

Sources and Sinks

Ecologists use the terms “source” and “sink” when describing the ability of different areas to support a particular species. In a source area, a species not only reproduces, but creates surplus population that then moves out into surrounding areas. A sink, as the name suggests, is an area where these same animals would vanish altogether without overflow from the source areas. Because an animal is seen in a sink area, we might imagine that the area is supporting a healthy population. But if the source disappears, the species will soon disappear from the sink.

For the past six months, I have been contemplating the sources and sinks for beavers. By my crude beaver census of several towns in our region, it appears that when beavers move to areas adjacent to roads and houses, few survive long enough to reproduce. Only the few suitable streams in remote valleys provide habitat where beavers can live full lives.

This gloomy pondering is the result of my search for Ducky, the beaver I have watched over since she first paddled from behind her lodge two and a half years ago, a buoyant beaver kit. Last spring, she set out into the wide world on her own. All seemed well when she settled downstream and found a mate, safely in source habitat. Her happy home-making was cut short in September by a pond-grab by her own parents and siblings.

I began searching for Ducky in the most likely places. I grew excited as I approached each beaver meadow, only to be disappointed. A mile downstream from their former home, another beaver had recently disappeared from a large alder swamp. Though the habitat was excellent, it was too close to people. As I worked my way upstream through the alders the roar of ATVs was getting closer, so close in fact that the machines could only have been coming right down the middle of the brook. Sure enough, above the roar I could hear shrieks and laughter, followed by revving engines, and eventually cursing. They had made it down to the beaver impoundment and become mired in silt. I could not see them from my position, but listened for half an hour as they attempted, unsuccessfully, to free the machine. I was glad that I did not find Ducky there.

Two weeks ago I decided to ski up a stream on my list of Unlikely Prospects. I had been disappointed so often that I told myself I was just exploring. Although the stream was a tributary of Ducky’s childhood brook, I considered it too small to be attractive to beavers. As I neared the headwaters, I could make out a meadow beyond the dark hemlock woods. I checked my excitement. At the edge of the meadow, however, I saw freshly chewed beaver sticks in the water. Ducky? Snowmobile tracks crisscrossed the little pond, but as I looked down, I noticed a hole in the ice and dense

layers of sticks in the water. Beside me, some beaver-chewed poles poked out of a hummock at the base of a tree. I was standing on an occupied beaver lodge. I skied a dozen feet from the opening in the ice, unpacked the apples I had brought “just in case,” and called to Ducky. Soon the surface of the water in the little hole began to ripple. The ripples grew! A beaver’s head popped up. The beaver scrambled eagerly onto the ice and grabbed the apple I had tossed toward the hole. Ducky!

Since that happy day, March has played its seasonal havoc. Most days the ice has been too thick for the beavers to emerge. On one spectacular blue-sky day, however, I made the ski to Ducky’s refuge. A fresh inch of snow



had returned winter to the throne. The preceding days had been seasonably warm, however, and a large hole had opened by the beaver lodge again. I brought apples and some striped maple branches. I called to Ducky and waited. Again the water began to roil, and Ducky emerged from the depths. This time she came and plucked an apple from my fingers and waddled to the edge of the ice to eat. After two more slices, she nipped off a section of branch and dove into the water and disappeared. Just a few seconds later, the surface rippled as another beaver surfaced. The beaver muzzle that appeared this time was not the pretty, youthful face of Ducky, but the boxier muzzle of an older beaver. Growler, Ducky's mate, had not become accustomed to me during the few weeks I had visited with them before their eviction. I expected he would quickly slap his tail and disappear. Instead, he gazed at me for a moment and then swam over, found an apple, and turned his back on me and began to eat as he floated. He then nipped off some twig and chewed off the bark, still floating just eight feet from my seat.

My relief at finding Ducky is tempered by the awareness that this pond will not sustain them for long. Although the location is remote, there is not enough forage for beavers. I think it a wonder that the pair made it through the winter. When they move on, will they be able to choose a location in a source area? In this new landscape with its many human claims, the beavers' time-tested discrimination no longer applies.

This spring, if all goes as anticipated, Ducky will have kits. So will the pair of beavers that settled in the watershed last spring. With Ducky's parents, that makes three sets of kits. When I think how few places there are for the youngsters to safely settle, I fret. Still, how lucky these beavers are to occupy the source, and how lucky for those who value wetland habitat that sources exist.

—*Patti Smith*