THE

# GARDENERS CHRONICLE 

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No．163．－VoL．VII．$\left\{\begin{array}{c}\text { Tump } \\ \text { Seners．}\end{array}\right\}$
SATURDAY，FEBRUARY 8， 1590. Regt，as a Xeverpyer．

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Sprout hathit，the foliage being midway between the two sprout hahit，the foliage being midway between the wor
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palil．Lonlou Agent－Mr，GEOROE， 10 ，Victorin Moal．P＇utney， WM．Thomson axd SoNs，Cloveafordy，Galishiels，N．B．
value, and the sorts of soils which suit them; for there is no best Wheat for all soils and climates, or one pre-eminent sort would suffice, whereas we have at least three or four score, red and white, long and short, bearded or beardless, coarse for indifferent situations, or refined for the finest Wheat soils.
The farms at Verrières have been for forty years past used by the firm of Messrs. Vilmorin, Andrieux \& Co. as a site for the preservation of old varieties of plants, and for the production and trial of new rarieties. The experimental grounds comprise each year about $2.5,000$ plots. As in the case of our own leading seedsmen, these different divisions are applied to the growth of stock seed for distribution among the growers of the firm ; to the cultivation of seeds delivered by the growers so as to subject the produce to the test of comparison; to the trial of novelties introduced by other seedsmen, as in the case of the new Peas I mentioned just now; and to the preservation of a number of typical examples to serve for comparison in the work of keeping old sorts true, and in introducing new varieties. It needs but little reflection to comprehend what a vast amount of work is entailed upon the firm and its experts in carrying into effeet the varions objects thus described. There are compartments for all the principal productions; for flowers of various_kinds; for Mangold (the seed of which is sold by this firm to the extent of two to three million pound annually); for Potatos, forage plants, Peas and "Haricots ;" and, in fact, for everything. And at the farm of St. Fiaere, where some fine ranges of sheds and floors have been erected for dealing with the ripe seeds and for storage, the patron saint of gardeners' figures above the chief entrance, and seems appropriately to preside over the industry of this great establishment.

The land in the immediate neighbourhood of Verrieres is fertile, and in driving from the railway station at Massy 1 noticed that it was chiefly devoted to the growth of vegetables for the Paris markets. This kind of cultivation is more prolitable than the growth of seeds, and M. Vilmorin's neighbours do not, in fact, grow any, so that his choice stocks of various kindswhich, no doubt repay him the extra cost of their production-run no risk of becoming contaminated by intermixture with common sorts. Perhaps 1 may turn aside here to mention that I happened to be at Verrières on the annual fête day, and M, Vilmorin being the mayor, I had the pleasure of hearing his address to the people, delivered in a tent where, with the assistance of the clergyman and two or three other gentlemen, he distributed a large number of handsome books as prizes to as bright-looking a lot of village school-children as 1 have ever seen. There was quite a crowd of small landowners present, and they all looked smart and well-to-do. The ceremony was not of long duration, and at its close we passed among the roundabouts, fancy stalls, and shooting galleries, and then returned to our betteraves, \&c. But, if I may tell the story, my accomplished guide and host, being invited as the mayor to show his skill, smashed three revolving eggs with a pea-rifle very neatly, and then we retired in triumph.

As to the betteraves, or Sugar Beets, it is a great mistake, growing them too large, inasmuch as the smaller ones contain a far larger percentage of sugar. The same rule applies to Mangold Wurzel for cattle, which ought never to be grown in rows much more than 27 inches apart, except for the purpose of cleaning foul land. The crop should consist of many and small,
rather than few and large. And yet, such is the popular ignorance, that growers sometimes throw it in the seed merchants' teeth that his betteraves à sucre (for this can surely only oecur in France) are not of the giant or mammoth breed.

I saw Onions growing in very many plots. The Potatos are a fine collection, to which, in fact, all the novelties are added every year. The practice here is to select the best from all the sorts here tried and tested, and not to breed any. Some are grown for trial, and some-previously approved of-are grown for seed, i.e., sets, to be sent to growers.
In England a potato merchant will look at no tuber which has not white flesh, and strange grimaces would be made at the Criterion or Holborn restanrants-these busy feeding places -if yellow-fleshed Potatos were served at dinner. In France it is the other way ; bright yellow is the approved colour, and in one of his frequent visits to England M. Vilmorin met with the very early yellow-fleshed Potato, Victor, an earlier variety than the Ashleaf, and found no difficulty in transferring it to France, where it has been a great favourite.

We next observed a collection of Gourds and the Custard Marrow, which, when true, grows in a clunnp, and does not "run." The blossoms are artificially impregnated, and to keep them true, are confined in such a bag as Grapes are secured in sometimes to balle wasps and flies. French Beans and Gerkins came next, and then Scarlet liunners - red, white, and bi-colored; and a Lina Runner, and a late Bulgarimis sort, named Southern Prolific, with dark-coloured, purple flowers. W'e passed the ground where the Peas had been harvested, and the dwarf Beans. The green-seeded French Beans, which are so much in fashion in France, are obtained in this way; the haulm is pulled up before the seeds are ripe, and put into heaps, with a covering of straw to preserve them from the weather. The Beans so treated, when shelled and boiled, preserve their green colour.
The trade in these green French Beans has become a very large one around Paris and elsewhere. Soja hispida, or Dolichos soja, the Soy Bean, is represented here. It is grown for fodder and for ploughing in green as manure, and is of little value in France, it ripening too late, if at all. But it is one of the great food plants of the world, a native of Japan, De Candolle says, and used in that country and in China from remote antiquity. The lean contains a large proportion of oil, and preparations similar to butter and cheese, and oil, are obtained from it in the cookery of the East.
Flowers innumerable are grown in the grounds, of various kinds for the production of stock, seed, and with the other nbjects already noticed. I observed an exquisite light blue Delphinium, which was raised here ; charming rose-coloured sweet Peas; Gladioli ; P'bloz Drummondi fimbriata, the blossoms fringed and pointed-an innovation, not an improvement; Italian Verbena, striped. But we had little time among the flowers, and left them for another occasion, my pencil having been mainly occupied among the varieties of Wheat, hybrids, cross-breds and pure-breds. H. $E$.

## New or Noteworthy Plants.

## CYPRIPEDIUM "NORTHUMBRIAN" (new hybrid).

This new hybrid has been raised by Mr. Drewett O. Drewett, of Riding Mill-on-Tyne, from seeds of C. calophyllum, fertilised by the pollen of C. insigne var. Maulei. It belongs to the same group
as C. Ashburtonix, C. Crossianum, and C. obscuram, and is of about equal merit with those plants from a decorative point of view. The leaf is similar to that of C. insigne in shape, but it is indistinctly marbled with dark nerves and cross veins. The peduncle is 7 or 8 inches long, brownish-purple, and pubescent. The bract is similar to that of C. insigne, about $1 \frac{1}{2}$ inch long, convolute in the lower part, dull green, suffused and dusted with dull purple. The ovary is about twice as long as the bract, entirely of a dark purple colour, and softly pubescent. The upper sepal is almost exactiy elliptic, being broadest at the middle, and nearly equally narrowing at both ends, sub-acute, nearly $2 \frac{1}{2}$ inches long by $1 \frac{1}{3}$ inch broad, pubescent on the back; the basal and central area is light apple-green, well covered with small brownish-purple spots, and the apical third and the broad borders are pure white and unspotted; the nerves are numerous and closely set, and neither very prominent or strongly coloured. The lower sepal is oblong-acute, pale green, spotted with brownish-purple at the base. The petals are similar to those of C. Crossianum, but are a little paler, and not so spotted, they are light brownish-purple, fading into purplish-ochreous at the tips, and with the nerves and indistinct cross-veins rather darker; the base is yellow-green, with a basal tuft of purplebrown hairs, and the wavy edges are ciliate, with fine purple hairs. The lip is pointed, and somewbat like that of C. insigne in form, shining, and of a light brownish-purple colour, the inflexed sides of the claw being ochreous, with a faint purplish tinge, and dotted with purple. The staminode is broadly obcordate, with a short tooth in the notch, haviog a ridge-like tubercle in front; the colour is pale purplish. Of the bybrids allied to it, C. Crossianum comes nearest, but the upper sepal of that flower is broadest towards the base, and the lip is not pointed. The broad ovate form and dark green prominent nerves of the upper sepal, and wart-spots of the sepals of C. calophyllum, its mother parent, have entirely disappeared in the hybrid, and if its parentage was not certaio, no one would probably have guessed that C. calophyllum was one of its parents. It only shows how unwise it is tu attempt to assign parentage to supposed hybrids, without certain knowledge of their origin. Mr. Drewett has, however, ingeniouly stated, that it is just such a hybrid as one might expect to obtain from a cross made between C. Crossianum and C. Asbburtonix. These two plants are the issue of four parents, thus :-

> C. Crossianum =
> C. Ashburtonize $=\{$
> $\begin{aligned} & \text { C. insigne. } \\ & \text { C. venustum. }\end{aligned}$
> C. insigne,

If we assign the fractional value of half to each of the four parents of these two bybrids, then to the elements of a hybrid raised between C. Crossianum and C. Ashburtonix, we should assign half that fractional value, or one quarter; such a hybrid would therefore be compounded of the elements :-

$$
\left.\begin{array}{l}
\text { C. insigne, }{ }^{2}=\{ \\
\text { C. venustum, } \\
\text { C. barbatum, }
\end{array}\right\}
$$

And this new hybrid "Northumbrian" has the same combination in the same proportions, thus:-


But so curious are the ways of Nature, that it by no means follows that a plant just like C. "Northumbrian" would be obtained by crossing C. Crossianum and C. Ashburtonix; however, it would be very interesting, from a scientific point of view, if some one would make the experiment. N. E. Brown, Herbarium, Kew.

Ctpripedium Leeanum var, biflorum, new var.
Mr. D. O. Drewett, of Riding Mill-on-Tyne, has sent to Kew a very handsome form of this plant, which shows a decided tendency to produce two flowers on a scape, though, as is also the case with C. bar-
batum var. biflorum, the peduncles are not always two-fowered, but when one-flowered, seems recognisable from the two other forms of the plant, by the large development of the secondary bract. The upper sepal is large and full, and well marked with purple spots, and the whole flower is brightly coloured. The peduncle seema also to be rather longer than usual. The parents of this form are C . iosigne var. Chantini, seed parent, and C. Spicerianum, pollen pareat. N. E. Brown, Kew.

## Cipitprditim slamense, $n$, $s p$.

This is a new and pretty Cypripedium, imported from the neighbourhood of Bangkok, in Siam, of which a leaf and flower have just been received from Mons. J. Garden, Horticulteur, Bois-Colombes, near Paris, for description. It belongs to the group with tesselated leaves, and apparently stands nearest to C. javanicam, Reinw. The leaf is linear-
spots and warts. Staminode horse-shoe shaped, with a notch in the basal and a small tooth in the apical side, the margin of a pale purplish colour, and the centre with numerous dark green nerves. I understand that it is to be sent out this spring, and no doubt it will be welcomed by cultivators of this interesting genus. $R$. $A$. Rolfe.

## LOCKINGE

On October 12 last year we published in these columns an account of the gardens at Lockinge, made famous in these days by Lord Wantage. Since the publication of that paper we afforded our readera, on January 11, a view of the couservatory, flower garden, and church; and we now give a view of the rock garden, and a bridge over the neighbouring stream (fig. 26), aud another (fig. 27), of the same stream a little distance away from the rockery.
gardening, or that supplied through the medium of the horticultural press, which was always welcome, seeing that it contained the most recent cullings from the head-quarters of horticulture. Who, then, can say that horticulture is made up of unwritten traditions? There are hundreds of eatablishments throughout the country where the kuowledge of gardening to be obtained is of the most rudimentary kind, if entire dependence is to $b \in$ placed on what is to be obtained from the verbal instructions of the chief, Even in large establishments, young men yearning for a konwledge of their profession, must glean it from various sources written and recorled. To ignore these facts is to ignore the valuable assistance given to horticulture by auch men as Miller, London, Thompson, Lindley, Thomas Moore, and many others, including living writers.
Much is written about imitating Nature, but I fear that many of her works are inimitable in many


Fio. 26.-rockery and hestic badooe over a staeam in the oardens, loceinof,
oblong, 6 inches long, $1 \frac{1}{8}$ inch broad, grey-green, somewhat glaucous abore, and teaselated with dark green nerves, very glaucous below. Scape 14 inches high, dark purple-brown, pubescent. Bract acute, 1 inch long. Ovary $2 \frac{3}{4}$ inches, purple-brown. Dorsal sepal broadly ovate, acute, $1 \frac{1}{2}$ inch long; light green in the centre and base, passing into light purple, and thence into a broad white margin; the nerves dark green, seventeen in number; and the margin reflexed. Lower sepal smaller, narrower, pale green, with six darker nerves. Petals ligulate, slightly deflexed, 2$\}$ inches long, 8 lines broad, ciliate; light green, with twelve darker nerves, with nbout six blackish warts on upper margin, the distal third passing into pale purple. The lip 2 inches long, the pouch ellipsoidsl, sub-compreased, pallid behind and at apex, with small duaky spota, purple-brown in front, the infolded basal lobes meeting at their edge, pale whitish-green, with numerous amall and a few larger purple-brown

The stream has been very successfully dealt with by the garden artist, and exhibits so little obtrusion of art, that it is quite a charming feature of the garden. The rockery is not a very pretensioua thing, but it is natural, and well adapted to the growth and to the display of the planta with which it is furnished.

## A GARDENERS' PROBLEM.

Houtictltume (p.116) is said to be "built up of traditions"-which mesus, I presume, that the opinions and practices relating to horticulture have been handed down to posterity unwritten. I, like many others, have scaled the horticultural ladder, or passed through the routine of gardening, in the usual way; but from the very commencement I had to call in the aid of the written history of the profession, in the shape of good atandard words on
pafts of the globe, the British Islea included. How can we imitate, in the confined limits of a greenhouse, or on pigmy mounds of earth called rockeries, what Nature requires a continent or a mountain, with their attendant climatic conditions of heat, light, and moisture, to effect? The history of Gentians, l'rimulas, Saxifragas, the Narras, and others, in gardens, all testify to what I mean. Who has nod often been shocked by the burlesques on Nature in what are termed natural rockeries, grottos, and caves, especially as aids to plant culture? Man constructs these paltryimitations often without con. sidering how the plants will be able to obtain light or water absolutely necessary for their existence, The grottos and caves are planted, and the suhjects left pretty much to take care of themselves, and the gardener then wonders why they die. Illustrations of this may be seen in many otherwise good horticultural establiahments. Nature builds rocks in a

