**Rapid Surveys - Dugan Vertical Transects**

1. Measure beach characteristics. With a digital inclinometer, measure the slope of the beach at the Water Table Outcrop (essentially where damp sand meets saturated sand).
2. Measure width of upper beach (basically high zone above where talitrids live)
3. Run three randomly selected vertical transects (For beaches, use the measuring wheel which also marks the transect in the sand. For rocky shores, lay vertical transect tapes). Here is how Jenny describes the placement of the upper part of the transect: “e.g. the bluff toe,  perennial vegetation line, or primary foredune toe.  We will score wrack that is cast above that boundary too but note it is above the long term intertidal boundary.  Spring can be tricky since there are new veg recruits but we go to the older vegetation and score the new recruits.” Here is her description from Dugan et al. 2003 “On each beach, three transects were established extending from the landward boundary of the beach (the lowest edge of terrestrial vegetation or the base of the sea bluff) to below the lowest swash level. When possible, an area of the beach with a natural landward boundary and a measurable supralittoral zone was sampled.”
4. for the three transects at each site and expressed as square meters of wrack m-1 of beach. The percent cover of wrack was calculated by dividing the total wrack intersected (m) by the intertidal width of each transect. Means of percent cover were also calculated for the three transects at each beach.”
5. Record transect length.
6. For each piece of wrack encountered that is >16mm, estimate length and measure depth. “All wrack, debris, driftwood, carrion, or tar of 0.01m or more in width that intersected the transect line were measured, categorized, and recorded.
7. The total width of wrack encountered was then totaled for each transect. Means of wrack cover were calculated Record depth in the intersection of length and species.

Needed Equipment

* Measuring wheel
* 3 Transect lines (Metric, ideally 50m)
* Measuring tape
* GPS Unit
* Data sheets (Waterproof)
* Clipboard
* Pencil
* Do we want to use marked data sheet to create size classes?

**Rapid Surveys - Wrackline Surveys/Ellipse Surveys**

1. Walk parallel to waterline. Find a wrack pile over 1m in length, record maximum length, maximum width, and depth of the wrack.
2. Visually scan the surface of the wrack for Sargassum horneri, if located, record maximum length and maximum width of the S. horneri
3. Repeat until as many as 15 wrack piles are measured. Do not score wrack piles that have any vertical overlap (that is, measure the first piece and then walk until the next new, non-vertically overlapping piece is found).

Needed Equipment

* 2 Transect lines (Metric, at least 25 m)
* Measuring tape
* Meter stick
* Data sheets (Waterproof)
* Clipboard
* Pencil
* GPS with batteries

**Rapid Surveys - Sargassum horneri Timed Search**

1. Divide the intertidal into two zones (High and Low).
2. Scan each zone for 15 minutes. This time can be reduced with multiple observers (e.g. if you have three observers, they could scan each zone for 5 minutes each).
3. Count each Sargassum horneri “unit” and measure length, width, and depth (I used “unit” to allow for clumps that may consist of multiple individuals that are difficult to disentagle….we are after volume so I’m not super worried if we don’t have a good estimate of number of thalli).

Needed Equipment

* Stopwatch
* Measuring tape
* Data sheets (Waterproof)
* Clipboard
* Pencil

**Beach Characteristics (from Dugan papers)**

1. Measure orientation in Google Earth Pro.
2. Measure beach length in Google Earth Pro. (“the sandy shoreline distance (km) of continuous beach at each site, which was typically bounded by rocky headlands”).