

The Farmer's Advocate AND HOME MAGAZINE.

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THE DOMINION.

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generally not being public speakers, do not care to face a campaign where the platform must be taken and big questions threshed out. If farmers desire more members they must prepare them and elect them. It is the young man's day, and, if we mistake not, before many parliaments have been dissolved there is going to be an upheaval and some of the thinkers, among the live farming communities who have had the advantage of training at some agricultural or other college, will be in the fight, and will be able to hold their own with members of other professions and will ably represent agriculture and the people. It is the business of the farmer to get into this political game, play it fair, and see that the other fellow does not win with a cold deck of cards.

Nature's Diary.

A. B. Klugh, M.A.

Among all the plants which abound in our woods, fields and bogs there are none more beautiful or more interesting than the Orchids. The most striking flowers in our flora belong to this family, and all the species are extremely interesting because of the wonderful way in which their flowers are modified to ensure cross pollination by the aid of insects.

Before dealing with the modifications which the flowers of the Orchids exhibit it would be well to briefly review the structure of some flowers which are not so modified. Take for instance the Buttercup. Here we have five separate sepals, five separate petals, many separate stamens and several separate pistils. In any flower the essential parts are the stamens and pistils. The former bears at its apex the anther which contains the pollen the latter has a sticky surface at the top, called the stigma, to which the pollen grains adhere. On the stigma the pollen grains germinate, sending a tube down into the ovary. Along this tube the nucleus of the pollen grain passes, fuses with the egg-cell in the ovule. The ovule is then said to be fertilized and is termed a seed.

Now let us look at the Lady's-Slipper and see

what modifications have taken place. In Fig. 1 we see that there is a broad oval standard at the top of the flower, this is one of the sepals. The other two sepals are united and are below, and in the illustration are hidden by the lip. Two of the petals stand out like wings at the sides, the third is very much modified, being changed into a sac called the lip. From Fig. 2 we see

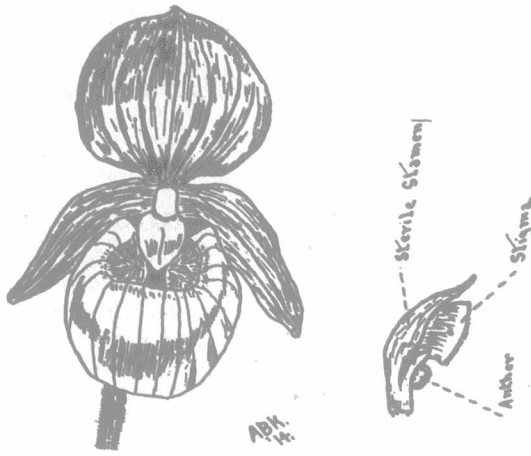


Fig. 1—Showing Lady's Slipper.



Fig. 2—Side View of Column of Lady's Slipper.

that in place of the stamens and pistil being separate, they are fused together into a structure known as the column. This is really composed of three stamens and the pistil, but one stamen is sterile and has been transformed into a shelf, in the centre and underneath which is the stigma, while at each side and beneath are the two fertile stamens, which have lost their filaments (or stalks) so that only the anther remains. The

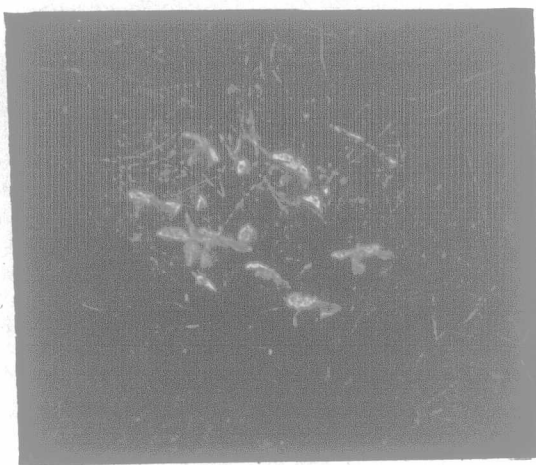


Fig. 3—Showing Lady's Slipper in its haunts.

pollen in the orchids is not dry and powdery as it is in other plants, but is contained in the anther in an adherent sticky mass, which is termed the pollinium, or pollen mass.

Now when we come to investigate the method of pollination we see the use of these modifications. The insect enters readily enough through the opening shown in the centre of the flower in Fig. 1., but when after having dined on the nec-



Fig. 4—Ram's Head Lady's Slipper.

tar secreted by the hairs at the bottom of the lip, it cannot leave by this opening because of the incurved sides. The only exits are the two little openings on either side of the flap formed by the sterile stamen, and in crawling out of one of these the insect is obliged to pass under the pollinium, thus gathering up some of its sticky pollen. When it visits the next blossom on leav-

ing by the "back doors" its back comes in contact with the stigma (see Fig. 2) and some of the pollen is scraped off on it. At the same time the insect gets another load of pollen from this last flower to carry to the next and so on. Thus we see that by this elaborate device cross-pollination is ensured.

The structure of the flower of the Yellow Lady's-Slipper is very similar to that of the species just described, but the upper sepal is narrower, and the two side petals are twisted, narrow, and hang downwards.

In the Stemless Lady's-Slipper, which is also rather aptly called Moccasin Flower, the entrance to the lip is a slit instead of a roundish opening, the texture of the lip is softer than in any other species of the genus, and the lip is purple in color.

The little Ram's Head Lady's-Slipper is one of our most unique-looking flowers, as may be seen from Fig. 4, and it also has the distinction of being by far the rarest of all our Lady's-Slippers.

The habitat of the Lady's-Slipper is usually in peat-bogs, and it is fortunate that it is so, for few but ardent botanists venture into these places of wet and uncertain footing, and if they grew in more accessible places they would soon be exterminated in all settled parts of the country. The botanist is content to admire them in their haunts and to carry away a few blossoms to exhibit as examples of the beauties of our native flora, but the chance way-farer is almost certain to return with a spade and a basket or two, to dig up the plants and plant them in a garden where they soon die in its uncongenial soil.

THE HORSE.

Rearing Foals From Working Mares Profitable.

A correspondent of "The Farmer's Advocate," Winnipeg, Man., gives some seasonable advice regarding the rearing of foals from working mares, and his ideas herein recorded are applicable throughout Canada.

There is no reason whatever why breeding mares should not do a fair share of the season's farm work, and at same time successfully raise a strong, healthy foal. Of course discretion must be used. Personally I am in favor of their being kept off the roads from doing such work as hauling grain on account of the uncertain state of the roads at this season. Mares hauling heavy loads and constantly getting "stuck" would probably result in giving birth to dead foals. On the other hand, they can be worked to advantage at almost any kind of field work such as seeding, summerfallowing and cultivating right up to within a few days of foaling, and again with discretion two weeks after foaling.

Mares are in much the best shape for foaling if allowed access to grass frequently and regularly. Personally, I am dead against work horses being turned out to pasture, after doing a hard day's work, all night to get their living, but I do think that in-foal mares give much better results when they have lots of green grass to eat, but then they should not be doing full work at this time. Where the mares do not get green feed they should certainly have bran and oats at this period. A mare doing a fair amount of work should get five quarts of oat chop and two quarts of bran three times a day with all the best hay she will clean up. The colt should be given oats as soon as it will eat them, which usually is surprisingly soon.

Be sure these oats are the best possible. Avoid musty or heated oats, old oats are best. The colt should also get a chance to nibble a little sweet hay as soon as old enough. When mares are working and come in from the fields at all heated they should be kept from colts until they have had time to cool off. I think the best place for a foal when dam is working is a nice high-boarded, loose box with small yard in connection, also well boarded. Right here I must say I think the very worst place for a foal is to be allowed to run all over the farm after the mother when mother is working, and yet it's surprising how many thoughtless farmers allow their colts to do this.

Before turning mare in with foal remove harness to avoid accidents. It is also much the best not to tie mares up as colts are likely to get entangled in the halter shank. If this is unavoidable, I advise tying a stick to halter shank between the head piece and manger. This helps to prevent the colt getting entangled. Colts that are raised in this way are invariably quieter than the range-raised colts, they are used to being handled, and it is a very simple matter to halter-break them at this period. They are also easier to wean in the fall, and if given proper attention will not lose any colt flesh at this period which is most important.

All things considered I think working in-foal mares with discretion a good business proposition, and in itself comprises a branch of mixed farming I am at present very much in favor of.