

NATURALISTS' NOTES

Lovely As a Tree

Imagine there is a machine that pumps gallons of oxygen into the atmosphere! Imagine that it vacuums up the carbon dioxide created by combustion engines. It lifts vast amounts of water from the earth and frees it into the atmosphere as vapour, which then falls as rain on another part of the Earth. This technological whiz has many sidelines. It produces a wide variety of foods, medicines, fuel, fibres and oils for commercial use. It runs silently, is environmentally friendly and operates free of charge.

With fears growing about global warming and Kyoto becoming a household word, surely we would all welcome such a marvel. But is it necessary? The natural world is already filled with organisms that bring all these benefits to the planet and among the most important of them are trees.

How does a tree work to renew the atmosphere? Photosynthetic cells, found in the green parts of trees, contain a pigment called chlorophyll that absorbs light. Through the process of photosynthesis trees use the energy from sunlight to convert carbon dioxide and water into-sugars and oxygen.

Trees inhabit most parts of the Earth. They clothe the mountains and valleys. Under the extreme temperatures of deserts, some trees have evolved to turn their leaves edge-on to the burning sun to minimize the loss of moisture. Evergreens are adapted to colder environments by having cold-resistant resins in waxy needles. By shedding their leaves in the fall, deciduous trees conserve water in winter when ground water is frozen.

The Douglas fir has an outer bark that resists forest fires. The lodgepole pine will only open its cones to release seeds when heated. The alder plays a star role by fixing nitrogen in the soil, preparing the barren soil for other trees. Later, rotting leaves and logs deposit pounds of this fertilizer in the earth. Some accomplishment for a 'weed' tree!

Trees are of vital importance to the health of our planet. For millions of years they have provided clean air, distributed water, and provided boundless resources. They have been eulogized by poets and painted by artists. Native peoples extensively utilized the cedar tree; sailors explored the uncharted seas in ships of oak; animals seek food and shelter in their branches, and humans find solace in their shade and beauty. Like old friends they are a constant in our lives; generations of people have gazed upon the same tree. They remind us of the passing years and will outlive us.

Written by Christine Woolcott for the Malaspina Naturalists' Club. Tree photo by Paul Clements. For more information on local flora contact the Malaspina Naturalists at 604.485.6134.