

The most resilient and just systems are those that are managed at the smallest practical scale.



Page 1. So far, I haven't heard anyone speaking about the fact that a healthy bed of rockweed with a majority of seaweeds more than ten years old has a wave-dampening effect that protects the shoreline from beach erosion. Once upon a time, at the beach location in this photo, there was enough soil to grow conifers, and now it's gone. The upland owner has an interest here when it comes to protecting the shoreline vegetation and trees which serve as a windbreak while holding rocks and soil in place.

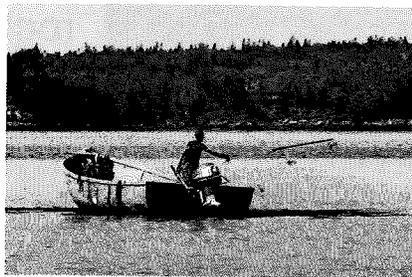
Why do I say "with a majority of plants more than ten years old"? In the first decade of its growth, rockweed becomes a bushy plant about three feet tall with half of its biomass above midline, half below midline. You can determine the rate of growth by measuring the distance between single air bladders on the stem. That distance is how much rockweed grows in a year, and where I live, it averages out to 3-4" per year. In its second decade of growth, rockweed changes its form to resemble a maple tree growing in a climax forest with half of its biomass in the upper third of the seaweed, half in the lower two thirds.

The upland owner, observing rockweed over time, can become aware of all the relationships.

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Page 2. This **overarching canopy habitat** provides food, shelter, and reproductive territory for 150 species, including shellfish, adult and juvenile fish, crabs, and lobsters. In order to protect this vital overarching canopy habitat that also has a wave-dampening effect that protects the shoreline, if you're going to harvest rockweed as fertilizer for your garden or other gardens, it's best to set the cutting height at 36", and when you paddle through a rockweed bed that's covered with 36" of water, you will want to see at least 50% of the surface area covered with rockweed fronds floating on the surface. If the canopy is gone, leave it alone. Let it grow back. Use stormcast plants instead.

Before the Law Court awarded ownership of rockweed to the upland owner, rockweed harvesters were supposedly regulated by a cutting height of "sixteen inches and leave the lowest lateral side branches". This makes no sense if you understand the morphology of rockweed and all the relationships between other marine species that depend upon it, while also keeping in mind the interests of the upland owner who requires protection from beach erosion caused by waves, especially in this time of climate change and rising seas.



Above are photos from a series we took of a harvester for Acadian Seaplants. The cutting bar on his rake is five inches above sea floor because of the curved pipe guards, and he was supposed to be using a long handle to give him depth control so he could abide by the statutory cutting height. Instead, he removed the long handle and attached a rope to his short handle, threw the rake at the beds, let it settle to bottom, and was effectively dragging bottom. When I commented to DMR that this should be an illegal **method** of harvesting, I received no official response.

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Page 3. This photo was taken yesterday, January 10th, 2024. Compare this to the photo on page 1, taken at the same place in 2008. There's a boulder on the right for orientation. Sand and soil are gone, the old shoreline vegetation is gone, due to wave action, leaving a cobble beach. I wrote this to DMR in June of 2013:

"Nina and I observed two men in an Acadian Seaplants blue boat harvesting rockweed with rakes. Earlier we had photographed Byron using a serrated rake with a rope attached, but these men were using a rake with a straight blade, and they carried files to keep it sharp. Nevertheless, the guard on the rake makes it possible for them to cut rockweed 5-6" above the strata. They said that they could rake five tons in an hour and a half, and that Acadian Seaplants pays \$47/ton. They said that they have a grapple net system and overhead winches at Parritt's wharf that simplifies unloading, but nevertheless, the rockweed has to be handled three times: once into the boat, once into the grapple nets, and one more lift by crane-lift ashore.....I explained to them that they were harvesting near sensitive shoreline (coastal erosion and residential flooding on the storm tides), and that Byron had raked the exact same bed, right where they were working, a week and a half ago. I also explained that I sell rockweed to gardeners, harvest rockweed, measure rockweed along the shoreline where they were working, and am concerned that I could lose the mud bank where I hang kelp to dry if rockweed that buffers wave actions is removed. They ignored everything I said and just went on working. Their comments: 'It's just like mowing the lawn. They say that when you cut a stalk of rockweed, two grow back in its place.' Here we have an example of triple overlap of effort." (and no understanding of the morphology of rockweed, I would add; Byron and these two fellows were simply roving harvesters with no memory of place, no sense of the relationship between their efforts and their impact on the shore.)