

---

# The Bog in Our Backyard

---

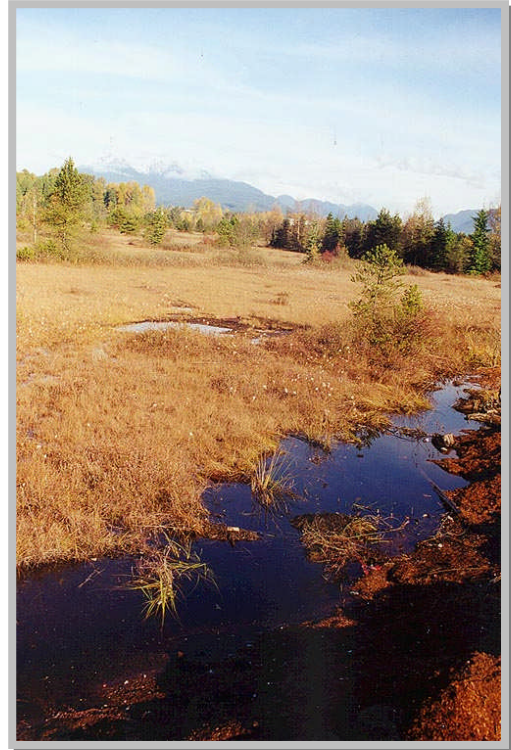
- by David Clements - reprinted from 1999 (Summer) Newsletter

What is so special about a bog? We debated this point in one of my classes at Trinity Western University, and a few weeks later we got to visit one so the students could see for themselves what a special place such a "mere" bog can be. We didn't have to drive for an hour or so to see Burns Bog because right in our own backyard the Langley Peat Lands bog is there, doing its thing. It is located southwest of the Houston Trailhead and covers some 89 hectares. Not presently accessible to the public, my nonvascular plant biology class obtained a permit from the GVRD to explore and study this unique habitat.

Before I go on to describe some of the remarkable life forms my class identified in the bog, I need to give you some of the bog basics. Actually, Bogs are not basic at all; they are highly acidic. One student took measurements of the acidity of the bog and found it got as low as 3.8., which on the pH scale is 100s of times more acid than neutral (=7). What creates this acidity is a type of plant that is the essence of a bog: *Sphagnum* moss. *Sphagnum* looks a little like its cousins, the "true mosses" that you see growing on tree trunks, but it has some unique properties, like its ability to make its surroundings acidic and its ability to soak up many times its weight in water. The latter is what makes a bog into a giant sponge. There are actually several species of *Sphagnum* in the Langley Peat Lands; one of my students identified five.

So, what does a bog do? In February, the Burns Bog Society invited world bog expert David Bellamy from the United Kingdom to speak to a banquet on the topic. He discussed three important things the bog was doing: (1). It fertilizes the Fraser delta. The input of nutrients from the bog helps to maintain our coastal fishery. Due to the acid environment, the bog is a source of iron, an element that limits the productivity of life in the open ocean. (2). It acts a lungs for the Lower Mainland. It has been estimated that the carbon stored in the bog is equivalent to the annual emissions of 5.4 million cars. Unlike forest trees or other forms of life, the carbon is retained fro very long periods of time, because of the slow rate of decay. Thus, bogs are great guzzlers of greenhouse gases. (3). It is a natural air conditioner. A plume of cool air is released from its surface that further modifies climatic patterns. The Langley bog, quietly and unassumingly carries out the very same functions, on a smaller scale. There are many other unique aspect of the bog hat caught the interest of my students.

Only certain types of plants ca grow in a big environment, and even some of the ones that do grow take on peculiar forms in these acidic conditions. Thus, bog vegetation is an eclectic mix of small twisted shore pines, birch trees, thick-leaved shore shrubs such as Labrador tea and bog laurel, white tufted cotton grass, and wild cranberries. The insect-eating sundews also grow the bog, but were not yet out in March. My students were impressed by the wonderful mix of lichens that flourish in the area, such as



the red-tipped lipstick cladonias that peppered the hog-fuel roads that took us out to the middle of the bog. Because bogs contain special vegetation that can be found nowhere else, my botany students wholeheartedly applauded the efforts of the GVRD towards preserving the Langley Peat Lands. They happily observed considerable regeneration of Sphagnum in the wake of the peat harvesting between 1958 and 1980. Burns Bog expert Don DeMill has suggested that bogs can regenerate fully within about 40 yrs of harvesting.

The bog is also a good place to observe wildlife: coyotes loping off in the distance, spotted peregrine falcons on the hunt and, occasionally, the entrancing sight of a group of sandhill cranes putting on a ballet. As we headed back to our van, the students and I crossed the tarmac on which the old Langley Peat Processing Plant is built. One student remarked about how odd it felt walking on a solid surface again. Indeed, the Langley Peat Lands provide a special place in creation where we can learn to walk softly and leave a small footprint. (Reminder Due to the serious drowning hazard of the floating mats of vegetation, the bog is closed to the public until proper access can be provided.)