later dive).		
Procedure/ROV handling	Place the baited trap at a distance of at least 100 m away from the camera tripod. Preferably deploy the traps in the bottom at the beginning of each dive and leave it in the bottom for as long as possible. Preferably recover them at the last dive at the site. Put trap inside milk crate to avoid animals to be washed away during the ascent.		
Procedure onboard (post-recovery)	Place all collected specimens in jars containing 10% buffered formaldehyde solution or Ethanol depending on the organism. Preferably sort the organisms according to large groups (e.g., crabs, shrimps, fish, etc).		
Storage	Store containers in a safe place (action packer ideally in room temperature).		

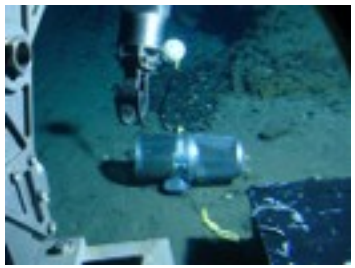


Figure 1. Examples of baited traps.