Rockweed in Maine
The Beaches Conference
June 14, 2019

Moderator: Meagan Sims, Maine Department of Environmental Protection
Note Taker: Suzanne Kahn, Wells Reserve

Speaker: Ken Ross (Small Business Owner, Pembroke, Maine)

- The rockweed dispute is a multifaceted issue.
- Ken is a landowner of waterfront property and rents his place in Cobscook Bay out to eco-tourists. The property has been in the family for over one hundred years. Ken is also a member of the Rockweed Coalition.
- Since the 1990s, the use of rockweed has increased, with fertilizer being the primary use.
- What effects does the cutting of rockweed have on the ecosystem? We don't know.
- Rockweed at high tide sits at the surface and lessens the force of waves on the coast. It is also a home for lots of critters.
- The bulk cutting of rockweed for agricultural purposes seems to be doing harm on the rockweed.
- Ken thinks of the rockweed as a forest.

Speaker: Robin Hadlock Seeley (University of New Hampshire)

- Robin promotes rockweed conservation.
- "The trees of the forest are the large seaweeds, known as rockweed." (Rachel Carson, 1955, Edge of the Sea)
- Rockweed provides habitat for fish and more than one hundred marine animals.
- Millions of pounds of rockweed are cut from Maine's shores each year.
- Thirty-five fish species depend on rockweed, and twenty-five of these are commercial fish species.
- Seabirds forage for fish in the rockweed.
- Rockweed provides a lobster nursery and a living shoreline.
- What does "sustainable seaweed harvest" actually mean? In terms of ecological sustainability, the value is habitat, and this is how Robin defines sustainability. Rockweed harvesters define it in terms of sustainable biomass yields, seeing the value as biomass.
- There is no state limit to how much rockweed can be taken.
- In 2015, there were lots of lawsuits and in 2019 it was decided that rockweed is owned by private landowners. Robin sees this clarity as a positive shift.

Speaker: Hannah Webber (Schoodic Institute)

- Hannah is a PhD student at the University of Maine, working with CRASSH (Conserving Rockweed Animal Systems for Sustainable Harvest). Her project objective is: To assess animal and abiotic responses to rockweed harvest. She is looking at the ecosystem linkages and how harvesting influences the system.
- Her project includes 54 sites around Maine, and these include both harvest and control sites. Pre-harvest and post-harvest data are collected.

- The sites are commercial size sites (100 m).
- The project includes biomass assessment, architecture, abiotic conditions, invertebrates, bird use of rockweed, and bird surveys.
- Her project provides an opportunity to engage landowners and citizen scientists in research.

Speaker: Nichole Price (Bigelow Laboratories for Ocean Sciences)

- Rockweed Harvest to Mitigate Greenhouse Gases
- Sources of greenhouse gases: 82% carbon dioxide, 10% methane, 6% nitrous oxide, and 3% fluorinated gases.
- Phytoremediation is using underwater forests to mitigate coastal ocean acidification.
- How does harvesting impact rockweed's ability to mitigate?
- At Bigelow Labs, she is conducting a study using a harvest area and a no harvest area. The absorption rate of carbon dioxide and the change in pH in the water are being measured.
- The productivity of the harvested area increases over time (after 4-9 months). The increase doesn't happen initially after the 16-inch cut, but after the 4-9 months, the increase happens.
- Kelp meal has lots of nutritional properties and is used in dairy farms in the Northeast and Midwest.
- At increased amounts of kelp meal in cows (using it as their food source), the methane producing bacteria in cows decreases. 17% of methane emitted globally comes from livestock.

Speaker: Greg Tobey (SOURCE Inc.)

- SOURCE uses mechanical harvest boats designed to protect seaweed. They can only cut to the 16-inch limit.
- The boat creates underwater noise so critters are scared away before the rockweed is cut.
- SOURCE waits for the spore season of rockweed to happen before harvesting with the boats. They take rockweed measurements, too.

Speaker: Tollef Olson (Ocean's Balance)

- Our food model is broken and seaweed is an important food--and has been for a long time.
- We need to look at food sources in the ocean, with so little arable terrestrial land available.
- There is no better natural fertilizer than seaweed.
- He put in the first for-consumption seaweed farm in the United States.
- We need regulation and management and the use of proper techniques for harvesting.
- He is against the privatization of seaweed ownership.
- We need to incorporate seaweed into everything we eat.
- Chemical runoff is a problem, so using natural fertilizers like seaweed is important.