ment for children, the aged and infirm, and would not diminish the amount of labour on plantations.

For the Plantain, Pinguin, and all similar herbaceous plants, machinery is absolutely necessary to separate and clean the fibre advantageously; when this desideratum is accomplished, and with one or two years' practice, there is nothing to prevent Jamaica competing with any part of the world of ten times the same extent. The inducement to do so cannot be much greater than it is at present. I find by a statistical account that the imports of Flax into the United Kingdom during 1853 amounted to 94,163 tons 14 cwt., and at the exorbitant price of 110*l.* per ton, to which the average price of foreign Flax has already risen, shows a sum of 10,356,007*l.*, which has been paid in cash for foreign Flax fibre last year; and since the prohibition of Russian hemp into European markets, prices and demand are increasing daily.

My motive for laying before you my views on this subject, and preparing the samples of fibre for your inspection, is, that I am anxious to submit to you, and through you to the agriculturists and people in general of this island, the desirability and advantages in an individual and national point of view to be derived from the adoption and extensive cultivation of fibrous plants. As I have already mentioned, the great scarcity, exorbitant price, and widely-spreading demand for fibre throughout the world, render the materials of which it is manufactured of much importance, particularly in this country, where labour is scarce and dear, and agriculture at its lowest ebb. Many of these fibres will be found of superior quality, and produced in greater abundance than any grown in temperate regions.

I have made a very moderate calculation of the produce of an established field with Plantains, which I find to be as follows:—

An acre planted with suckers, at 10 feet apart, will contain 435 plants, and the first year will produce as many bunches of fruit worth 6*d.*	£10 17 6
Each stem will yield 1 lb. of finely-dressed fibre, worth 6*d.*	10 17 6
Amounting in all to	21 15 0

There can also be raised on the same land, along with the Plantains during the first year, a crop of Yams, corn, Kidney Beans, and sweet Potatoes, worth at least 20*l.*, thus realising the first year 41*l.* 15*s.* The second year each Plantain-stool will throw up three or more suckers, the quantity of fibre will thereby be tripled, and succeeding years would add to the produce; and if the Plantain is cut before the fruit is formed, the quantity of fibre will be fully one-third more, of a far superior quality. I may here remark that the Banana is a much hardier plant than the Plaintain; it will live and thrive at an elevation where the latter would not exist. In selecting any particular variety of the Musa for cultivation, great care ought to be observed, as on this point much of the success depends.

In connection with this branch of industry, other plants, although of less importance, ought not to be lost sight of, being available in meeting a great deficiency as materials for the manufacture of paper, such as many of our very soft and spongy woods, which cannot be classed among timbers; the various and inexhaustible supply of tough Withes, Reeds, Grasses; and, perhaps superior to all, the refuse of Arrowroot, as it comes from the mill, divested of its starch; many tons of this are annually wasted, being thrown on the dunghill. The above-mentioned materials are far more likely to answer the purpose than the Bamboo, so much used in China for making paper.

I shall conclude by briefly describing another plant (the Pothos violacea), admirably adapted for all descriptions of fine straw-plaits, particularly where strength and richness of appearance are desired; its plait will be found superior to the best Leghorn plait. This plant, although an epiphyte, and growing plentifully at the roots and on the tops of the highest trees, at an elevation on the mountains not under 1000 feet, may readily be cultivated in woodlands and moist places. The part made use of is the petiole, or footstalk of the leaf, which grows from 18 inches to 2 feet long, and readily divides into strips of any dimensions, and contains a strong fibre, which the common plait made from the Fan-palm does not, and seldom retains colour long. These advantages may tend to bring the plant into notice after awhile; and, if through my humble endeavours, any of the undeveloped resources of the country are brought into notice, a happy result will be effected.

Home Correspondence.

Batates, or Sweet Potatoes.—Bearing on the subject of M. Von Siebold's communication in your last number, I may mention, if it can be of service to any one wishing to make trial of the Japanese variety of the Sweet Potato, which he eulogises so highly, that many years ago, in India, my servant on one occasion purchased a few Sweet Potatoes of a kind very different from the ordinary Sweet Potato so common in that country. They were about 4 inches long, in shape resembling a short thick sausage; when dressed the interior consisted of a fine white mealy substance, so slightly sweet as to be scarcely perceptible, and only sufficiently so to be agreeable, with a delicacy of flavour much surpassing any kind of Potato or Yam I have ever met with. I was told they were brought from Goa, the capital of the Portuguese possessions, from which I was then some 20 miles or more distant; and except on the occasion referred to I never met the same kind in India. They seem to have resembled M. Von S.'s description of the Japan varieties of the sweet Potato. *J. H. H.*

Oaks.—Your ransacking the dusty corners of the country for Oak chips, has caused me to remember that some 20 years ago I searched Bewdley Forest for curiosities in that way, and after satisfying myself that there were both Q. sessiliflora, Q. pedunculata, and Q. pubescens, with intermediate varieties too numerous to mention, a Mr. Corbet, one of my employer's wood-cutters, told me that there were but three kinds of Oak in the forest, viz., the black, the red, and the white; and that they could tell the black, if their eyes were shut when cutting it, as it was harder, and consequently worse to cut than the other two. He very kindly procured me a specimen of the wood of each kind; I cast them on the floor of our Potato shed, where they have been ever since. In the winter, as a matter of course, the doors and windows were shut. In the summer the doors and windows were open. Sometimes these specimens were among straw and Fern, which covered the Potatoes. I have frequently examined them as to their soundness; and though much has been said on the durability of the different kinds of Oak, I cannot perceive much difference in these. I herewith send you a specimen of each for your inspection. No. 1, Black; No. 2, Red; No. 3, White. *John Pearson, Kinlet, near Bewdley.* [The Red and Black Oaks appear to be Q. sessiliflora; the White Oak is certainly Q. pedunculata.]

Longevity of Seeds.—I can confirm the statements of your correspondent "J. R." that some seeds do, under certain conditions, retain their vitality for a long period. Previous to 1836 a number of plants of Lavatera arborea had been allowed to seed in my garden, a large portion of which was scattered on the ground. Since that year not a single plant has been left to flower, yet after the ground has been dug numbers of seedlings have come up annually, and I have no doubt will continue to do so for years to come. But the most remarkable instance that has come under my observation was the appearance of a great number of plants of Lavatera Olbia on the sides of a new road cut through the forest some years since. In order to raise the road in a hollow place a large quantity of soil was dug from the forest, and on this fresh turned-up earth great numbers of common plants came up the following summer, and among them many dozens of Lavatera Olbia. If the seeds of this plant were not in the soil, I know not how they could have got there. I have never seen the plant growing in any garden in this neighbourhood or elsewhere, and the portion of the road upon which the Lavatera appeared was in the centre of the forest, and not a single plant could be found anywhere except upon the newly upturned soil, which had probably been undisturbed for ages till this road was made. The plants flowered freely for a year or two, but gradually decreased in number, and six or seven years afterwards they entirely disappeared. When I first noticed the plant I sent specimens to Mr. Salmon, then residing at Thetford, and he informed me that it was Lavatera Olbia. I firmly believe that the seeds were in the soil, as I cannot suppose that they had been recently conveyed there. The plants were scattered on each side of the road for about half a mile. *Henry Doubleday, Epping.*——As you have lately published such full and interesting details on the case of the long entombed Raspberry seeds, you may like to hear that a somewhat similar instance has been observed on the Continent. Gærtner (Versuche über die Bastarderzeugung, s. 157) states on the authority of Jouannot that seeds from the graves of ancient Gauls, of the date of the introduction of Christianity (probably at the time of Clodowig in the third or fourth century A.D.) germinated and produced Heliotropium vulgare, Centaurea cyanus, and Trifolium minimum. Gærtner gives, as reference, Froriep Notizen, B. XLIII., No. 946, p. 348. It seems that no known botanist looked to the correctness of these names. *C. Darwin.*

Potato Disease.—In reference to the article in your last Number relative to this disease, there is no doubt that the reason of the preservation of the plant in bog soil is its antiseptic quality. I have proved this by setting Potatoes in some of the worst years in a clay soil, but protected by a copious drill of peat earth in the furrow. This treatment answered perfectly, whilst plants not so managed were almost destroyed by disease. *Woglog.*

Turf Pits.—In many situations by far the cheapest and not an inconvenient hot-bed or plant-preserving frame, may be made by building the sides with sods 6 or 8 inches wide, driving small stakes through to stiffen them. These sod walls may be either built solid or with holes left, *à la* Macphail, for leaf or other lining to be added when desirable. Upon the top of these walls lay a frame of wood (we use only the Larch slabs) halved into each other, and with screeds nailed on their sides to form the top frame slide, to receive and keep in their places either glass or other coverings. Simple as this may be, for a few pence you have a Mushroom, Plant, or Cucumber receptacle far more capable of keeping out frost than wood, brick, or stone. *An Old Correspondent.* [An excellent plan where sods can be had. See some editorial remarks, p. 659.]

The Holcus Saccharatus, or Sugar-cane Grass, of which you sent me seed, has, I am happy to say, succeeded here admirably. It grows 12 to 14 feet high, and it is thought that it will prove a very valuable food for cattle. I divided the seed amongst six of my neighbours, two of whom are going to sow an acre each, and two others half an acre each. In seeding propensities it is very prolific, and chickens eat it as readily as corn. *J. C., Cold Spring Harbour, Long Island, Dec.* 10.

Seedling Fruit Trees.—As several different statements have been published on how far the different varieties of our fruit trees produce seedlings like their parents, I think very interesting information might be given by some few of your correspondents who may have carefully sown named seeds and have noted the result. Jourdan (in the "Mémoires de l'Acad. de Lyons," vol. ii., p. 94, 114) states most positively that he has tried repeatedly, and that all the many seedlings which he raised from the same variety of fruit tree resembled each other in foliage and general manner of growth as perfectly as do the young plants of any wild species whatever; and therefore that they differed from the seedlings of every other variety of the same fruit tree. Hence, also, as he asserts, the seedlings of one variety can never be confounded by an experienced eye with those of another variety, being as distinct as were their parents. Moreover, he states that the fruit of seedling Pears and Apples, though differing greatly in size, succulency, and flavour from those of their parents, yet resemble them in the more important characters of form and in the nature of their seeds. On the other hand Van Mons asserts that he sometimes raised from the seed of one variety of Pear a quite distinct kind; but it now appears that Van Mons was careless in marking the varieties sown. If any one can give accurate information on this curious subject, I hope that he will be so kind as to take the trouble to do so; and will give, as far as he can, some idea what proportion of seedlings are produced which resemble their parents in foliage and general habit; for if seedlings differ from their parents only in a few rare instances, this might perhaps be attributed to an accidental cross from some neighbouring tree. Is it known whether some varieties of Pears and Apples tend to produce truer offspring than other varieties? Plums are said to come very true. Mr. Rivers, and possibly others, could probably give very interesting details on this head. *C. Darwin.*

Societies.

LINNEAN, *Dec.* 18.—Prof. Bell, President, in the chair.—W. Archer, jun., Esq., and W. Dickinson, Esq., were elected Fellows. Mr. Pamplin exhibited living specimens of the Argyroneta, which had been the subject of a communication at a previous meeting. Prof. Bentley exhibited a specimen in spirits of Papaver bracteatum, showing a conversion of stamens into carpels, together with some other vegetable monstrosities. The following papers were read: 1. "Notes on some West Indian seeds, washed up on the coast of Wales," by Dr. Hooker. The principal interest attaching to these seeds was said to be derived from the extension of the area over which they proved the Gulf Stream to be capable of transporting foreign bodies, it having been hitherto generally supposed that cross currents or other causes prevented any of these floating seeds from being carried into the Irish Sea. 2. "On Dictyocline, a new genus of Ferns," by Mr. T. Moore. This genus was stated to belong to the Hemionitideæ, a group distinguished by having anastomosing receptacles, and continuous linear reticulated sori. It differed from the allied genera in having the veins pinnate, and the soriferous venules transversely anastomosing between them, forming two or three series of roundish hexagonal areoles. It is a native of Assam. The provisional name of Chorizopteris was suggested for another Assam Fern which does not associate with any known genus. It has the veins uniformly reticulated, forming two or three series of oblique, unequal, elongated, hexagonal areoles, and is supposed to belong to the Acrosticheæ. Two species were noticed—C. pinnata from Assam, and C. bipinnata, from New Caledonia. The paper was concluded by some observations on the value of the receptacle as a discriminative character among the Ferns. 3. The commencement of a memoir "On the Natural History of the Glow-worm," by the late G. Newport, Esq., prepared from the author's MS. by Prof. Ellis, of University College.

Notices of Books.

WE have received a volume of Sermons entitled *The Gospel in Ezekiel*, by the Rev. Dr. Guthrie (Black, Edinburgh), to which we would draw attention for the sake of the happy imagery derived from natural history, which we find scattered here and there through its pages. Upon its doctrinal merits we, of course, express no opinion. The rev. author sets an example which we should be glad to see more generally followed; for if the object of a preacher is to produce a vivid impression upon the minds of his hearers, especially where they form a rural congregation, he will find no way to their hearts more direct than through apt illustrations derived from natural objects with which they are familiar. This was thoroughly understood by the inspired writers, but has long been too much neglected. Or if attempted, it has sometimes been with so little skill and knowledge as to render natural imagery more ridiculous than impressive. No one can say that of Dr. Guthrie, one of whose similes we take as an example:—

"Compare man with any of the other creatures of God, and how directly we come to the conclusion that

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