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"WILD FLOWERS AND WILD GARDENERS".

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For a "Gardeners all" programme the title of this address may seem a very wild one, but very appropriate, coming, as it does, from the "wild and woolly west".

For many years I have been keenly interested in the introduction of wild flowers into gardens; and have met many interesting specimens of both flowers and gardeners.

By "wild flowers", I mean the uncultivated, untrained specimens so common throughout the Dominion; they comprise plants native to Canada, as well as aliens introduced from other countries. Some of these aliens are allowed to over-run the country, competing with, and sometimes crushing out, our native flowers, so that the average person has difficulty in knowing which are native and which are foreign. Take for example:- a Thistle found in nearly all parts of Canada and erroneously called the Canada Thistle. This does not belong to Canada, it was accidentally introduced from Europe where it is universally known as the Field Thistle; now, in some parts of Canada, this pernicious weed has possessed the land to such an extent, that its predominance has forced prairie farmers to give up their land and seek pastures green elsewhere.

But all aliens are not necessarily wild, some have been carefully trained and cultivated, and constitute valuable additions to our gardens, parks, and boulevards. Of course, in horticulture we do not usually refer to these as "aliens", we like to call them "exotics" - another name for the same thing.

The definition of "Wild flowers" may be similarly applied to "Wild Gardeners"; those uncultivated, untrained individuals so common throughout the Dominion. They comprise native Canadians and aliens, amateurs and professionals, who have wild ideas regarding the life and health of plants, and correspondingly wild ideas concerning their treatment when introduced into the garden. Because a man is armed with a spade and rake, a mower and pruning shears, is no reason why he should be called a gardener. Many thousands of trees, shrubs, and herbaceous plants have been ruined, or killed outright, by the use of these implements, in the hands of what I term "wild gardeners".

The main purpose of this address is to bring a little more joy, and a little less sorrow, to those flower lovers who desire to introduce some of our showy native flowers into their gardens; and to give some pointers which, if attended to, will add greatly to the success and happiness of both flowers and gardeners.

First of all remember, when you see flowers thriving and flourishing on "mountain top, moor, or fen", they are in their natural environment; think of them as living things, enjoying that particular habitat; and try, as far as you can, to give them the same shade or sunshine, and similar wet or dry conditions; because it is not fair to transplant flowers which thrive in hot arid drybelt regions, to a garden where the sprinkler keeps them cold and wet.

Our success at the University Botanical Gardens where we have transplanted over 1000 different species of wild flowers from all parts of British Columbia, may illustrate what can be done with care, and consideration of the plants requirements.

In the time at my disposal I shall select a few examples of native plants which are being exterminated in large numbers by so-called "nature lovers"; many of whom I include in the term "wild gardeners".

In the Fir woodlands of the wet belts of British Columbia we find a beautiful pink Lady-slipper Orchid (*Calypso bulbosa*) it used to be quite abundant, but is becoming rare, because so many people dig it up, and bury it in their gardens. This Orchid has usually a single leaf, the base of which becomes swollen into a pseudo-bulb as it is technically called. This leaf arises from a small crown of roots which penetrate the soil, the bulb-like part is above ground, but hidden in a layer of moss or fir needles about one inch deep. Our "Wild gardeners" dig up these Orchids and bury roots, crown, and even the bulb in the soil, to rot before next

season. The way to success is to plant only the roots in the soil, and cover the bulb with moss or fir needles so that the bulb is exposed to air, but hidden from light.

The garden has aptly been defined as an asylum for abnormal or freak flowers, but too often it becomes a cemetery, with only the tallies left to mark the spot.

Other woodland plants exposed to the attacks of "wild gardeners" are our native ferns. Hundreds of these are dug up annually to die in some one's garden, because these so-called "nature lovers" did not know that on the average, 7/8 of a fern plant is underground. The complete rhizome system spreads over a very large area in proportion to the visible fronds above ground; and our wild gardeners get their spades, mattocks and sacks into the auto, and hie to ^{the} woodlands to select the largest and best of our swordferns, maidenhair, or oakfern; chop off all the roots - which are left in the ground, dig up the crown with the brown bases of fronds of the last seven or ten years, and return triumphantly to bury them in a deep hole in the garden. The way to success - select specimens with small fronds, and with mattock or pick, loosen the soil for some distance around; the rhizomes are not deeply situated, but often quite near the surface, lift them carefully and keep them moist till they are planted about the same depth in a similar shady part of the garden.

Amongst our rapidly disappearing showy plants are our Dogtooth lilies (*Erythronium*), Indian Camas (*Camassia*), often erroneously called Wild hyacinths, and our Brodieas especially *Brodiaea grandiflora*. These grow naturally in shallow soil on the surface of rock or hard pan, and when brought into the garden thrive for a few years, gradually becoming weaker and finally die out. Each year during their growth, most of these genera form a new bulb below the level of the old one, so that in the course of from six to eight years the bulbs become too small and too deep to reach the surface again. The way to success - the bed where the bulbs are to be grown should have soil dug out to a depth of a foot or more, fill in the lower four inches with rocks or cobble stones closely packed, and the interspaces filled in tightly with small chips or coarse gravel, cover this with about six inches of good garden soil well tramped down, and set the bulbs at a depth of about twice their size; the bulbs should not be transplanted till their leaves have turned yellow. When, after a few years, the bulbs reach the rocky foundation and cannot go deeper, they increase in size and yield large healthy flowering shoots as a reward for the trouble taken to imitate the natural environment.

One of the most beautiful trees on this continent is Nuttall's Dogwood, a native of south western British Columbia, extending south to California. Its large white flowers in spring or early summer, the variety of autumnal tints from green to russet and red in the fall, and its immunity to insect pests and fungus diseases are characteristics which make it a very desirable tree in beautifying home grounds.

In its natural environment it thrives on well drained gravelly soil with a southern exposure, in semishade, in open woodlands or by the margin of the forest. In such locations it produces next years flower buds in the "fall" and ripens its wood, then goes to rest for the winter.

Its beauty has led to its destruction at the hands of those "wild gardeners", who go into the woods and dig up the nicest young flowering trees, leaving most of the roots in the ground; in spite of abundant watering, after transplanting, the trees die; those "wild gardeners" are responsible for the erroneous statement that Dogwoods are difficult to transplant.

Some gardeners are not so wild in their selection of trees to transplant, but are not very considerate as to their treatment in the home grounds. The soil and exposure may be correct, but the use of the sprinkler to keep the lawns green in the fall, also keeps the Dogwoods green, preventing the ripening of the wood, and promoting winter killing of branches; the final result - deformed, unsymmetrical trees. Yet some of these "wild gardeners" boast that their Dogwoods flower twice a year, once in spring and

again in the fall. The abnormal fall flowers are some of next springs flowers forced by a superfluous amount of water at the season when water should be withheld, to encourage natural ripening before winter sets in.

Dogwoods are amongst the easiest trees to transplant. Learn how to identify young trees one foot, or not more than two feet high; then in the latter part of March, loosen the soil carefully by pick or digging fork - not a spade - gently lifting the plant up with as many as possible of the fine hair-like roots, and protect them from drying out. When planting, make the hole large enough to allow spreading out the roots, and where possible "puddle" them in, that is:- fill the hole with water and shovel in the soil, allowing it to settle naturally - do not tramp the mud down. This makes a natural and complete contact with the surrounding soil in the garden, you can then "forget it".

To encourage the gorgeous autumnal tints in the fall, and a profusion of flowers in spring, see that no excess water is given after next year's flower buds make their appearance. Do all you can to prevent them flowering in the fall.

Though I have discussed the treatment of only a few wild flowers - they are representative of many other species which have similar requirements; and I trust that if there are any "Wild gardeners" listening in, I may have helped you to graduate to the rank of real nature lovers, and that you may have more success and more joy through giving greater consideration for our showy "wild flowers", of which we in British Columbia, have such a great selection of species from which to choose.