

BROOKLYN BOTANIC GARDEN

CONSERVATION OF NATIVE PLANTS

Many of our most beautiful wild flowers are disappearing. There are several reasons for this. When we cut down the trees in a forest, we directly destroy many of the wild flowers growing there; in addition, we destroy the natural environment in which these flowers grow and without which they can not survive. We do the same thing when we build roads and factories and houses, and when we plant fields of food plants. This is bad enough, but at least it is necessary. But we also kill many wild flowers through pure carelessness--by setting the woods on fire with cigarettes thoughtlessly thrown down, and with camp fires not properly put out. Fire kills the plants and also destroys the humus in the soil which the plants need.

In addition, dealers often go into the woods and collect entirely too many wild plants to sell. We should not buy plants taken from the woods, but only those raised by the dealers who sell them. Finally, many of us, in our mistaken enthusiasm for wild flowers, pick too many to bring home for our own enjoyment.

From this we can see that the picking of wild flowers by individuals is not by any means the only reason for their becoming scarce--nor even the main reason. And similarly, refraining from picking them is not the only remedy--nor even the most important remedy. But it is one little thing that each of us can do; and it is one thing that each of us must do.

Fortunately, we do not have to refrain from picking all wild flowers. Many of them are so plentiful and spread so fast that we may pick all we want. Others may be picked if we take moderate amounts, and pick carefully so as not to tear the whole plant up by the roots; ^{or} take all its leaves, or break so many of its branches that it can not recover. But there are some wild flowers which we should never pick at all, either because they are already so scarce, or because it is practically impossible to pick them without destroying the whole plant, or because they are annuals, and so must have their flowers left to form seeds for the next year.

It is not very hard to learn which flowers must not be picked. But if we do not know, we can use our judgment according to the following general rule formulated by Mr. P. L. Ricker, President of the Wild Flower Preservation Society: No attractive wild flower should be picked for bouquets except the well-known weedy ones, unless there are at least a hundred of them--and then only one flower in ten should be picked.

Many of the States, including New York, have laws protecting certain wild flowers on public land. These laws do some good, especially in restraining commercial dealers; but they are not always easy to enforce, and they do not apply to private land; most people recognize that the best way to protect wild flowers is to instill a sense of responsibility and pride in all the people.

The following slides show some of the flowers that should not be picked at all, and a few of the many that may be picked freely. In the case of those shown in the first eight slides, the New York State Conservation Law forbids the picking or injuring of them on state land or in any public place. The penalty for violating this law is fifty dollars for each offense. The flowers shown in the rest of the slides are selected from lists prepared by the Wild Flower Preservation Society, and the Conservation Committee of the Garden Club of America.

1. I. Explanatory slide for the first group.

2. Trailing arbutus (*Epigaea repens*), protected by New York State Law. As its name implies, the plant trails along the ground and takes root at the joints. The leaves are evergreen, and the stems are tough and hard to break. If we try to pick any of these flowers we are almost sure to tear up some of the trailing stems with their roots and so destroy a good deal of the plant. The flowers are pink, or sometimes almost white, and very fragrant; they come out very early in the spring. It grows in sandy woods, especially in the shade of pines.

3. Flowering dogwood (*Cornus florida*), protected by New York State Law. These beautiful white flowers grow on trees in the woods, and come out about the middle of May. As a matter of fact, the showy white parts are not petals, as we would suppose, but are just fancy leaves, called bracts, surrounding the group of small yellow flowers in the center. Anyone picking these flowers would break off good-sized branches and so do considerable damage to the tree. It is usually disappointing to pick these flowers, anyway, because the white bracts wilt so quickly.

4. Mountain laurel (*Kalmia latifolia*), protected by New York State Law. These flowers grow on evergreen bushes, and come out early in June; they are deep pink in the bud, and paler pink in full bloom. The bushes grow on rocky hillsides. Here, as with the dogwood, picking the flowers means breaking off branches, which it may take the plant several years to replace.

5. Stemless lady's slipper or pink lady's slipper or moccasin flower (*Cypripedium acaule*), protected by New York State Law. This whole plant consists of two big leaves at the ground, and a bare stalk with one large showy flower at the tip. Almost anyone picking one of these flowers would want to take the leaves, too, or would tear them up by mistake with the flower, and so the whole plant would be ruined. This is one of our native orchids, growing in dry woods, and blooming the last of May. It is already scarce, and it would surely be a pity to get rid of it entirely.

6. The smaller yellow lady's slipper (*Cypripedium parviflorum*) and the larger yellow lady's slipper (*Cypripedium parviflorum* var. *pubescens*) are both protected by the New York State Conservation Law. They are very similar except for size; and the smaller one grows in moister places. This picture shows the larger one as it grows in the woods. It blooms in May and June. Unlike the pink lady's slipper, each of these flowers grows at the tip of a leafy stem. You can easily see that if we picked the flower and two or three leaves, there would be almost nothing left of the plant.

7. This shows two of the larger yellow lady's slippers at closer range. The flowers themselves are a good deal like the pink lady's slippers, except for color.

8. The fringed gentian (*Gentiana crinita*), protected by New York State Law, has already become very rare. It grows in low, moist places and blooms in September and October. Unlike most of our spring flowers, the underground parts of this plant do not live on year after year. The plant is a biennial--which means that each individual lives only two years. The first year after

the seed sprouts, the plant produces roots, stems, and leaves, but no flowers. The second year, it blooms and forms seeds, and then it dies. If we pick the flowers, no seeds will be formed, and there will be no fringed gentian plants in that place in future years. The bright blue flowers, with the beautifully fringed petals, make the plant a particularly desirable one to keep.

9. The pinxter flower or the so-called "purple" azalea (Rhododendron nudiflorum) is also protected by New York State Law. These beautiful and very delicate flowers grow on bushes in open woods and swamps, and bloom about the middle of May. Breaking off branches with clusters of flowers and leaves gives the bush a serious setback, and gives us pleasure for only a very short time, as the flowers wilt so quickly.

10. The New York State Conservation Law forbids the picking or injuring of ferns of any kind growing on State land or in any public place. This slide shows the interrupted fern (Osmunda Claytoniana), just one of the many kinds of beautiful ferns. The green parts of some of the leaves are interrupted in the middle by brown, spore-bearing divisions. This is a large, handsome fern growing in rather dry woods. We really could pick a number of leaves from a plant like one of these without injuring it too much; but in public places, too many people might each pick a few, and so the plant could easily be destroyed.

The following nine slides show flowers which are not protected by New York State Law, but which are listed to be protected both by the Conservation Committee of the Garden Club of America, and by the Wild Flower Preservation Society; and so they should not be picked.

11. The wake robin (Trillium erectum), with its rich purplish red flowers, blooms in the woods in April and May. The three large leaves at the tip of the stem, near the flower, are the only leaves the plant has; and they would be almost sure to be picked with the flower. Then the roots would starve, and the whole plant would be destroyed.

12. The painted trillium (Trillium undulatum) is much like the wake robin except for color. It grows in moister woods, and blooms a little later. Here, too, picking the flower is almost sure to mean death to the whole plant.

13. The showy orchis (Orchis spectabilis) is one of our native orchids, but it does not look much like the lady's slippers. Each stem has several flowers; each flower has one large white petal, corresponding to the slipper-like pouch of the lady's slipper; and the rest of the petals are purple. The plant has two large leaves at the ground; and if these are picked with the flowers, the plant dies. The flowers are found in rich woods in May and June.

14. Jack-in-the-pulpit (Arisaema triphyllum) is a very well known flower. It blooms in the woods in May and June. You can easily see that anyone would naturally pick the leaves with the flowers; and he often pulls up the whole plant, because the roots are very shallow. After all, he might as well pull up the whole plant, because the underground parts will starve without the leaves. But as a matter of fact, he might better not pick the flower at all, because it wilts so very soon.

15. The scarlet painted cup (*Castilleja coccinea*) grows in moist open places, and blooms in June and July. The showy red parts are fancy leaves; the true flowers are small and yellow; a few of them may be seen in this picture, peeping out from among the scarlet bracts. Lower down on the stem the plant has regular green leaves, but they do not show in this picture.

16. The wood lily (*Lilium philadelphicum*) has large, beautiful cup-like flowers opening upward, not hanging upside down as so many other lilies do. It grows in open woods, and blooms in July. It is a great temptation to pick these flowers, but we must not do it.

17. The yellow fringed orchis (*Orchis ciliaris*) grows in very wet places, and blooms in July and August. The flowers are not very large, but they are brightly colored and they grow in good-sized clusters. It is a good general rule not to pick any of our wild orchids.

18. The cardinal flower (*Lobelia cardinalis*) also grows in wet places, often along brooks in the woods. It blooms in August and September. The showy red parts look a good deal like the bracts in the painted cup, but here they are really petals. This is one of our most gorgeous wild flowers, and one we should not wish to destroy.

19. The partridge berry (*Mitchella repens*) creeps along the ground in dry woods, usually at the bases of trees. It blooms in May and June, but the flowers are small and not very showy. The bright red berries, shown here, come later in the season, and stay on all winter. It is for these berries that the plant is named; and it is much better known and more often picked for them than for the flowers. But tearing up the creeping and rooting stems is disastrous to the plant.

We shall now see pictures of eight of the many kinds of wild flowers which may be picked in quantity.

20. II. Explanatory slide for this group.

21. There are many kinds of buttercups, and most of them are common and plentiful. This is the tall field buttercup (*Ranunculus acris*), which grows in open places and blooms all summer, from June to August. It has nice bright flowers, and leaves divided in an interesting way.

22. Daisies (*Chrysanthemum Leucanthemum* var. *pinnatifidum*) are fine flowers to pick, because they last a long time, and they are very showy, too. Wild daisies are very much like cultivated daisies which people buy of the florists. The wild ones often grow so thickly that anyone could pick hundreds of them in a few minutes. They grow in fields, and bloom all summer. They have smooth, divided leaves.

23. Black-eyed Susan (*Rudbeckia hirta*) is a good deal like a daisy, but it has yellow rays (or "petals", as most people would mistakenly call them), and a dark purplish brown center. The plant is hairy, and the leaves are not divided. The flowers are very showy, as you can see, and they keep well, too. They grow in fields, and bloom all summer.

24. Yarrow (*Achillea Millefolium*) has big flat clusters of tiny daisy-like flowers, and very finely divided, feathery, grayish green leaves. It grows abundantly in fields, and blooms all summer and fall. It makes a showy bouquet and keeps very well.

25. Queen Anne's lace or wild carrot (*Daucus Carota*) looks somewhat like yarrow, but the flower clusters are much more delicate and lacy, and the leaves are broader. It is very pretty for a day or so, but it does not keep a long time, as daisies, black-eyed Susans, and yarrow do. It grows in fields and blooms from July to September.

26. There are many kinds of asters (*Aster species*), and most of them are very plentiful. They vary greatly in size, and also in color--from white through pink and blue to deep purple. They grow in woods and fields, and bloom in the fall. They make very graceful, showy bouquets, and the flowers last a long time.

27. There are many kinds of goldenrod, too (*Solidago species*), but the different kinds look more alike than the different kinds of asters. Goldenrod grows abundantly in woods and fields and blooms in the fall. It is nice to gather asters and goldenrod together; they go well in the same vase, the goldenrod standing up, and the asters spreading, and both stay fresh a long time.

28. Joe Pye weed has particularly beautiful flowers, as you can see (*Eupatorium purpureum*)--rich purplish pink, feathery and graceful. It grows on the borders of moist woods and blooms in late summer and early fall. We may pick it by the armful with a clear conscience, and so we can really enjoy it.