

BOREAL BITS

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HOW THE DEER SAVED THE GIANT

“Observe constantly that all things take place by change, and accustom thyself to consider that the nature of the Universe loves nothing so much as to change the things which are, and to make new things like them.” Marcus Aurelius (121-180 A.D.)

It was a cool day during the second week in November, the stiff northwest wind driving the chill from a moderate -4°C to -19°C . Snow from the previous week's storm lay huddled beneath the spreading skirts of a balsam fir and on the northern exposures. The rest had succumbed to the rays of the late fall sun, still strong enough to melt exposed snow. The nearby lake had been iced over for a week and it would take more than a few hours of intense November sun to thaw it. Fracture lines crisscrossed the surface but the ice grew thicker every day. Soon more snow would come and it did a week later when a Colorado low dumped 24 cm (9.5 in) on the lake and surrounding forests. Here it would remain until late March when eventually the snow that accumulated on top of it surrendered to the strong spring sun. Above the forest, conspicuously tall against the leaden sky, a forest giant, a white pine, swayed in the November wind.

Many decades earlier in the early fall a red squirrel, scampering across a pine bough more than two hundred metres away had carried a pine cone to its cache. It stopped on the



branch and gnawed at the cone, taking an afternoon snack. A seed loosened and fluttered from between the cone scales, spinning in the wind to the ground in its dizzying flight. At about the same time, three yellow leaves broke loose from a nearby quaking aspen and landed on top of it. An

early frost and heavy snow blanketed the forest that year, and by doing so, protected the seed from the voracious jaws and beaks of mice and birds. The seed germinated during the warmth of the following spring sending roots into the deep, soil-filled crevasse in the bedrock on which it lay. Within the diameter of ten paces, a white spruce and a balsam fir also took root that year and each reached for the sun. Also, from an underground root, a quaking aspen shoot appeared, grew huge leaves and began the race for domination.



As the years passed the four young trees competed with one another and as fate would have it, the white pine seedling was northwest of the spruce, northeast of the fir and due north of the aspen. This meant that precious energy was not reaching the pine and it languished in the shade of the competition. In addition, both the spruce and fir were shade-tolerant species and grew more rapidly than the pine, reaching higher each successive year. Roots from the more successful trees became larger and more robust, sapping moisture and nutrients from the surrounding soil. The pine tree would have died were it not for the deer.

(photo by PB)

When the handsome young buck first wandered into the area in search of females that early December, it was a fine specimen)and anxious to prove itself. What better way than to leave markings? It pawed the ground raw, and then urinated creating a muddy sign

that was sure to drive the females wild. It rubbed against overhanging tree limbs leaving scent from the orbital glands near its eyes. It saw the aspen, now taller than it was, and charged the slender-stemmed tree, thrashing it as it would another set of antlers on another deer. The noise of the confrontation not only acted as an invitation to other bucks but as a come-hither invitation for does. The deer remained for a day and then left, but the damage to the aspen was done. The antlers of the animal had stripped a stretch of bark that almost girdled the sapling; the tree was doomed. The following spring it struggled with existence but finally died during an extended drought. Its death brought renewed vigour to the white pine. That summer it grew more than it had in the previous three years because now it was receiving much more sunshine. But it still competed with the spruce and fir and soon these two trees were so large and so dense that even more sunlight was blocked, and more nutrients were being diverted from the pine.

(We continue our saga next week when a Christmas tree saves the young giant.)