

Anterior Petals I received through the kindness of Dr. Maxwell Masters, and I can confidently affirm that the plant is allied to the genus *Spathophyllum*. It agrees with *Spathophyllum* in the triaxial flowers (petals 6, anthers 3, 3-lobed ovary), but differs in the ovaries having sub-ovulate cells. *Anterior* *Spathophyllum*, Linden et André (*Fl. Afric.*, 1877, p. 21, s. 123), the flowers of which I received by the kindness of Mr. Veitch, belongs also to the genus *Anteriorphyllum*, but the cells of the ovary are very often 2-ovulate, therefore this species, *Anteriorphyllum* *frutescens* (Linden et André, Engler, *Veitch*, in *Fl. Afric.*, 1877, p. 21, s. 123), the flowers of which I received by the kindness of Mr. Veitch, belongs also to the genus *Anteriorphyllum*, but the cells of the ovary are 2-ovulate, but the form of the ovary is quite different. Possibly species will hereafter be found with characters bearing a transition between *Spathophyllum* and *Anteriorphyllum*. A. Engler, *Seiner Garten*, *Stenak*.

STAPHYLIA PATRIBONOSTER, N. E. S. [Fig. 21.]

Stems erect, branching at base, 2-3 inches high, 4-6 thick, pubescent, four-angled, sides very concave, angles acute, tomentose, with 8-10 flowers 1-2, erect from the base of the young stems, not very fertile. Petals 11, inch long, pubescent. Calyx lobes narrow linear-lanceolate acute, 5 lines long, 1 line broad, pubescent. Corolla 2½-3½ inches in diameter, the back minutely pubescent, pale green tinged with reddish brown towards the tips, the base regular, the centre densely white, with long red, rich purple veins, which extend a short way up the base of the lobes; the latter are 1-2 inch long, 7-8 lines broad, lanceolate-acuminate, spreading or reflexed, glabrous except just at the base, and fringed with long, simple, purpled hairs, dark red or purple-brown, the basal part marked with numerous slender, transverse, undulated yellow lines; ligula strongly spreading, linear, concave, apex recurved, *STAPHYLIA* with a central projecting tooth, or truncate-emarginate with a small notch from the base of the notch, or very rarely the dorsal appendages of the central foot to the base, horizontally spreading, shorter than the corolla, straight or curved, linear, obtuse, entire, blackish purple.

This very pretty species may at once be distinguished from all yet described by the horizontally spreading processes of the lower corolla. The above description and figure was made from the same plant that was figured in the *Botanical Magazine*, t. 506, as *S. acuta* of Maxon, from which species it differs in its much more slender stems, only half as thick, smaller flowers, and differs even; it is also cultivated under the name of *S. Coccinella*. The ligule are mostly truncate-emarginate with a projecting middle tooth, the side lobes being very short and rounded, as figured in the *Botanical Magazine*, but in one flower examined by me some of them were quite entire and simply acute, as here represented. N. E. S. *Boston, Ariz.*

BOTTOM-HEAT WITHOUT COST.

On reading the above leading in the *Gardener's Chronicle*, p. 107, many gardeners must have been on the watch for a proposition that makes great difference to bottom-heat in what is about to be divulged. Mr. Fish is, however, such a master in surprises in horticultural matters that we must rather regret that this, his last essay on heating, has nothing sensational about it. There cannot be the least doubt but that placing the roots of all plants in the same temperature as their tops are given in is the natural way to success in their cultivation, especially in the winter months. In growing early Grapes—that is, where they are expected to ripen from April till June—if the roots of the Vines are all confined inside the house the gardener can then direct to their wants in every detail of soil-water, and, therefore, no one can gibe at him that the system is sound in practice. I have, however, grown good crops of early Grapes in vintages where the Vines were planted inside and the roots could get to the outside borders, which were protected by Gutta leaves mixed with litter, and the outside covered with wooden slates. The varieties of Vines grown were principally of the Frontignan series, which are well known to delight in heat, and they produced more vigorous wood and bunches than those in the vintages where the roots of the Vines were confined inside. Where, however, labours and materials are scarce, and warmth is desirable on the outside border, I am of Mr. Fish's opinion that the growing of very early Grapes in structures where the borders are inside is the safest and best system.

In growing the main crops of summer, autumn,

and late-keeping Grapes, I have found, since a long experience, that the best results have been from vintages where the Vines were planted inside but the roots were left to ramble in properly prepared outside borders at their "own sweet will." There is something more in after attention, and its atmospheric effects in making Vines roots always try to reach the outside border when they can, than Mr. Fish gives credit for. The late Mr. John Wilson, when gardener at Workshop Mass., once told me that the original Black Damsons Vine planted there, and which grew in the corner of a vinery where its roots were confined inside, had managed to get through the sashes, and work its way as sideways and horizontal there. On making some alterations here this year near the outside border of the main range of vintages, the Vines roots were found rambling into the best step that had been filled into a drain, and this was 4 or 5 feet from the main border. I believe, therefore, that for Vines, where they are expected to grow to a good old age and permanently

warm, dry summers. This vinery has now been planted further east, and new ones bearing good crops of Grapes, with bunches and berries of good size, and their colour of that rich golden hue which the Market shows when in perfection. There is no extra expense in leaving the air-drains in this house, for the same borders heating the atmosphere of 4 hours the piping in the outside where the drains are placed.

I have now given to show my experience in Grapes growing, but with less and tending, for both Mr. Fish recorded his "anathema"—that if so one can conceive him that outside borders are better than inside when they are for ever after "to hold their peace." I hope, therefore, that other extensive Grapes growers will support me, and advance the cause of practical horticulture by giving their opinions on the subject, so that it may be impartially ventilated in the columns of the *Gardener's Chronicle*. William Fildes.



FIG. 21.—*STAPHYLIA PATRIBONOSTER*.

A, The entire flower viewed. B, Petal. C, Lip. D, Modified lip. (A, B, C, D, magnified.)

to bear good crops, that the system of planting them inside the house, allowing the roots to get to the outside border, is better than wholly confining the roots inside, unless it is in the case of very early Grapes.

As to the artificial heating of Vine borders, if Mr. Fish saw how the system is pursued here I am sure he would be quite delighted with it, and give it above likelihood. A large vinery, 100 feet in length and 18 feet in breadth, is planted principally with Muscats, and its borders inside and outside have heated air-drains every 4 feet. This is effected by having two rows of 4-inch piping placed at the level of the drains, and the heated air in the drains communicates with the large channel inside the house where the flow and return pipes are placed. The cutting where the two rows of piping is placed on the outside of the border is lagged over the brickwork, with ventilators on the top to regulate the supply of air from the outside to the drains. Plenty of drainage is laid on the surface of the drains, and the roots of the Vines are quite safe from any under heat or too much drying if plenty of water is given to the borders in

SCHLIMIA TRIFIDA.

This interesting plant, described by Professor Hitchcock at p. 708 of our last volume, was exhibited at the meeting of the Royal Horticultural Society on January 17, by Sir Trevor Lawrence, Bart., and attracted a good deal of notice from the visitors on account of its remarkable appearance, so unusual in texture as to have been apparently modified out of their wits, and as possible to form that the individual blossoms were composed in ancient Greek or Latin. To this remarkable appearance of the flowers, so peculiar as to have been apparently modified out of their wits, and as possible to form that the individual blossoms were composed in ancient Greek or Latin. To this remarkable appearance of the flowers, so peculiar as to have been apparently modified out of their wits, and as possible to form that the individual blossoms were composed in ancient Greek or Latin.

The general aspect of the plant is very much that of a small *Staphylia*, the foliage and pseudobulbs being very similar in character. The drooping racemes are one-sided and few-flowered, the blunt or the two concave sepals just outside as pointed by