

of our thickets. It is a perennial herb, the cleanest in appearance of all our climbers.

If you have trees upon your lawns with high and unsightly trunks, plant a Virginia creeper near to cover them. Do not introduce single high objects covered with climbers into an unbroken lawn. An old stub covered with a mingled verdure of Virginia creeper and bitter-sweet, is desirable among trees, but never in an open lawn, unless it has an immediate background of high verdure.—*L. H. Bailey, in the Michigan Horticulturist.*

LOVE MAKETH RICH.

BY MRS. M. J. SMITH.

My neighbor, just across the way
Is rich, while I am poor.
Yet with her priceless wealth to-day,
She envies me I'm sure.

How lifeless all my treasures are ;
These costly works of art.
Her gems have life and gather close
Unto a tender heart.

My halls are tapestried. I see
Rare views at every glance.
On her low walls at eventide
The shadow fairies dance.

Oh, restless figures bearing me,
Back to a father's cot ;
A plain, unpainted vine-clad cot—
But such a hallowed spot.

Oh, I would give the world to be
A happy child to night !
And stand once more within the glow
Of that soft firelight.

To hear my mother's gentle voice,
And feel the kind caress
Of hands that laid our childish plans
And wrought our happiness.

Oh years and years, twixt now and then,
So empty but in name,
Has been the restless, fevered life,
This stretch for wealth and fame.

That could the crown of love once more
But grace my burning brow,
I would exchange with her who sits
In yonder firelight now.

She does not know how glittering gold
Can weigh the spirit down,
Nor how her love is lifting her
Unto a star-gemmed crown.

She does know how thick the thorns
'Neath sparkling gems are set,
She does not see how often pearls
With costly dew is wet.

And so she goes her humble way,
And envies me I'm sure.
While I, I grudge her gifts that make
Her rich, while I'm so poor.

Southey says, in one of his letters : " I have told you of the Spaniard who always put on spectacles when about to eat cherries, that they might look bigger and more tempting. In like manner I make the most of my enjoyments, and though I do not cast my eyes away from my troubles, I pack them in as little compass as possible for myself and never let them annoy others."

Fruit Garden.

Hand-Hybridization and Its Importance in the Improvement of Fruits and Flowers.

BY ERNEST WALKER.

Several years ago, in correspondence with one of the principal florists of the country, respecting a new set of Coleus, we referred to the fact of their being the result of "hand-hybridization," and received this reply : "That amounts to nothing. Insects can do that better than we." However, our set of twenty varieties was selected from less than one hundred and fifty seedlings, where this florist in advertising a similar set of his natural seedlings, claimed they had been carefully selected from something like ten thousand seedlings ; doubtless congratulating himself that he had done so well. This is what suggested the following thoughts upon the subject.

All horticulturists know that the present improved state of the various kinds of cultivated fruits and flowers has been brought about by cultivation, and that originally, or in their wild state, few of these kinds possessed any of the qualities which characterize the present improved varieties. And furthermore, this high state which cultivation has wrought is found to be not permanent, but ever exhibiting a tendency to return to the primitive state.

There is, however, a reason for this as in all things ordered by the omniscient mind of the great Designer, who has placed at the disposal of man the material, and bestowed upon him a superior intelligence which it is man's privilege to use in developing this material that it may better serve his necessities. Had the Creator himself developed the resources of this material—built the cities, the railroads, the iron bridges, clothed man, and further, made each flower and fruit in a permanent state of perfection, what would be the mission of man ? What part would or could he fulfil in the great plan of the Infinite Designer ?

As it is, however, all things have been created with ever a susceptibility to improve, yet ever exhibiting a tendency to return to the primitive state. This plainly establishes the fact that, if there be not improvement there must be deterioration ; so that it seems the Creator has, in a measure, compelled man to cultivate and use his intelligence in opposing this tendency, and ever persevere in the improvement of both mind and matter.

As before stated, this disposition is plainly manifest in the fruits and flowers which we cultivate. This brings us to a consideration of the subject before us, that of hand hybridization, or artificial cross fertilization in the improvement of fruits and flowers.

First, let us enquire, in what does improvement consist ? Not merely in obtaining new varieties, or some novel and curious feature,

but rather in improving the qualities already possessed, and in uniting them in new varieties to take the place of the parent varieties, through which we rather tend to diminish the number of varieties ; just as, could we combine in one apple the good qualities of all, we certainly should need but the one variety.

The importance of discarding old varieties as we improve upon them, has much impressed me since first I became interested in this subject, for how can one ascend a ladder, who, while endeavoring to reach the rounds above him, clings to those below ?

Now in the improvement of fruits and flowers, as is admitted in the improvement of stock and cattle, the basis of success and progressive improvement is found in the pedigree. By maintaining this, we are not only enabled to arrest this tendency to degenerate, but at the same time we preserve a foundation on which to build future progress. Thus, while perfecting desirable qualities, and combining them in new and improved varieties, we can ever add improvement to improvement, and so on *ad infinitum*.

In ordinary field crops and other plants annually grown from seed, the pedigree is preserved by careful selection and cultivation of a particular strain, and guarding against and casting out all departures from this. Thus can the pedigree of such plants be maintained—being annually grown from seed, the ameliorating influence of high cultivation has a more open chance to manifest itself.

In perennial plants, however, the tendency to degenerate when grown from seed is more manifest, so that it is impracticable to maintain the pedigree in this way, and bud propagation is resorted to. But in these plants, as in annuals, good cultivation will manifest its influence, through which we can increase the chances for obtaining an improved kind when grown from seed. Different pedigrees or varieties of fruits and flowers moreover possess individual qualities, which would, if combined, produce a new variety, possessing, perhaps, the desirable attributes of both parents. This suggests an enquiry as to the means of accomplishing such a result, to which we briefly answer. This means consists in the cross-fertilization of flowers, which in nature is performed by insects and other agents, carrying pollen or fertilizing dust from flower to flower, thus affecting the development of the seed, which proves that the tendency in seed to produce varied individuality is plainly due to some external agency present in the fertilization of the *ovule*, or some time during its development, such as climate, soil, cultivation, or cross-fertilization by insects or otherwise. So in resorting to this means of obtaining new varieties, we resort to a natural means after all.

However, insects are not interested in improving fruits and flowers, consequently do not always make the most desirable cross-