

&c., so that any person who cultivates this plant for 20 years will get enough to stock several acres of land. We leave to the amateurs of flowers the task of verifying our assertions, and the enjoyment of flower lawns in their winter gardens.

Home Correspondence.

Correa Latrobeana (see p. 733).—The proper name of this plant is *C. Lawrenceana*, Hook. It has had one or two other aliases, and has been figured under the name of *C. ferruginea* in Hooker's "Icones Plantarum," tab. 3; also in Maund's "Botanist," tab. 124. It differs from *C. speciosa* in its larger size, and in the circumstance that its filaments are all equal and not dilated. The plant seems to vary very much in size, and has had a different name to fit each gradation. P.

Mrs. Pollock—a Seedling.—Doubtless my friend and neighbour Mr. Grieve, of Culford Hall, the talented hybridiser and successful raiser of Mrs. Pollock, Italia Unita, Mrs. Benyon, Lucy Grieve, Lady Cullum, and many other fine varieties of Pelargonium, will inform you that Mrs. Pollock is a seedling. That need not, however, prevent me from confirming the fact. Mrs. Pollock came variegated from the first, and has always been the beautiful thing she is now. Although she is therefore no sport formed in the way of variegation, yet, singularly enough, a plant of her sported with me last season quite back to a green. There is not an atom of variegation about it, and Mr. Grieve says that most likely there never will be again. I mean to keep and increase the green stock, and see what comes of it. It certainly points to mixed blood somewhere; and Mr. Grieve will probably tell you that he generally uses one plain-leaved parent. One can readily understand the mixture of blood, but a "mixture of pollen" is doubtless unmixed nonsense. However, I had better "ca canny," as I don't profess to be an authority on this matter. Speaking of mixed blood reminds me of a very singular feature of Stella. I am not aware that the late Donald Beaton ever raised a variegated Geranium in his life. They were not in his Nosegay line, and I certainly never saw one at Surbiton. Yet I have not grown Stella through a single season without getting from one or other of the plants a good variegation, and I hear the same of it from other places. Generally these sports are good silver, almost identical with the one sent out by the Messrs. Henderson, of the Wellington Road, but one of mine has a tinge of gold in it. By the way, I am not at all sure whether Henderson's Variegated Stella was a sport or a seedling. I wish good old Donald was alive to give us the pedigree of Stella. Can any one throw any light upon it? It would be a singular physiological fact if with plain-leaved ancestors on both sides it should manifest such persistent tendencies to assume a bi- or tri-coloured garb. One thing at least is certain—the more Stellas of every colour the better; for, after trying every Nosegay, I still think Stella beats them all. D. T. Fish, Hardwicke Gardens, Bury St. Edmunds, Aug. 6.

Moles.—Can any of your readers inform me whether moles eat wire-worms? I don't think they do, as I have never found one in their stomachs, and think them rather too hard and dry for their somewhat delicate palate. Facts establishing or disproving the point will much oblige. Enquirer.

Oxalis Bowei.—I should be much obliged to any one who will be so kind as to look at his flowers of this Oxalis, and observe where the summits of the branching stigmas stand with respect to the two sets of anthers. In all my plants the stigmas stand close beneath the lower anthers; but I have good reason to believe that two other forms exist—one with the stigmas standing above both sets of anthers, and the other with the stigmas between the two sets. If any one has flowers in either of these latter states, that is long-styled or mid-styled, I should be grateful if he would send me a few rather young flowers wrapped up in tin-foil or oil-silk; for I should thus be enabled to fertilize my own flowers and obtain seed. Charles Darwin, Down, Bromley, Kent.

Cross-fertilising Papilionaceous Flowers.—All who have tried have found much difficulty in crossing papilionaceous flowers. Several years ago, Dr. Herbert remarked to me that with the exception of Erythrina no hybrids had been made in this great family. Gärtner crossed 36 flowers of different varieties of the common Pea, and he did not get a single pod perfectly developed and with the full complement of seed; he crossed 10 flowers of Kidney Beans, and did not get a single pod. Some years ago I crossed the varieties of the Sweet Pea, and many more flowers dropped off unimpregnated than were fertilised. The difficulty arises from the anthers opening at so early an age that they must be removed long before the flower expands. After the operation the immature stigma is liable to exposure to the air; and it is difficult to judge when to apply the pollen. Moreover there is some reason to suspect that the stigma requires successive applications of pollen. To show the difficulty of fertilising papilionaceous flowers, I may mention that I lately removed all the pollen that I could with a soft brush from six recently expanded flowers of *Lupinus pilosus* protected from the visits of insects, and then applied pollen from a distinct individual of the same species. Although in this case there was no operation at an early age, yet five flowers out of the six dropped off unimpregnated. Had these flowers remained untouched, all, judging from the others, probably would have set, and the only difference would have been that their stigmas would have been surrounded by a mass of pollen as long as the flowers continued in bloom. This case is worth mentioning as showing how erroneous the belief is that fertilisation usually takes place in unopened flowers, in which the pollen is shed at an early age. These trials on the Lupines, and others formerly on Sweet Peas, led me

to try the following plan. I rolled up thin paper into a cylinder, rather thinner than a knitting needle. I then tied a thread tight round, and cut off the cylinder beneath the thread, so that a little pipe closed at one end or cap, about the fifth of an inch in length, was left. This was easily filled with pollen from the keel-petal of any desired variety, and could then be placed on the pistil and secured below the stigma by being tied with a thread. I then castrated four flower-buds of the Sweet Pea, and placed on the young stigmas caps filled with pollen from another variety, and four fine pods were soon formed. I also fertilised eight castrated flowers of two species of Lupins with pollen from distinct plants of the same species, but from these I have got only four pods. I may add, that as an experiment I filled one of the little caps with pollen of *Lathyrus grandiflorus* and placed it on the stigma of a Sweet Pea (*Lathyrus odoratus*), and to my great surprise, considering how distinct these species are, a fine pod has been formed. I am certain no pollen could have been left in the flower of the Sweet Pea, as the anthers were removed whilst quite immature; and if these hybrid seeds grow, a curious hybrid will be produced. I should not have thought this plan of fertilising papilionaceous flowers worth mentioning had it not been applicable in all cases in which early castration is necessary, and likewise in certain cases mentioned by Gärtner, in which the stigma requires, or is benefited by, successive applications of pollen. In all such cases some trouble would be saved and certainty gained by the use of the little caps filled with the desired kind of pollen. Charles Darwin, Down, Bromley, Kent.

Verbena officinalis.—I know at least two habitats for this plant in this locality; but it is doubtful whether in either of them the plant is truly indigenous. In one case there is a pretty extensive patch in a ditch near a cabin; the other case is a number of plants on the margin of a stream where farmers are in the habit of washing their sheep. Now, the peasants here had, if they have not now, a belief that there is a charm in Vervain to keep away witches. They used to put it over the door for this purpose. It may have been planted at the sheep pool to prevent drowning. The peasants know it by its proper English name—Vervain. The Verbena was regarded by the ancients in a superstitious light, as is evidenced by Pliny and other classical writers; and, in fact, the term Verbena was a generic appellation of all sacred leaves. Shakspeare also mentions Vervain among the many other wild flowers with which he was familiar. While on this subject, I may mention that I have the same thing to complain of as many other gardeners—the failure of many of my bedding Verbenas. I do not think that frost has anything to do directly with the malady, as some that were planted out late, and had no frost, failed, as well as those planted out early. Purple King suffered more than any of the others. Some sorts are more delicate than others. Some of the old scarlet varieties seem to be particularly hardy. The plants of Purple King that I put out very late to supply vacancies are now growing pretty freely. I should be sorry to see this fine Verbena "go to the wall," as it is undoubtedly the king of purples. J. Douglas, Kilkea Castle, Kildare.

The Lady Strawberry.—Last autumn I received from Mr. Underhill, of Birmingham, some plants of his new seedling Strawberry called "The Lady," which was very highly spoken of, and said to be a great bearer and first-rate in flavour. The plants did well and produced a large crop of fruit; but I was quite disappointed with it, as it was sickly in colour, and possessed little or no flavour. I am aware that the sudden changes in the weather when the Strawberries were ripening were not favourable for them, but other varieties were very fine and the flavour excellent. I should much like to know how "The Lady" turned out with others who have grown it in different soils. Henry Doubleday, Epping.

Centaurea gymnocarpa.—What an elegant plant this is for a variety of purposes, both indoors and out! We have employed it out of doors rather extensively this season, and it has a charming appearance; it is not so white as *ragusina*, but it is far more graceful, so one quality is a set-off against the other. *Gymnocarpa* is easily managed, and a stock of it can be secured much easier than that of *ragusina*. It strikes freely, and may also be raised from seed; it is a most useful plant for decorative purposes, especially when grown as standards in smallish sized pots. In this state I have seen it as white as the other kind. John Edlington.

Mulberry-growing in London.—I gathered on the 2d inst. several excellent dishes of Mulberries in Charterhouse Garden, which is situated in the very heart of our great metropolis. The trees on which they grew are about 16 years old, and have a very healthy appearance. They have been well thinned, an operation which I imagine has had the effect of inducing them to ripen heavier crops this year than formerly. Beyond the thinning, which was unsparingly done, they have, however, had no mulching or other extra care. H. Hammerton, Charterhouse.

Pelargoniums.—We willingly give publicity to the following suggestions relating to what are now usually called Zonate Tricolor-leaved Pelargoniums, by Mr. Jabez J. Chater, of Cambridge, who is known as the raiser of some of our choice varieties. The suggestion for the classification of this and the kindred races of Pelargoniums is ingenious, and may prove to be practically useful. Our correspondent writes:—"These plants (the Pelargonium and its varieties) are particularly interesting to me. Besides Senior Wrangler, I have some others very beautiful. I am hybridising and getting new features into both leaf and flower. By-the-by, referring to a paper presented to the Botanical Congress by Mr. Wills on the sporting of Pelargoniums and other plants (this word 'sporting' I do not like), I cannot at all agree with his theory. I have obtained

my seedlings by careful hybridisation, and all that is necessary is to watch till the pollen and stigma are in a fit state; that is, the latter must be perfect, fresh, and open, well-developed, and kept free from insects, and the former must be bright, clear, just burst, and from a well-defined and perfect anther. Under these circumstances apply the pollen, and the work is done. In many, numberless instances I have watched (it cannot be done without watching), and have seen the effect upon the flower. In the Pelargonium it will occasionally droop its head; in the Hollyhock, after impregnation, the sepals will gradually fade, and become marcescent. I think it erroneous *in toto* to speak of 'mixed pollen' in fertilising; it cannot be one application either by artificial or natural means is all that one stigma can receive. Hence the inappropriateness of the cause of variation, or rather coloration, suggested by Mr. Wills. I find on referring to my notes that Senior Wrangler is no sport. It sprung up with variegated cotyledons, and proceeded from a zonate variety of good quality called Woodwardianum; while to other sources I can directly refer other seedlings of distinct coloration. Might not these many-coloured Pelargoniums with propriety be defined as 'Zonal Versicolors?' They are certainly more than tricolors, possessing at least four, and in many instances five, distinct colours. I would retain the term 'Zonal Tricolor,' and for this class would bring in foliage of a different style of marking. For instance, I have now specimens possessing leaves of a yellow or a very light green centre, surrounded by a zone of crimson, brown, &c., and then a margin of much darker green, actually reversing the order of such sorts as Mrs. Pollock; these I hope by-and-by to have fully developed. Another class, to be simply called 'Zonal,' should comprise all such as Adonis, Madame Vaucher, and the old horse-shoe varieties. 'Bicolors' would take up such as Bijou, Golden Chain, and such like. 'Unicolors' would be such as the plain-leaved, namely, Tom Thumb, Lady Middleton, &c. There are also plain yellow-leaved kinds, and perhaps by-and-by there will be copper or purple-leaved. I have a variety that will, I think, at some time answer for Perilla, and a yellow leaf for a pure yellow bed, removing the flowers. Shall we ever attain to a yellow-flowered variety? I anticipate such a result; moreover, I feel satisfied that ere long flowers beautifully striped, like a Carnation, will be the order of the day—I have some good indications of this. The beauty of the plant would be enhanced if a truss of pure white flowers, flaked with rose purple or pink, were borne above a glorious bouquet of Senior Wrangler foliage."

Economic Value of the Common Brake.—Amongst British Ferns none are so well known as the common Brake or Bracken (*Pteris aquilina*), and this is also the most important of all the British species in an economic point of view. This Brake, though not used at the present day to the extent it was formerly, is nevertheless much valued in many parts of the country for manuring land. At one time it was much in request as fodder for cattle, but it is rarely, if ever, now employed for that purpose. As a litter for horses, however, the fronds are still much used in neighbourhoods where they abound, and in some districts, in Monmouthshire for instance, the cottagers collect them during the summer months and burn them, preserving the ash, which is moistened sufficiently to enable it to be made into balls about the size of a cricket ball. These are afterwards dried, and are then ready for use for washing all kinds of clothing. They fetch in the market from 3s. to 4s. per 100. Since the general introduction of soda, however, the demand for them has considerably decreased. The use of this ash as a substitute for soap is attributable to the large amount of potash which it contains; indeed, it was used at one time for glass making. In some parts of Scotland the fronds of the Brake may still be seen as a thatch upon the roofs of cottages. Besides these uses, the creeping underground root or rhizome is said to contain much starch and mucilage, and to be highly nutritious. The author of the "Useful Plants of Great Britain," after bearing testimony to the nutritive properties of these rhizomes, gives the following formula for preparing them for use. They should be first roasted over a fire until the outer skin is charred, and then the fibres should be separated by beating; the starchy substance that remains tastes much like Oat-cake, but with a slight astringency that is not unpleasant. Few substances will keep off hunger during violent exertion better than the underground stem of the Brake thus prepared—a fact worth remembering by the rambler in uninhabited districts. John R. Jackson.

Raphanus caudatus.—I obtained 24 seeds of this new Radish, and I have been successful in raising 17 plants from them. Wishing to give them a trial both indoors and out, I selected nine of the strongest, and planted them in a Peach border which was made last winter. The soil was a rich rather sandy loam, to which was added some ½-inch of bones. In this they were planted, and they began to grow very strongly, and continued to do so until they were coming into flower, when suddenly they began to show signs of something being wrong with them; on being examined it was found that the roots were completely eaten away by a maggot about half an inch in length, with a white and black head. Out of the nine plants only three are left, all of which look badly; allow me, therefore, to inquire whether or not others have had anything of the sort happen to their plants. The 8-inch pots are all in excellent condition, bearing heavy crops, some of the pods are 34 inches in length; the soil in which these are growing is rather different from that of the Peach border, being two parts loam, one leaf-mould, and the fourth part old Mushroom dung. I may add that I have one plant bearing very light green pods, while the others are all of a purplish colour. James Stewart.—I should like much to know the condition in which