

of others shorter and surer roads to the attainment of a given object. Our best vegetable physiologists are of opinion that hybrids and cross-breeds derive their form and habit from the female, the colour of the flowers from the male, while the constitution may be acquired from either parent. This is some times, and may be generally true, but the exceptions are so numerous that they cannot, according to my experience, be said to prove the rule. It is generally admitted that the most perfectly developed flowers and fruits are the best for the improver to work upon, and this is, I believe, true as a rule, although still attended with exceptions. Personally I have learnt from my labours in this field never to lose heart or hope. For sixteen years, from 1843 to 1859, I had laboured with such qualified success in raising seedling Roses, that I had then minimised the amount of labour by omitting the costly process, in point of time, of keeping notes of parentage, &c., when in the following year, 1860, I was more than compensated for all past labour by the extraordinary flush of success already stated. I say then to my brother horticulturists who may be working in this field—Never despair; persevere and wait.

My experience in selecting, hybridizing, and cross breeding tells me that he who is seeking to improve any class of plants should watch narrowly, and seize with alacrity, any deviation from the fixed character, and the wider the deviation the greater are the chances of an important issue. However unpromising in appearance at the outset, he knows not what issues may lie concealed in a variation, sport, hybrid, or cross-bred, or what the ground newly broken is capable of yielding under careful and assiduous cultivation. If we would succeed in this field we must observe, and think, and work. Observation and experiment are the only true sources of knowledge in nature; and while observing and experimenting, we should above all things guard against prejudices—*From an address delivered by William Paul at the Manchester Congress, July 21st, 1869.*

Horticultural Progress

It is gratifying in the extreme to visit such a floricultural establishment as that of Mr. James Fleming, Toronto, and see in the extensive arrangements there made for the propagation of all kinds of flowers, the evidence of a growing taste for these beautiful things.

Mr. Fleming has eight different houses devoted to the cultivation of flowers; all but one are span-roofed, and average about twenty feet by forty, are heated with about 2,000 feet of hot water pipe, and are roofed with heavy glass of the best quality.

The first of these houses is devoted at this time to Scarlet Geraniums. Of these beautiful bedding plants there were some sixty varieties, including the celebrated Donald Beaton collection, and four varieties of the beautiful new double geraniums, *Gloire de Nancy*, *Princesse Alice*, *Madame Lemoine* and *Romanule flora*.

In the second house were grouped a number of interesting plants, among which were the beautiful variegated leaved creeping grass *Panicum variegatum*, so much esteemed for variegating baskets; the *Smilax*, so much sought for by the ladies as an ornament for the hair or trimming for evening dresses, and the new zonal geranium, "Incomparable," whose flowers are a soft shade

of salmon beautifully striped and spotted with white.

In the third house was a miscellaneous collection of plants, which are brought into flower at this season to furnish beautiful bouquets for the winter evening parties.

There were some lovely monthly carnations in bloom, the *Libonia Floribunda*, covered with its profusion of orange and yellow flowers, and quite a collection of *Begonias*, with many other plants in flower: giving to this house a very gay and attractive appearance.

The fourth house is devoted to the large flowered fancy and show *Pelargoniums*, of which Mr. Fleming has seventy-eight varieties surely enough to furnish a fine selection to the most fastidious.

The fifth house is devoted chiefly to *Camellias* and *Azaleas*, which will soon be in bloom, being now covered with a profusion of buds.

The sixth house is filled with *Stevias*, *Salvias*, and other plants for winter blooming.

The seventh house contains but little besides roses. Of the *Tea*, *China* and *Bourbon* Roses, Mr. Fleming has seventy varieties, among which we noticed the grand tea-scented *Maréchal Niel*, with the *Canary* and *Isabella Sprunt*. He has also the new climbing rose, "*Gem of the Prairies*," which combines the climbing habit of the *Prairie Rose* with the fine color and scent of the *H. P. Rose*.

In *H. Perpetual* Roses, he numbers some fifty varieties, comprising such beauties as *Vulcan*, *Prince Camille de Rohan*, *Beauty of Waltham*, and *Madame Charles Crapelet*.

The eighth house is set apart for the cultivation of *verbenas*, of which Mr. Fleming has over fifty sorts, and to which he is continually adding all the new and desirable varieties that are offered.

In addition to these houses we noticed a cold grapery—a lean-to of eighteen feet in width by eighty-five feet in length—in which the choicest exotic grapes are grown.

There must be an increasing demand for choice plants and flowers in our Province, for already Mr. Fleming has upwards of three thousand plants of the different kinds of *Scarlet Geraniums*, to which, before the time for bedding out arrives, he will add many thousand more of *Verbenas* and other bedding-out plants, which will be sent out to give a charm to our gardens and make our homes attractive and beautiful.

CUTTING OFF STRAWBERRY LEAVES.—The *San Francisco Record* says:—We have found a very beneficial way to cut off the culture top of the strawberry plant after it is through bearing. If it is done, the plant commences a new growth immediately after, and by fall becomes a rank, luxuriant hill. It will be found that many plants are as much weakened and exhausted by bearing on the old dead leaves, and stalks, etc., as by the crop of fruit. Cut the top off by all means, and scatter a liberal supply of manure among the plants, and work the ground well."

Influence of Trees on Climate.

Attention has been called to the great influence which trees have upon the temperature and rainfall, by W. H. Mills, Esq., in his address before the Fruit Growers' Association in September last, and we now lay before our readers the substance of a short paragraph from the *Gardener's Chronicle*, bearing upon this subject.

M. de Lesseps, the engineer of the Suez Canal, made his headquarters at Ismailia, which, a few years ago, stood on a dry sandy desert on which rain was never known to fall. A fresh-water canal was cut from the Nile to the old dried-up basin of Lake Gimsah, and trees and shrubs were planted, and irrigated with the water. These grew rapidly. Accompanying this change there has been a corresponding change in the climate. Now during eight months of the year, Ismailia is one of the most healthy places in Lower Egypt. From June to September the mean temperature is 91°; from October to January 71°, and February to May 45°. Rain was unknown here until two years ago; now during the year ending with April, 1869, there were fourteen days on which rain fell, and on one Sunday in April a tremendous shower, something that the oldest Arab there had never seen before. "Rain ceases to fall on a country deprived of its forests, or only falls in violent storms. Here we see rain returning to the desert on restoring the trees."

Impositions by Tree Agents.

(To the Editor.)

Sir—I want to tell people to look out for these Tree Agents. They are great scamps. They go around the country telling you they are agents for some nursery, most always one of our best Canada Nurseries, and get you to subscribe for some trees which they promise you they will bring from that nursery. When they get a lot subscribed for, they go off to some place where they can get some cheap trees and buy them up for little or nothing, and then put what names they like on them and bring them to you and tell you they got them at the nursery they were agents for.

I know that is a fact, for I caught them at it this summer. A fellow came to me last winter and said he was agent for Mr. Beadle's Nursery, and I subscribed for some of his trees; and when the trees came in the spring, they were such a mean lot, I wrote right down to Mr. Beadle about them. Pretty soon I got a letter back, and he said he knew nothing about it,—that he did not send out any agents now, but sold them wholesale to dealers; but anyhow, he was sure he had not sold any to this fellow, for he never heard of him before. Then I showed the letter to him, and at last he owned up that he didn't bring the trees from Mr. Beadle's nursery, but bought them of a man that was selling out.