

Could Kent Island's South End Be Reforested? A Transplantation Experiment
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Kent Island's southern end had a forest. How long ago that forest stood alive and well is currently uncertain, but in the 1930s large clusters of barren, ghostly stumps covered substantial portions of the southern half. Only a few of those stumps stand today.

Why did the forest die out? There are several reasons, but gulls, primarily Herring Gulls, likely played the biggest role in regeneration suppression. As Grand Manan developed, its dump grew, and became a huge and accessible food source for gulls. The dump's growth coincided with a fishing industry boom. Increased fishing created more available fish for gulls, as fishermen threw bait overboard, caught more fish in weirs, et cetera. Additionally, the availability of fish in the Bay of Fundy would have been greater before the fishing industry depleted many species. These factors cumulatively led to an explosion in the gull population. All of these gulls had to nest somewhere, and many of them nested on Kent Island. At their peak, as many as 10,000 pairs of gulls bred on the island annually, thousands more than breed on the island today.

Why would the presence of gulls deteriorate a forest? Here are the best hypotheses: Copious amounts of acidic guano could have killed needles and leaves, and might have obstructed trees' ability to photosynthesize. The sheer weight of gulls damaged trees. Breeding gulls plucked any matter, organic or otherwise, for their nests, including small saplings. Snowshoe Hares played a huge role in forest repression. To some extent, the muskrats also retard forest growth. They enjoy nibbling recently transplanted Balsam Firs. Acid rain and fog, and climate change, could also have deteriorated Kent's Island's forests.

The goal of this experiment was to test the viability of reforesting the southern end, by planting saplings in plots down south. The four plots are not an attempt to start a forest, but they will provide valuable information: Could trees grow if planted on the south end? Which species would have the most success? Are the muskrats or gulls still preventing forest expansion? Are certain microhabitats within the south end more suitable for growing trees than others? What's the minimum (human) investment required to stimulate growth? If it turns out that it is viable to reforest the southern end, then the decision on whether or not it should be done will be an important one for future Kent Islanders.

North					
S 15	S 14	S 12	B 18	B 9	B 13
F 8	F 10	F 7	S 9	S 9	S 9
B 10	B 5	B 12	F 9	F 9	F 13
F 7	F 13	F 11	B 15	B 13	B 10
B 13 11	B 24		S 12	S 9	S 11
S 9	S 12	S 12	F 10	F 10	F 9
South					



Fig. 1. Each of the four plots contains 36 trees (9 each of birch, balsam fir, and white spruce), transplanted from the north end. I divided each plot into four treatments: Weed cloth, fencing, weed cloth and fencing combined, and no protection. Additionally, with help from Mark, I made a sweet driftwood chair.

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