…bering only twenty-eight—of which twenty …common—the choice would be extremely …ited were the space only planted with native …s, while the same authority says that …und can grow double or treble the num…r of trees the United States can." The forests … the several zones proposed to be here …presented are:—

1. The Eastern American forest with its many …ciduous trees, either free-flowering or with …e autumnal tinted leaves.

2. The Western American forest, with its …h and numerous Conifers.

3. The forests of Eastern Europe and …estern Asia, with the plants of the Mediter…anean coasts.

4. The most remarkable of all the forest …gions of the temperate zone—that of Eastern …ia and Japan. This Mr. Wallace proposes … increase by adding the plants of the tem…rate regions of the higher Himalayas.

5. The forests of the temperate southern …misphere, with the plants of Chili and Pata…nia, Australia and New Zealand.

Referring to the earlier parts of Mr. Wal…ce's pamphlet, it is evident from his descrip…on th… the portion of the Forest nearest to …ondon already so feels the effect of the smoke …om many factories of the East-end that …anting in the way he suggests would be …eless in that part.

Proceeding northwards the ground rises … h… somewhat above sea-level, but the …il is principally of a heavy nature until we …ach the large tract of undulating rising …round which, beginning north of Buckhurst …ill, and bounded on the east by the long …raggling village of Loughton, rises till it forms … plateau with an elevation of 600 to 700 feet …bove sea-level at High Beech—thence stretch…g a distance of 4 miles to the old market town …f Epping.

Here, if anywhere, is the situation for the …rest Mr. Wallace suggests. The soil is …arious. On the hill-top a surface soil, about … feet deep, is of light sandy loam, in the …pen covered with heather or bracken of some …ears' growth—amongst the pollarded Horn…eam and Oak the surface soil having a deposit … the lea… of many past years. Below the loam …ere see… to be, or to have been, some varying …pths of gravel; below this sand, or clay without …nd. The soil of the intervening valleys seems … consist principally of the clay, with washed …own deposits of the gravel in the watercourses, …e sp… of which rise in bogs abounding with …rosera and other bog plants.

Where the plateau becomes broader, towards …pping, some of the wider undrained open …aces are covered with a heavy sour peat. …here are in this portion some large groves of …gh Beech trees, which are one of the most …pular resorts; but most of the land is open, … at least covered with the pollards already …luded to.

A nursery in this neighbourhood, established …me eighteen years since for the culture of such …ants, seems to have almost anticipated Mr. …allace's scheme, or at least stands ready to …ar witness to the fitness of the soil and site … his experiments. Taking his several zones, … plants of each which have been found to …rive extraordinarily well there can be cited.

Of the trees and shrubs of his first or Eastern …merican zone, of course Rhododendrons, …aleas, and other lower growing shrubs, as …lmias, Andromedas, are thoroughly at home, …ile the bog plants, the Cranberries, the …odoras thrive. In the bogs likewise, side … side with our native Droseras, the Sarra…nias thrive, flower, and seed. The herbaceous …nts of these woods, the Trilliums and Sper…as, as well as the glorious North American …iums, superbum and others, grow, flower, … increase as if at home.

Of the forest trees of the zone which have taken kindly to the place we can instance the Scarlet Oaks (which in one year grow as much as in the lower Lea valley in three). The Tulip-tree, in its several forms, the Robinias, the beautiful Acers, such as saccharinum, dasycarpum, and others; Gymnocladus, Gleditschias, and Liquidambar; while the deciduous Magnolias, such as M. glauca, M. acuminata, all attain tree-like growth. The deciduous Cypress is at home, and the evergreen Firs of the zone, P. rigida and P. Strobus, succeed well. *George Paul.*

(To be continued.)

New Garden Plants.

Cycas siamensis, Miq.*

A species resembling C. circinalis. The specimen before us has a stout, glabrescent, oblong stock, 16 inches in circumference, marked with circular furrows, almost as in the root of Bryonia dioica. The leaves measure about 30 inches by 8 inches, are oblong in form, flat or slightly revolute at the edges, and pinnately divided into about sixty-five pairs and one terminal segment. The lower thirteen or fourteen segments are represented by spines which extend nearly to the base of the stalk, there being no intermediate form between the leaf-segment and the spine. The rachis is puberulous, rounded above, more so beneath. The segments in the centre of the leaf measure about 4 inches by ¼ inch, and gradually diminish in size towards the apex and towards the base; all are linear-lanceolate, abruptly spine-pointed at the apex, and decurrent at the base along the rachis; the midrib is prominent on both surfaces.

The species was imported from Cochin China, and is now in the collection of Mr. Bull. *M. T. M.*

Zamia? amplifolia, *Hort. Bull*, n. 1473.†

This is a handsome species, with an oblong obtuse glabrous caudex. The leaf-stalks are erect, terete, purplish, puberulous, 15—16 inches long, about the thickness of the little finger, and with scattered minute prickles. The blade is unequally pinnatisect, 4½ inches long, the segments in two pairs; each segment is about 11 by 3—4 inches, glabrous, coriaceous, yellowish green, broadly ovate, lanceolate, acuminate, obliquely wedge-shaped at the thickened base, entire, strongly ribbed on both sides, rachis angular.

This seems to differ from any species in cultivation, and is not referable to any form described in books or herbaria. Possibly, however, when better known it may prove to be a variety of Zamia Roezlii or Z. muricata. *M. T. M.*

Encephalartos acantha, *sp. nov.*‡

This is a very distinct looking species, presumably an Encephalartos, though the fructification is not yet known. It was introduced to Mr. Bull's nursery from Graham's Town, and there is at Kew a small specimen in cultivation, but it is not represented in the herbarium, unless a fragment from Natal be referable to the same species. The stock is subglobose (4—6 inches in circumference), afterwards becoming cylindrical, with ash-grey woolly tomentum, and marked above with the prominent triangular bases of fallen leaves and with perulæ.

The leaves, which are arranged in a terminal crown, measure some 28—30 inches (inclusive of the petiole, 4 inches), by 3—4 inches, and are oblong-obtuse, arching and conduplicate. The petiole and rachis are terete or somewhat flattened on the upper surface, destitute of spines but covered with woolly down at first, the segments closely crowded, nearly opposite, in 120 pairs, ascending, those in the middle of the leaf 3 inches by ⅛ inch, the others gradually diminishing in size towards the base and apex, all linear oblong, scarcely tapering at the base, ending suddenly at the apex in a short translucent spine, somewhat glaucous above, marked beneath by five prominent nerves, and with thickened margins. The same acantha = spina piscis, is applied from the resemblance of the leaves to the vertebral column of a fish. *M. T. M.*

* *Cycas siamensis*, Miquel ex A. D.C. Prod. xvi., ii., p. 528; Regel, Cycadearum Gen. et Spec. Revisio, p. 10.

† *Zamia? amplifolia*, Hort. Bull.—Petiolis pubescentibus sparse aculeatis; foliis 2-jugis segmentis subsessilibus late oblique ovato-lanceolatis acuminatis integris basi cuneatis incrassatis, utrinque prominenter plicato-nervosis glabris 11 × 3 poll.—Ex. Nov. Granat. in hort. Bull. introduct.

‡ *Encephalartos acantha*, Mast., n. sp.—Caudice subgloboso, serius cylindrato, elato, cinereo-lanuginoso superne foliorum defluxorum reliquiis crassis trigonis notato; foliis (petiolo 4—5 poll. incluso) 28—30 poll. × 3—4 poll. oblongo-obtusis arcuatis complicatis pinnatisectis, petiolo inermi rachique teretibus vel superne parum complanatis lanuginosis glabrescentibus; segmentis numerosissimis (ad 120-jugis) suboppositis ascendentibus oblongo-linearibus integris basi vix attenuatis apice subito in spinulam desinentibus, superne subglaucis subtus prominenter 5-nerviis, marginibus incrassatis vix revolutis in medio folii 3 poll. long. ⅛ poll. lat. basin et apicem versus gradatim decrescentibus; strobilis hucusque ignotis. — Ex Graham's Town, Afr. Aust. in hort. Bull introduct. Specimina 4 vidi.

Stanhopea tricornis, *Lindl.*

A delicate pallid small Stanhopea plant of the usual shape, with a pendent peduncle with two flowers of extraordinary size, when compared with the small bulbs. The flowers are quite astonishing. Nobody could decide at a distance they belonged to a Stanhopea. The lateral sepals are spread, the odd one is bent backwards over the ovary. The lip cannot be seen, for the petals make a cover over it, leaving part only of the broadly winged column to be seen between them. The petals are commonly inflexed at their tops, as if to protect the anthers against the insects, to speak in modern manner. The lip has a nearly half-globular hypochile, ligulate acute horns, with a tooth on the inferior side, and an oblong retuse epichile, that has a sort of a goitre under its apex, just as one sees in Vanda alpina and its allies of the cristata group, or in Renanthera labrosa (Arrhynchium labrosum, Renanthera bilinguis). A triangular depressed blade stands at the base of the epichile, showing a few indications of obtuse teeth. The column has broad oblong wings. When I saw the flowers fresh they were of a whitish ochre colour, having their tips a little darker. Crimson spots stand internally on the disk and base of petals and on the very base of sepals, shining through the rather pellucid hyaline tissue. The ochre-coloured hypochile has white longitudinal lines externally. It is rough internally, showing at once some rather dark purple dots. The horns and epichile are of a darker ochre colour, verging to light undecided orange. Wings of column of most pallid ochre, body green.

These were the colours of the just expanded flowers. I took them to Ems, and when I there opened my precious box I was exceedingly puzzled to see the petals and base of the lip of a light copper colour, as in Phajus cupreus, Rchb. f. (Limatodes mishmensis, Lindl.), where they are other times light purple. A woodcut showing a flower and a lip had been published both in these columns, 1850, p. 295, and in Paxton's *Flower Garden*, i., p. 31. I could well understand the correct representation as soon as I had seen the living flowers. The discoverer of the species (my late celebrated friend, J. Von Warscewicz) had sketched pink petals, other parts white. No doubt he saw the flowers only at a later period. They appear to last a good while longer than is usually customary with Stanhopeas. The species has been collected quite lately (April, 1877) by Mr. Low's excellent collector, my German countryman, Mr. F. C. Lehmann. He found the flowers yellowish white, coming, no doubt, when they just had expanded.

This very rare and very extraordinary plant was once in the garden of old Horticultural Society at Chiswick. I possess a very good specimen, with Dr. Lindley's autographic label, sent in 1855. The plant is also very well represented in his herbarium. I never saw the plant alive. Thus you may imagine my pleasure and satisfaction when I saw it in September flowering at Burford Lodge, Box Hill, near Dorking, in Sir Trevor Lawrence's collection which might be called an orchidic *féerie*. My gratification even increased when the two flowers were in my possession, well packed in a box. They were sketched at Kew and sketched at Ems, and I dried them quite reluctantly, sorry to lose sight of their interesting features. I had some scrupulous thoughts in naming it, the more since Dr. Lindley's types in his own collection show very different, far straighter, narrower horns. Yet my seven specimens show all transitions, and I finally can state that those organs show great variation. Sir Trevor Lawrence kindly informed me that his plant was obtained at a Klabochian sale ensconced between the stems of a Bollea cœlestis, and probably quite overlooked or despised by the other visitors. *H. G. Rchb. f.*

Cymbidium affine, *Grif.*, *saltem Lindl.**

This is in the way of Cymbidium eburneum and C. Mastersii in growth, with flowers more like those of the last species in a rich raceme. The lip supplies the difference. The flowers are white, with a few purplish dots on the anterior part of the lip. As to the hairiness of the lip it only appears afterwards, when the specimen is dried. I have seen it in the very types of at least Dr. Lindley's C. affine. I believe myself right in combining this with C. micromeron, Lindl. As to Dr. Griffith's representation, tab. 291, it might be better not to quote it at all. It looks so much like the common C. Mastersii, and the inner surface of the lip not

* *Cymbidium affine*, Griff. Not. iii., 3, saltem Lindl., Cont. n. 180.—Foliis linearibus acuminatis loratis rigidis; racemo erecto seu prono subæqualibus; racemo vaginis acuminatis densis vestito apice plurifloro; bracteis triangulis obtusatis; sepalis ligulatis acutis; tepalis linearibus acutis, labello flabellato apice trifido, laciniis lateralibus triangulis antrorsis; lacinia media cuneata oblonga undulata, carinis geminis a medio disco usque ante basin laciniæ mediæ, ibi semiovato dilatatis; columna trigona anguste alata apice inclinata basi cum labello connata.—*Cymbidium micromeron*, Lindl. Cont. d. 184. *H. G. Rchb. f.*