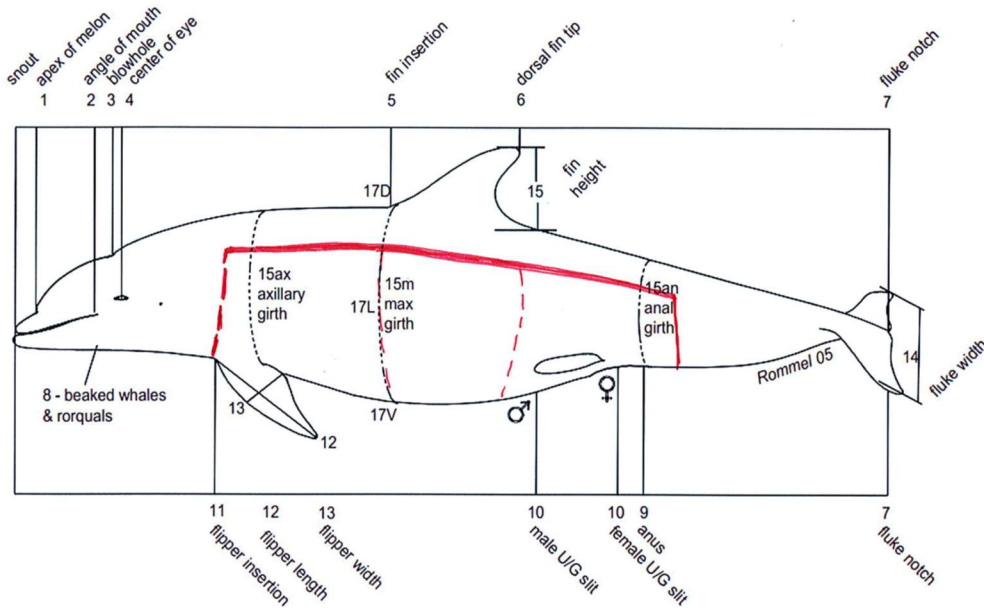


BASIC SAMPLING PROTOCOL FOR DECOMPOSED CETACEANS

Cut a large rectangular or curved area of the skin and blubber away on one side of the animal to expose the ribs and abdomen. The drawing shows the side area of the body to target for removal of the skin and blubber layer. Imagery below shows the initial cut and how to work away the layer of skin and attached blubber to access organs for sampling. Garden shears can be used to remove ribs if they cannot be pulled off by hand once the skin and blubber layer has been removed.



- Head can be cut off of the dolphin or whale by feeling for a natural depression about 3-6 inches (depending on carcass size) behind the blowhole that will allow for an easy separation of the skull and first vertebrae.
- The organs for collection are listed below and the necropsy sample list assumes that the animal is fresh enough to be able to distinguish organs from one another. Decomposition may make it impossible to identify organs such as testes or the reproductive tract in females. It is possible the animal will be so decomposed that it will be soupy and only stomach contents can be collected by feeling through the body cavity for prey remains. There

could also be a hole in the body cavity with stomach contents apparent on the sand. In these cases, collect all prey items and pieces of any tissue that look like an organ.

MINIMAL SAMPLE COLLECTION:

- Collect all stomach contents by tying off the esophagus and intestine with twine or string (if intact and identifiable) and putting the intact stomach in a trash bag. Otherwise, scoop up and collect all visible squid beaks, crustacean remains and fish otoliths, and any potential prey remains that may be found by hand when digging through the soup of decomposing organs. Anything that may be prey should be collected. Freeze the intact stomach or collected prey remains.
- If stomach is not identifiable because of decomposition, you can also remove big pieces of organs at a time and put the removed tissues in a pile by the dolphin or whale carcass after feeling through the tissue to make sure you have not removed hard prey remains like squid beaks and carapace remains. This will allow you to systematically remove organs from the body cavity until it is empty and you can dig in the remaining soup by hand to see if there are any prey remains. Cetaceans do strand with no prey in the stomach so it is possible no prey will be located.
- Gallon ziplock bag sized chunks of anything suspected to be a different organ (lung, kidney, heart, liver, testes etc.) for freezing.
- Gallon ziplock bag of skin/blubber/muscle sample from the freshest (down-side) part of the carcass, usually with the least sun exposure for freezing.
- Brain sample scooped from back of head with a spoon and placed in a ziplock bag for freezing.
- Eyes in ziplock bags (if still there, eyes are often pecked by birds or missing).
- Teeth on lower jaw if present which can be pried out with a screwdriver (may be female or young male without teeth).
- ~3 vertebrae and ~2 ribs collected and bagged.

LABELING:

Labeling: If possible, please label the samples as best as you can including date and location

If you can identify the organ that is best

- If you find the left vs right lung, kidney, ... please label it "left lung".

If you cannot identify the organ, any information helps.

- "lung?", "near the heart", "close to the genital slit", "in the esophagus" etc.

You can write on the bag, attach a tag, or label waterproof paper (rite-on-rain, photo-paper) in the sample bag

Photos: We recommend having your photographer not touch the animal or samples so they can remain with clean hands to photograph and possibly help with labelling. There are never too many photos.

- Photos of the full animal before necropsy from multiple angles.
- Photos of the surrounding environment, including reef and rocks it likely came over.
- If the animal is small enough to roll over, photos of both sides is ideal.
- Photos of any visible injuries, hooks, nets, shark bites.
- Photos of head from a side view and dorsal fin profile.
- Photos of the body cavity:
 - Before taking samples.
 - Identifiable organs before removing them and after removing them.
 - Unknown organs that are sampled or that might not be sampled.
 - Parasites, bruising, bone breaks etc.
 - Anything that could have been human:
 - Plastics, hooks, gunshots, propeller strike, evidence of poached teeth.

Tissue	Frozen	SAMPLE CHECKLIST
Skin and blubber	<input type="checkbox"/>	Collect from most fresh area, bottom-side, least sun exposed
Muscle	<input type="checkbox"/>	Collect from most fresh area, bottom-side, least sun exposed
Heart (whole)	<input type="checkbox"/>	
Lung (right)	<input type="checkbox"/>	
Lung (left)	<input type="checkbox"/>	
Liver	<input type="checkbox"/>	
Kidney (left)	<input type="checkbox"/>	
Kidney (right)	<input type="checkbox"/>	
Testis (right)	<input type="checkbox"/>	Full reproductive tract if female
Testis (left)	<input type="checkbox"/>	
Brain sample	<input type="checkbox"/>	Scooped out of back of skull
Bones	<input type="checkbox"/>	~ 3 vertebrae and ~ 2 ribs
Stomach Contents	<input type="checkbox"/>	Tied off at esophagus and intestine, or scooped

MEASUREMENTS: Only TOTAL LENGTH is needed which is measured as a straight length from the tip of the rostrum to the tail fluke notch.

Questions? Contact Kristi West at kristiw@hawaii.edu