

*Going green* is a lifestyle whereby one reduces one's negative impact on the environment. However, today's column is all about the environment having a positive impact on us humans, a phenomenon I will call *Green going*.

A chemical substance called chlorophyll is present within the cellular tissue of all living trees, shrubs, crops, grasses, weeds and even the lowest forms of plant life including moss and algae. This pigment gives plants their green color. Every year about this time, we begin to notice the disappearance of this green color, and as the green vanishes, new colors immerge. Autumn foliage color change is upon us.

Have you ever wondered why the green color disappears and where it goes? Furthermore, from where does all that yellow, orange and red appear?

To answer these two questions, one must first look at the function of



chlorophyll. Within the cells of all green plants are tiny bodies called chloroplasts. Containing chlorophyll, these bodies trap the sun's energy. Converting this trapped sunlight energy and combining it with carbon dioxide and water results in the production of sugar and a release of oxygen to the atmosphere. This process is called photosynthesis. During the growing season as photosynthesis occurs, chlorophyll is continually being

produced and broken down.

As summer ends and autumn arrives, daylight hours become shorter. As a result, the food-making process begins to shut down. With less and less photosynthesis taking place, the chlorophyll disintegrates and eventually disappears from the leaves. As the bright green fades, yellow and orange colors



often immerse. Interestingly, these colors were always present, but the green chlorophyll masked them. Trees noted for their brilliant yellow and orange colors include green ash, tulip tree, aspen, birch, mountain ash, sugar maple and ginkgo.



Red Maple

Leaves that turn red in autumn are different. The color red is produced during photosynthesis when the sugars become trapped within the leaves. A number of factors including sunlight, temperature and moisture influence the intensity of red. A succession of warm, sunny days and cool, crisp (but not freezing) nights are the conditions that create the most

spectacular display. During bright, sunny autumn days, photosynthesis produces abundant sugars in the leaves, but the cool nights cause the veins of the leaves to close thus trapping the sugars within. The amount of moisture in the soil also affects autumn colors. A warm wet spring, favorable summer weather, and warm sunny fall days with cool nights will generally produce the most brilliant autumn colors,



Smooth Sumac

Not all trees are capable of producing the red pigment. Those specifically noted for their red fall foliage include northern red oak, red maple, smooth sumac, sassafras, ornamental pear and sweet gum.

Yes, *going green* is important, but witnessing the *green going* is more beautiful. Autumn foliage color change is upon us. The color green is quickly vanishing and new colors are immersing. Take time to enjoy the brilliant bursts of yellow, orange and red leaves for soon they, too, will be gone.