

Violet and Pansy Culture.

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Of all flowers the violet is one of the most popular, and widely grown, and is one of which some species have been cultivated for centuries in Europe. The sweet violet, *Viola odorata*, is native to Europe and Japan, and is now cultivated in its different varieties all over the world for commercial purposes.

My experiment with violet seed, however, was carried on with the seed of an Alpine violet, *Viola lutea*.

This is a rather small plant with leaves much like those of our common wild violet, and bears yellow blossoms that have the three lower petals striped with black.

For planting the seed, I used flats having spaces between the boards, on the bottom, in order that the surplus water might drain through instead of making the soil soggy.

In filling the flats, the first thing put in was a layer of coarse clogs to provide drainage, and on this was filled

in a mixture of sand, leaf mold and sod, and pressed down until the surface was about an inch below the top of the box, and perfectly level. It is important that the surface be level, and that the flat is not set on a slant, for, if either of these conditions is violated, the water will settle at one side of the flat, and some of the seeds be drowned, while others dry out.

After the flat was prepared, I scattered the seed over the surface, sowing it as evenly as possible, and not too thickly. Then I sifted sand and earth over the seeds until they were covered, when once more I pressed the soil down - this time to hold the seeds firmly and place them in direct contact with the moisture in the soil. I watered the flat thoroughly with a sprinkler, covered up any seeds that were washed out, and put the flat on a greenhouse bench where the temperature was moderate. To keep the moisture in, I placed glass over the top of the flat, and so avoided watering the seeds more than twice during

their germination, and yet kept the moisture constant, and even. In watering seeds or plants, water thoroughly, and when it is needed, for in this way the large amount of water rushing through the soil will carry air with it, and perform the work of aeration, thus preventing the soil from becoming sour.

I planted the seeds on Jan. 24th, and by Feb. 1st some of the plants had appeared, taking about a week for germination. When most of the plants were up, I removed the glass and it now became necessary to water them more frequently, although I was obliged to be careful not to keep the soil too wet, for, in that case, the plants may damp off. I allowed the plants to grow in the flat until Feb. 11th, when they had one leaf besides the cotyledons, and then I transplanted them to another flat prepared in the same way, as was the first. To transplant, I lifted the plants with a flat, pointed stick, being careful to go deep enough to secure all of the root, and then with another stick made a hole in the new flat, set in the plant so that but little of the stem was above ground, and pressed

the earth down firmly.

These plants I set in rows 3 in. apart, with about $1\frac{1}{2}$ in. between the plants. This gave them plenty of room for growth, allowed the air to circulate around them freely, and made only the one transplanting necessary before the plants were ready to go out into the open ground.

On April 3d. I set them into a bed previously well spaded and worked, on the north side of the house. The cool weather at first seemed to encourage them to thrive, but when the wind sprang up, despite the fact that the ground was kept moist, the plants began to lose their healthy look and take on the appearance of being away from their native haunts, suggesting that perhaps Alpine violet are not adapted to the Kansas climate. However, when the wind ceased to blow steadily, the violet seemed to do better, and, if protected, may survive long enough to bloom.

The violet cuttings that I started were from the so-called California violet, and were mostly runner cuttings. These were taken from the runners, preferably those that were rooted, and were trimmed up so as to leave the end joint and a small leaf or two, the rest being

cut off to reduce surface for evaporation. When the cuttings were prepared, they were put into cold water for a while to harden them and were then set close together in rows 2 in. apart, in a flat partly filled with earth, but with about $1\frac{1}{2}$ in. of pure, clean sand on top.

The main thing in starting violet cuttings is to keep them from drying out, and, as those I started accidentally became too dry a few times, the results were not altogether satisfactory, although some of the better cuttings grew and thrived. The cuttings were set on Feb. 23d. and by Mch. 20th. those that were alive were ready to be potted off. I put them into thumb pots and allowed them to stay there until April 8th. when I set them in a bed on the east side of the house. All of those set out lived, and made a good growth.

Pansy.

The pansy though usually classified under the species *Viola tricolor*, is, probably, descended from species *Viola altaica* as many pansies seem to be more closely allied to it than to *Viola tricolor*. However, comparatively little can really be traced of the pansy's origin.

Named pansies come fairly true from seed, but the particular varieties can only be propagated successfully from cuttings.

A good pansy plant should be dwarf, short stemmed, and of stocky habit, and should produce an abundance of good flowers.

For the pansies, I prepared flats, planted the seed, and cared for the young plants in the same way as for the violet, and, contrary to the general rule that pansies are quicker to germinate than violets, the seeds of the pansy and violet planted on the same day and kept under the same conditions, came up at nearly the same time.

After the plants were transplanted the first time, they became quite badly infested with aphids, which are extremely difficult to get rid of. These especial ones were treated to frequent smokings with tobacco, and sprayings with tobacco tea - made by boiling tobacco stems in water - and yet some of them were not discouraged and remained, without doing any serious harm. On Apr. 3d, I set the plants out of doors in the same bed as the Alpine violet, and not a single plant has died.

An orange colored fungus, *Puccinia violae*,

made its appearance on the leaves, but by picking off and burning the affected leaves, I have prevented the growth of the plants from being checked.

The pansies planted were *Viola tricolor* - *Maxima Trimardeau* Mixed, *Viola tricolor* - *Maxima French* Mixed, *Viola cornuta* - *White Perfection*, *Viola tricolor* - *Maxima Alba*, *Tufted pansy* - Mixed, and *Viola tricolor* - *Maxima aurea*.

The *cornutas* or tufted pansies, are hybrids of pansies and the Alpine violet, *Viola cornuta*. Formerly, they were grown, as violas or bedding pansies. They are characterized by a tufted root, growth and profuse branching at the base of the stem, and succeed best in fairly deep, rich, moist soil. The flowers are small and numerous.

To keep track of the comparative value of the kinds, I planted in my trial bed ten of each kind, setting them 4 in. apart, in rows 5 in. distant from each other. Then, starting at one end of the bed, I numbered the kinds, and in this way have been able to keep a record of their growth and blooming

propensities.

No. 1. *Viola Tricolor* - *Maxima Trimardeau Mixed*, is a large, growing plant with very large thrifty leaves, and produce large blossoms, some of them with crimped edges.

No. 2. *Viola Tricolor* - *Maxima French Mixed*, is much the same in plant and flower as No. 1.

No. 3. *Viola cornuta* - *White Perfection*, is branching like all of the *cornutas*, and produces small white blossoms.

No. 4. *Viola Tricolor* - *Maxima alba*, is a short, strong-growing, little plant, was the first to bloom and is covered with buds and fair-sized white blossoms. It appears to be the freest bloomer in the lot.

No. 5. *Tufted Pansy* - *Mixed*, has the same characteristics as No. 3.

No. 6. *Viola Tricolor* - *Maxima aurca*, is a strong, large-leaved plant, and bears quite large, pure yellow flowers.

From April 30th. when the first blossom appeared, the sixty trial plants have produced the following number of flowers.

No. 1. - 32.

No. 2. - 37.

No. 3. - 27.

No. 4. - 56.

No. 5. - 48.

No. 6. - 31.

And at the present time of writing, June
10th are just getting into full bloom, and
bid fair to make my pansy bed a satis-
factory experiment.