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RECENT PROGRESS IN AMERICAN HORTICULTURE.[1]

BY L. H. BAILEY, ITHACA, N.Y.

YOU have asked me to say something about recent progress in horticulture. I am at a loss to know how you want the subject treated. The subject is a large one, and can be approached in many ways. It is by no means admitted that there is any recent progress. There is a large class of our horticultural public which disparages these modern times as in no way so good as those of several or many years ago. These men are mostly gardeners who were apprenticed in their youth. There is another class which decries the introduction of new varieties of plants, thinking these novelties to be unreliable and deceitful. There are others who are content with the older things and who have never had occasion to ask if there has been any progress in recent years. Others have looked for progress, but have not found it. A professor of horticulture told me a few days ago that nothing new nor interesting seems to be transpiring in the horticultural world. Some people even deny outright that any progress is making at the present time. On the other hand, there are some, perhaps the minority, who contend that they see great advancement. Perhaps these are mostly young men. Then there are the catalogues with their fascinating impossibilities, pregnant with the glory that is to come. Between all these diversities, where is the young man to stand who loves plants and sunshine and is yet ambitious? Is there any progress in horticulture? If not, it is dead, uninspiring. We cannot live on the past, good as it is; we must draw our inspiration from the future. This subject is of vital personal interest to me; it must be so to you.

I cannot forego the satisfaction of saying at the outset, that some of this supposed stagnation must be due to blindness on the part of the observer. The apprenticed gardener underwent in his youth the stupendous misfortune of having learned the art and science of horticulture. The apprentice system, in itself, does not often educate a man; that is, it does not make him a student. It teaches him to base the whole art upon rule, personal experience and "authority;" it is apt to make him a narrow man, and he may not readily assimilate novel methods. Those who have looked for progress and have not found it, may have looked in the wrong place. It is possible that they do not understand very clearly just what progress is. Those who are simply indifferent exert little influence upon our inquiry and may be omitted. Those who see progress upon all sides may be over-sanguine. Perhaps they project something of their own passion into their statements. And the catalogues, being for the most part editorial rather than horticultural productions, may be liberally discounted as evidence. It is apparent, therefore, that we must make an independent inquiry if we are to answer our own question. Several considerations incline me to believe that progress is not only making, but that it is making very rapidly. And I may say here that I care little for any facts or illustrations of progress merely as facts. There must be some law, some tendency, some profound movement underlying it all, and this we must discover. I shall not attempt, therefore, to indicate how great the progress has been in any definite time, but endeavor to ascertain if there is progression which gains impetus with the years.

1. *There is a progressive variation in plants.* Horticulture is the science of cultivation of plants. The plant is the beginning and the end. For the plant we till the soil, build green-houses, and transact the business of the garden. All progress, therefore, rests upon the possibility of securing better varieties, those possessing greater intrinsic merit in themselves or better adaptations to certain purposes or regions. In other words, all progress rests upon the fact that evolution is still operative, that garden plants, like wild animals and plants, are more or less constantly undergoing modification. American horticulture may be said to have begun with the opening of the century. It was in 1806 that Bernard M'Mahon wrote his "American Gardener's Calendar." This work contains a catalogue of 3,700 "species and varieties of the most valuable and curious plants hitherto discovered." Among the cultivated varieties of fruits and vegetables, the present reader will see few familiar names. He will observe among the fruits, however, some American types, showing that even at that date American pomology had begun to diverge from the English and French which gave it birth. This is especially true of the apples, for of the fifty-nine kinds in the catalogue about 66 per cent are of American origin. Several nurseries were established in the next thirty years and fresh importations of European varieties were made, so that when Downing, in 1845, described the 190 apples known to be growing in this country, American varieties had fallen to 52 per cent. In 1872, however, when almost 2,000 varieties were described in Downing's second revision, the American kinds had risen to 65 or more per cent, or to about the proportion which they occupied at the opening of the century. At the present time, the per cent of varieties of American origin is much higher, and if we omit from our calculations the obsolete varieties, we find that over 80 per cent of the apples actually cultivated in the older apple regions at the present time are of American origin. The percentage of native varieties, in other words, has risen from nothing to 80 per cent since the apple settlement of the country, and at least once during this time the native productions have recovered from an overwhelming onslaught of foreigners. Except in the cold north and north-west where the apple industry is now experiencing an immigration not unlike that which befell the older States early in the century, few people would think of importing varieties of apples with the expectation that they would prove to be a commercial success in America. Other plants have shown most astounding development. In 1889, 39 varieties of chrysanthemums were introduced in North America; in 1890, 57 varieties; and in 1891, 121 varieties. The chrysanthemum is now the princess of flowers, yet in 1806 M'Mahon barely mentioned it, and there were no named varieties. All this is evidence of the greatest and most substantial progress, and much of it is recent; and there is every reason to believe that this rapid adaptation of plants to new conditions is still in progress in all cultivated species. In fact, the initial and conspicuous stage of such adaptation is just now taking place in the Russian apples in America, in which the American seedlings are even now gaining a greater prominence than some of their parents. Both the parent stock and the seedling brood are radical and progressive departures of recent date. The same modification to suit American environments is seen in every plant which has been cultivated here for a score or more of years. The mulberries are striking examples, for our fruit-bearing varieties are not only different from those of Europe, whence they came, but many of them belong to a species which in Europe is not esteemed for fruit. The European varieties of almonds are now being superceded in California by native seedlings which are said to be much better adapted to our Pacific climate than their recent progenitors. These facts of rapid adaptation are everywhere so patent upon reflection that I need not consider them further at this time. They

[1] Read before the Agricultural and Experimental Union of Ontario, at the Ontario Agricultural College, Guelph, Dec. 23, 1892.