Frenchman Bay Partners Rockweed Group

Group Meeting July 26, 2016 3-5pm

Gordon’s Wharf, Sullivan

In attendance: Chris Petersen (Frenchman Bay Partners, College of the Atlantic) and Hannah Webber (Schoodic Institute) (co-moderators),

Emma Fox (University of Maine), Bob Deforrest (Frenchman Bay Partners, Maine Coast Heritage Trust)), Mark Whiting (MEDEP [retired], Hancock County Soil and Water Conservation District), Robin Hadlock-Seeley (Shoals Marine Lab, Rockweed Coalition), Shep Erhart (Maine Sea Vegetables, Maine Seaweed Council).

**1. Introductions**-- Members of the group introduced themselves. People reviewed their affiliations but also their reasons for being there, with a variety of reasons from seeing the ecology rockweed as really wonderful and ecologically important (for example, right now small seastars are settling on rockweed and they rarely are seen on Fucus) to wanting to see a more collaborative process for combining our understanding of ecology and harvesting of algae.

**2.   Frenchman Bay Partners Conservation Action Plan**

**a.   What it looks like for current targets. (Chris)**

Chris went over two handouts, the 2013 Frenchman Bay Plan, and a separate document that summarized the current strategies and goals for the four other conservation targets of Frenchman Bay Partners (FBP). Chris outlined the steps in the Conservation Action Planning process, and the group talked about the advantages of the process, although as a group we have already gone several steps into the process, since rockweed is already identified as a conservation target. CAP organized threats in a much more objective way.  This led to a discussion of the current threats.

**3. What are the concerns around rockweed**

(Moderator note in original agenda: we want to make sure not only that all concerns of people at the meeting are heard, but if we are aware of other concerns as well,  for example from harvesters, processors, DMR)

* That current ‘legal’ harvesting of rockweed (pending court cases) is unsustainable
* That rockweed harvesting threats lead to regulatory change that affects harvesters of other algae and ‘regulates them out of the industry’, especially for small harvesters.
* That regulation would happen at a state level, with little or no local input.
* If sector management were to be broadened, that one company could dominate allocation (in Canada, one company has all of the sectors). Currently there is informal division of habitat among general seaweed harvesters, and Shep recounted times when he has worked with harvesters to define exclusive collection areas. One question was whether the Maine Seaweed council could ever take on a mediation role.
* That only larger harvesters of rockweed would be able to harvest at a distance from a processing plant (currently there are geographic limits to harvest in that harvesters need to be near a place to land the harvest and near a processing plant).
* Places with access nearby can have much higher harvest pressure than places with less access.
* The idea that the size of harvest is somewhat sustainable now, but that soon we might have increased harvesting pressure, so that we have an opportunity to think about steps now before we are in emergency mode.
* Climate change is a huge threat.  This includes climate variability, ice damage and wave action recently had a major impact on many seaweed beds. Many kelps are not resistant to freezing.
* The role of serial harvesting in an area, and the different meanings of sustainable. It appears that biomass harvest is sustainable in mid-coast rockweed beds, but the question came up if those beds have the same ecological role that unharvested beds have.
* The idea of strip or patch harvesting versus larger area harvesting as a way to possibly maintain ecological function of beds.
* Indirect ecological effects on shorebirds.  In Corea, the claim that after rockweed harvesting was done there that they didn’t see shorebirds returning to the cove.
* Invasive species - the group didn’t feel like this was a current issue having a large impact on rockweed, but talked about the distribution of Codium up to Blue Hill Bay, tunicates, bryozoans.
* Oil tankers and tarsands being shipped across the Maine coastline from St. John.
* Human error in harvesting leading to holdfast removal

The group also had questions with what happens when there are large amounts of tubed weed, *Vertebrata (=Polysiphonia) lanosa* is on rockweed, we guessed that it didn’t affect product.  We also are not sure how much our conversations on rockweed are parallel with general concerns with edible algae harvest, and which are distinct, and whether it makes sense to ever talk algal harvest more broadly in this group.

**4.   What do we know about rockweed in Frenchman Bay**

**a.   Previous data on age structure/growth rate data from Schoodic using Signs of the Seasons protocol (Hannah)**

 Hannah presented the data that she has collected with citizen science groups on rockweed phenology, age structure, and growth rates from the Schoodic Peninsula (documents are in the shared google folder).  She found that growth rates were relatively high (a bit above 10 cm/ year).  Hannah reviewed data on minimum age estimates, and seasonal patterns of plant reproduction.

 The discussion here was centered how to get similar data for the entire bay.  It was suggested that we start by doing surveys on conserved lands and see what kind of coverage that gives us on the bay.  Hannah will be working with Chris’ marine biology students at COA this fall to begin some of that work.  The success of this method to produce a sense of growth variation in rockweed in the bay will depend on the granularity of the growth rate data, in other words how much it varies on a small spatial scale. If most of the variation is between points and upper bays, then it won’t take lots of sampling to get a good ‘heat map’ of growth rates in the bay.

 In terms of estimating the extent of rockweed beds and the biomass of those beds, Bob suggested that we could contact Lighthawk, who works with nonprofits to do flyovers of areas.  Several groups use google earth or satellite imagery to try to help them with estimates of rockweed bed area.  Harvesters or researchers then use imaging programs such as ImageJ to estimate areas of beds.  For density estimates, all methods seem to involve some form of destructive sampling, often with .5mx.5m quadrats where all algae is removed and weighed.

It was also mentioned that some in the industry to do not believe that in the current market and processing structure that Frenchman Bay will be a large target for rockweed harvesting. The issues might include total resource, distance to processing, and shore facilities with access to a crane.

**b.   Harvest data/economics (Emma)**

Emma reviewed data on harvest that she had received from a request to the state, the documents are in the shared google drive under rockweed and seaweed economics.  We talked about the problems of getting data for smaller areas when the harvesters or processors hit below 3, and how that makes it tough to understand local harvesting patterns.

**3.   What do we want to know about rockweed in Frenchman Bay**

We already touched on several of the areas where we wanted to know information, mostly about the biology of local rockweed populations.  We had been concerned about collecting these types of data on private lands, and then making that data public.  We decided previously in the meeting to skirt this issue by starting on conserved lands, and then seeing how far that information gets us.

**4.   What are our collective, sustainable goals for rockweed in Frenchman Bay**

We were running out of time and didn’t address this question directly.

**5.   What are some possible ways to proceed**

**a.   Examples from Cobscook and current DMR management**

We asked the general question of how well sectors worked in Cobscook Bay.  The management scheme there has the most in common with many of the recommendations from the Fisheries Management Plan (FMP) for rockweed.   Shep pointed to the recommendations on p. 33 of the FMP as important, and Chris had listed the goals and objectives from the beginning of the FMP as potential important guiding principles.  Individuals talked about the importance of a training program for harvesters in a management plan. We reviewed some of the current standards for sector management, and pointed to several that we liked.   Among other things, we talked about the importance of multi-year leases of sectors, so that harvesters felt a need for multi-year conservation.

**Misc:  Other thoughts that we had at the end of the meeting (under the heading any ideas are fair game):**

Within any management plan – how do we create conservation areas for both research and conservation.  Do those areas transcend rockweed? We thought not to pursue this option, that it makes the group look like it is trying to usurp natural resources, and could negatively affect the participation of both upland landowners and harvesters, or two most obvious stakeholders.

\*\*\* For our next meeting we are hoping that Bob can compile layers of potential conservation areas that we could use for estimating growth of rockweed

\*\*\* We thought that our next meeting could be in September