village, or suburbs it might be called, of Popotla. The Spanish commander there dismounted from his jaded steed, and sitting down on the steps of an Indian temple gazed mournfully on the broken files as they passed before him. What a spectacle did they present! The cavalry, most of them dismounted, were mingled with the infantry, who dragged their feeble limbs along with difficulty; their shattered mail and tattered garments dripping with the salt ooze, showing through their rents many a bruise and ghastly wound; their bright arms soiled, their proud crests and banners gone, the baggage, artillery—all, in short, that constitutes the pride and panoply of glorious war, for ever lost. Cortes, as he looked wistfully on their thinned and disordered ranks, sought in vain for many a familiar face, and missed more than one dear companion who had stood side by side with him through all the perils of the Conquest. Though accustomed to control his emotions, or at least to conceal them, the sight was too much for him. He covered his face with his hands, and the tears which trickled down revealed too plainly the anguish of his soul." (Prescott's "Conquest of Mexico," p. 70).

The reader may say, "But where's the tree?" Prescott does not notice it, but tradition has preserved it. It was beside the Indian temple on whose steps Cortes sat down. We have a photograph of the tree, with a trunk of enormous dimensions, only instead of standing beside an Indian temple it stands within the wall, and overshadows the portal of a Christian church, opening on the road by a couple of steps such as Cortes might have seated himself upon. In fact we have here the ordinary transformation which befals a site or edifice dedicated to religious purposes—the impure faith is replaced by the pure, the corrupt by the reformed—but the site remains, and the edifice is retained by the new comers, only modified and remodelled.

The tree is known to this day by the name of the "Ahuehuete de la Noche triste." In a Mexican Almanac we find the following notice regarding it, accompanied by a rude wood engraving of the tree. "Popotlan, the city of besoms—what a prosaic name for a place, the witness of one of the most dramatic episodes of the Conquest! And nevertheless in this insignificant village, full of dust or of mud according to the season, is to be seen the venerable tree under which, according to popular tradition, Captain Hernan Cortes sat down to breathe and rest his aching body after the frightful catastrophe of the 1st of July."

Returning to the argument which we had in hand, and which we have used as a thread on which to string our notes of the qualities of this tree, we have to remark that there is a great resemblance between its timber, and that of the Red-wood. The latter is the most valued timber in California, the former the most useful in the Southern States. A special good property of both is splitting up straight, so as to serve for planks without the use of the saw. In the Taxodium, Michaux says, they split off in a direction parallel to the concentric circles; but as these are so large, the shingles split off are, when not very hard, nearly flat; and it is the same with the Sequoia. The colour of the timber of both is also alike. Michaux says, "The wood of the Cypress is fine-grained, and, after being for some time exposed to the light, of a reddish colour;" and in speaking of the Sequoia sempervirens, Dr. Bigelow says, "The wood resembles the Cedar" (that is, Juniperus virginiana) "a good deal in lightness and susceptibility of polish, but it is of a slightly darker shade of red. In the rural districts along the coast farmers use it for making fencing rails; and it is almost certain to excite incredulity to state the number of rails that can be made from a single tree. They are counted by thousands, as we count them by hundreds in the Eastern States." (Bigelow, Pac. R. R. Rep. iv., p. 24.)

A resin of an agreeable odour and a red colour exudes from the Cypress. We have already spoken of the red or claret-coloured resin exuded by the Sequoias.

On the whole, we trust we have said enough to satisfy the reader that we have in these two genera the respective representatives of the same type, the one peculiar to the East and the other to the West of North America, south of 38° N. lat.

The characters distinguishing the Mexican Taxodium from the American are slight, but we think sufficient; it is, however, foreign to the purpose of these notes to go into such details. In this country, so far as we know, the American type is the only one in cultivation. There are doubtless some small plants of the other, for the large trees near Mexico produce seeds plentifully, and they must have been brought over by many people. We have received them ourselves. But we do not happen to know of any which have been planted out. The American tree, however, is distributed tolerably abundantly, and does very well in the South of England. Mr. Palmer's tables of the worst effects of the winter of 1860-61 at places reported on by him give the following results:—

	Killed.	Much injured.	Slightly injured.	Uninjured.	Total.
England	1	1	4	23	29
Scotland	—	—	—	2	2
Ireland	—	—	—	2	2
	1	1	4	27	33

The place where it was killed and the place where it was much injured were both in Cambridgeshire. At the latter (Pamperford Hall), the trees were universally cut down to the ground, "but they stool most freely from the stem."

We have scarcely any notes of the height and dimensions of trees of this species in England. At Syon House there is one 80 feet high; at Blenheim Park, one 70 feet high; at Endsleigh, Devonshire, one 36 feet high; at Nettlecombe, Somersetshire, one 30 feet high and about 35 years old; at Enys, near Penrhyn, 43 feet high. *A. M.*

ON CUTTING EVERGREEN SHRUBS, &c.

THE damage done to ordinary evergreen shrubs during the memorable winter of 1860-61 will long be remembered by a very large class of garden admirers. It is to some of these generally-cultivated evergreens that I wish to devote the following remarks, suggested by the very low temperatures experienced during the present winter in various parts of the country, but more particularly in England, where, no doubt, the severity of the season has injured some shrubs similar to those damaged in Scotland during the above winter, particularly if growing in low and somewhat damp situations. The injury may not show to its full extent till after several days or even weeks of sunshine, except on some of the more tender species, such as Portugal Laurels, Laurustinus, Aucubas, Alaternus, Phillyreas, Arbutus, Euonymus, Sweet Bays, &c.

Previous to the winter of 1860, the Portugal Laurels in many of the Scottish gardens were exceedingly handsome, being in many cases of a hemispherical shape, and frequently surrounded with shrubs of other species, but often of a less pleasing outline. The latter were often removed to prevent their interfering with some of the finely-shaped Portugals. On the 24th December, 1860, the thermometer at Edinburgh fell to −6°, being 38° below the freezing point. The moist autumn, preceded by an unusually long drought, had caused many of the evergreens to be in a growing condition at a rather late period of the year; and from their being full of sap at the time the frost set in, many of the Portugal Laurel stems were found to be split longitudinally, to the width, in some instances, of fully half an inch. Although their leaves remained tolerably fresh during the following summer, the growths made were scarcely perceptible, and the plants by degrees became thin of foliage—so much so, that it was found advisable to cut many of them down during 1862. Some of the injured shrubs, before being cut, began to push out numerous young growths from the lower parts of their stems, evidently showing that their upper portions had suffered. Many of these plants were cut down to within 18 inches of the ground. The Portugals which survived were chiefly such as stood on Grass lawns or along the front part of shrubberies, particularly on high-lying ground, where the young growths were annually cut quite short all over the surface, so as to keep the plant in a hemispherical shape. Such plants at the time of the frost were densely covered with a thick coating of snow, which completely protected all the inner branches, and was the means of saving them; while some of the unpruned plants, standing immediately behind on the higher ground, where the branches were long and spreading, suffered severely. In some low and damp situations, however, both pruned and unpruned suffered alike. The injured and cut-down shrubs, treated in the following manner, are now forming handsome and vigorous plants. I shall take, as an illustration of my practice, a Portugal Laurel 18 feet in diameter of branches and 15 feet high, with a stem from 3 to 4 feet in circumference at the surface of the ground, many examples of which size were experimented on during 1861-62 in consequence of injuries from frost previously received. The branches of most of these were cut slanting to within 18 inches of the soil; immediately afterwards, the whole surface of the ground, beneath what was the original spread of the branches, was covered over with a thick coating of compost, of leaf-mould mixed with a quantity of soil, chiefly the emptyings of pots, of which large quantities are always accumulating where much potting is carried on. This covering of soil is most essential, and ought to be carefully attended to with all evergreens cut in, whether in consequence of frost or excess of growth. The surface of the ground under most evergreen shrubs is generally very much confined, and the roots in consequence run near the surface. If such ground is exposed, particularly after the tops have been cut down, the surface-roots are very apt to become injured by the sun's rays penetrating the soil and drying them up. It will likewise be found that the surface-roots are liable to become frosted, as they are very tender from long and close confinement. The young shoots on plants so exposed, although they will push out freely at first, will in many cases become sickly and ultimately die, while the young shoots made on the cut-down shrubs treated as described will be found to prosper. Many of the old Portugal Laurel stumps operated on during 1862 are now fine globular-shaped plants, 8 feet high and 15 feet in circumference.

If at any time it is intended to cut down Portugal Laurels, from their being rather large for the situations they occupy, the best way is to cut them in a sort of pyramidal or ovate shape, about 4 feet high. When healthy-stemmed plants are cut in this manner, and the ground coated with soil, as before recommended, such cut plants will break out freely all over that portion of the stems left, and will very soon make beautiful shrubs again.

Many other evergreen plants, such as Aucubas, Bay Laurels, Sweet Bays, Alaternus, Laurustinus, Hollies, and numerous others, treated as recommended for the Portugal Laurel, are now forming finely-shaped plants, and are all in a thriving condition. Many of the hybrid Rhododendrons were also much injured by the frost in 1860, which necessitated their also being cut down. Their roots were afterwards covered with peat-soil, and they soon broke out all over the old wood, and have since made good and shapely plants. Owing to the large quantity of young wood produced, flowering shoots were not made on many of the varieties for several years afterwards.

Some evergreen hedges were also much injured, such as Holly, Portugal Laurel, Alaternus, Sweet Bay, Laurustinus, Evergreen Privet, &c., &c. Amongst the Hollies, one hedge was cut to 5 feet, another to 6 feet, while a third was cut to within 20 inches of the ground. These hedges were treated as described for the standard Portugal Laurels. It was found that the high-cut plants, although they broke freely out all over the tops of the cut stems, left long bare spaces at bottom, while those cut low, broke out freely all over the lower-cut portion of the stems, and being annually breasted in, are now making an excellent fence. Those cut high, on the other hand, although they have stood for several years, will have to be cut down to within 18 or 20 inches of the ground, in order to induce them to break out from the lower part. Laurustinus and large evergreen Privets produce buds freely, if cut higher—say to 3 or 4 feet above the ground. The natural tendency of these plants is to produce a multitude of young growths all over the exposed surface of the bark. Evergreen hedge-plants, as Holly and Portugal Laurel, or others having a natural upright or compact growth, require to be cut lower than such plants as the large, shining, and hairy-leaved varieties of Laurustinus and evergreen Privet, whose natural habit is to diverge. Injuries to the latter hedge-shrubs, particularly the Privet, do not arise so much from the effects of hard frost as from the forcible bending-down of their branches by heavy snow. This renders the over-stretched vessels along the upper surface liable to become injured from frost, particularly when full of sap; and is the cause of so much dead wood being found throughout old Privet hedges. All evergreen hedges when cut, whether high or low, require their surface-roots to be covered with fresh compost for protection, as well as for throwing vigour into their growth.

These notes are the result of observations made at Edinburgh, and may prove applicable for many districts both in England and Ireland, if they should happen to have large evergreens injured, as occurred in Scotland during the winter of 1860. *James McNab, in the "Gardener."*

Home Correspondence.

Fertilisation of Cypripediums.—As the sexes of Orchids form a subject of considerable interest, I beg to forward you the accompanying specimens of Cypripedium insigne. Of this I have several plants, all however originally derived from the same piece, but in spite of numerous attempts, I have uniformly failed to fertilise the flowers. The seed-vessel swells and the flower fades as usual, but no seed is produced. It appears to me that my plant produces a male flower only, and is not hermaphrodite. Have any others of your correspondents made a similar observation? I enclose a flower of Cypripedium insigne and two barren seed-vessels, to which the pollen of C. barbatum and C. venustum was applied this year. To prove that the pollen masses of the plant in question are good, I send also a seed-vessel of C. barbatum, fertilised with the pollen of one of the same flowers of C. insigne, and which is full of seeds. *A. D. B.*

[The specimens forwarded appeared on examination to be perfectly formed as regards their stamens and pistils, but perfectly destitute of ovules. On forwarding them to Mr. Darwin, that gentleman kindly favoured us with the following remarks. EDS.:—From the remarkable fact lately ascertained by Dr. Hildebrand, that with many Orchids the ovules do not become developed until many weeks or even months have elapsed after the pollen-tubes have penetrated the stigma, it is not a little difficult to ascertain whether any Orchis is exclusively a male plant, that is, whether the female organs have aborted. Of course there is no difficulty in ascertaining the rudimentary condition of the pollen, and so ascertaining that a plant is a female. The explanation of the sterility of the seed-capsules in the Cypripediums sent to me I have little doubt lies in the circumstance of their having been fertilised by pollen taken from the same plant or seedling. I now know of a long series of cases in which various Orchids are absolutely sterile when impregnated by their own pollen (proved, however, to be in itself effective), but which can be easily impregnated by pollen taken from other individuals of the same species, or from distinct species. These facts strike me as most remarkable under a physiological point of view, and they point to the necessity of an occasional or regular union between distinct individuals of the same species. *Ch. Darwin.*]

Forced White Lilacs.—We have heard much of a certain process—a profound secret, of course—by which a grower of flowers for the Parisian markets is enabled to change the flowers of the common Lilac into the purest white. I have never given free credit to the above, thinking it not improbable that this gentleman may at some previous date have become the possessor of a seedling Lilac, which forces well; or that by a selection of the best and whitest from amongst such as Syringa persica alba, vulgaris alba, or vulgaris alba major, he has attained a like end. I should have troubled myself no further about the matter had not my attention been drawn to it afresh in a late number of the "Floral Magazine." I enclose some flowers of the S. persica alba, an exceedingly useful variety for early forcing, whether for cut flowers or otherwise. *William Earley.* [The flowers in question were beautifully white, and altogether in charming condition. EDS.]

Rival Systems of Vine Growing.—We have full information as to the splendid Grapes produced at Combe Abbey, when both top and bottom were allowed to extend at the same time. It is well-known, however, that nearly all, I might indeed say all, the first prize Grapes, both in London and Edinburgh, have been cut from Vines not exceeding six years of age. I well remember Mr. Hill, who is admitted to be