
ON SOME POINTS CONNECTED WITH THE
ORCHIDACEÆ.

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I HAD the pleasure of showing to the Congress at Amsterdam a monstrous flower-spike of *Selenipedium caudatum*, one flower of which had nearly a flat, ribbon-like lip. (See "Bulletin du Congrès International de Botanique et d'Horticulture." Amsterdam, 1865, p. 62.) I now exhibit a single flower of *Cypripedium* with a stamen under the stigma, as in *Uropedium*, so that it is tetrandrous, the staminodium being included. If I remember rightly, a similar case has also been observed by Pyramus de Candolle. In the next place I would remark, that Mr. Wallis, Mr. Linden's collector, has dis-

* In these ovaries the ovules were erect, but in the ovaries consisting of a single carpel, the ovule is suspended from the side rather above the middle, so that its attachment is at some little distance from the base of the style.

covered in South America a new species of *Uropedium*, growing on trees. It is a pity that he has not dried even a single flower.

As to malformations, I do not believe that any use can be made of them for breaking down the limits of genera.

ON SAUNDERSIA, A NEW GENUS OF ORCHIDACEÆ.

The grand days of Orchidology are gone for ever—the days when every month afforded a new genus. There appear to be very few new genera to be discovered; the greater then is the pleasure to see an old, long-known plant at length taking its place in the annals of science.

Among the drawings of Descourtilz, made more than thirty years ago, mostly near Bananal, in Brazil, there was one representation of a cæspitose plant, with ligulate leaves, no developed bulbs, basilar sub-capitate racemes of yellowish-white flowers striped with brown, and long tongue-like, bifid lips. Dr. Lindley took a copy of this plate, which is now in his Herbarium at Kew; and I remember well, that he and I looked despairingly on the mystery, as on one not to be solved, for no details as to the pollen, &c. were known. My astonishment was great when I found an excellent representation, made by Mr. W. Wilson Saunders, at Hillfield House, near Reigate, from the living plant. This gentleman had even prepared careful dissections; but the apex of the pollen apparatus had escaped his observation, and I did not know whether the plant belonged to the *Vandææ* or to the *Epidendrææ*.

At length, shortly before the International Exhibition, Mr. Saunders, at my repeated request, sent me the "*rarissima avis*," which proved, as no one could have suspected, nearly allied to *Trichocentrum*, but very well distinguished as a genus by the spur being adnate to the ovary, by the pyriform solid pollen masses, and by the long narrow glandula. I dedicate the genus to the above-named gentleman, whose attachment to science and gardening is so well-known, and whose highly interesting gardens and stoves are quite unique. The technical characters are the following:—

SAUNDERSIA *Rehb. fil. Nov. Gen.*—Ovarium hispidum canaliculatum, calcar cylindraceo optime adnato. Sepala oblonga apiculata, concava, extus carinata. Sepala subæqualia, minora, dorso carinata, omnia recte seu subrecte inserta. Labellum plus duplo longius, æstivatione inflexum, lineari-ligulatum, apice flabellato dilatatum, bifidum, cruribus oblique rhombeis, carina crassa utrinque in limbo medio marginante. Columna brevis, crassa, androclinium immersum in rostellum subulato bifidum extensum. Alula ciliolata utrinque juxta foveam obcelata ab alis quadratis, maximis, oblongo retusis protensis. Anthera oblonga, apice attenuata, unilocularis, septulis minutissimis. Pollinia gemina pyriformia in caudicula lineari ac glandulâ subposita ligulata.

Saundersia mirabilis: planta ebulbis. Folia cuneato ligulata, obtuse acuta. Pedunculus cephalotes, squamis vestitus oblongis, acutis, scariosis, superne capitato racemosus uti diximus. Flores erecti. Ovarium purpureum, sepala et petala flaveola, purpureo zebrina, labellum eboraceum.

In Brasilia legerunt *Descourtilz* (icones Mus. Delessert) et

Blunt, mercatoris excellentissis. Low, Claptonensis, collector, unde in Hort. Saundersianum, introducta est nitida planta.

ON THE INFLORESCENCE OF ORCHIDS.

It is a highly interesting fact, that Orchids are very constant in their inflorescence. It might be thought that racemose species would easily become paniced, and that such species as are one-flowered would often have more flowers; the one-flowered inflorescences generally being nothing but abortive racemes. In those genera, where some of the species have normally branched inflorescences, it sometimes happens that certain species, which ordinarily are unbranched become branched. Thus we are not astonished at a branched *Odontoglossum grande* or *Insleayi*.* But in those genera where there are no species normally branched the branching of the ordinarily unbranched inflorescences is very rare.

Considering the extraordinary luxuriance of our stove Orchids, it might be expected that more anomalies in the inflorescence would occur than in the places where Orchids grow wild. Yet if the number of normal inflorescences be considered, and the relatively very few higher developments that take place, it will easily be admitted that when they do occur they are very extraordinary. It is a singular thing indeed to make me responsible for these very few exceptions to a general rule, to which nobody has alluded before me, so far as I know. To say that there is nothing striking in the fact of such generally unbranched inflorescences becoming branched, is to regard the matter from the point of view of a theoretical botanist rather than from that of an observer, who takes things as they are, not as they should be if they were good enough to conform to his theories.

I add here some remarks on the inflorescence of the Orchidaceæ in general.

MONANDROUS.—*Ophrydeæ*. I have only seen one highly developed specimen of *Orchis Morio*, L., near Tharand, in Saxony, among thousands, giving the meadow a purplish hue, which might be seen at a distance. The same specimen had three developed tubercidia. I exhibit it in a dried state. It is represented in my *Orchidographia europea*, tab. 150. I was lately in the same place, and did not observe any trace of such a plant. I can only regard it as a monster, since the lateral branchlet is extra-axillary, so that the inflorescence would seem to be a bifurcation.

Ophrys aranifera, Huds., has been observed with a branch "at least once" by Dr. Maxwell Masters; but the specimen was, unfortunately, not preserved.

Disa grandiflora L., is represented in Mr. Warner's book on Orchids with a panicle. Mr. Warner tells me he does not well recollect the circumstance; and the representation (by Andrews, as

* I may add, that I have now (September, 1866) before me two other anomalies in the shape of a fusion of the racemes of both *Odontoglossum grande* and *O. Schimperianum*.

stated twice on the plate, and as Mr. Warner assures me) represents something which I regard as impossible. There may have been a branchlet in an inflorescence which would have been highly curious; but that such a being as it represented is the product of fancy, every one will admit who has the least idea of orchidaceous morphology.

NEOTTIACEÆ.—There is a small group of these with grassy leaves and a frequently branched inflorescence: *Corymbis* P. Th. (*Heisteria Reinw*, *Rhynchanthera* Bl., *Macrostylis* Kuhl van Hass.), *Chloidia* Lindl., *Tropidia* Lindl. Excepting these in genera, I know of only one branched inflorescence ever observed in Neottiaceæ, and that is in the shape of a very beautiful strong raceme of *Macodes marmorata* Rchb. f. (*Anæctochilus Lonii* Hort.) which bears an extra-axillary branchlet near the summit. This is, no doubt, a case of bifurcation, such as may often be observed in racemes. The specimen is preserved in my herbarium.

OPERCULATÆ.—*Arethuseæ*. Some *Sobralias*, as the old *S. dichotoma* of Ruiz et Pav., have the inflorescence normally branched; some other species have sometimes exceptionally a branchlet to the raceme. The genus *Galeola* Lour. (*Erythrorchis* Bl., *Hæmatorchis* Bl. *Letcheria* F. Müll.) produce branched inflorescences usually of an extraordinary length.

These cases excepted, I know of no branched inflorescence in this small tribe, whether normal or abnormal.

VANDÆÆ.—*Brassideæ* offer many instances of branched inflorescences—many *Oncidia*, many *Odontoglossa* have such. Hence it is no wonder at all that even these species, which usually have simple racemes, produce exceptionally panicles. Panicles are quite common among *Jonopsis*, *Trizeuxis*, *Quekettia*, *Diadenium*. They occur sometimes in *Rodriguezia*, *Notylia*, *Cryptarrhena*; often in *Comparettia*, *Sielochilus*, *Lockhartia*. I believe I have once seen a branchlet in *Zygostates pellucida*. I do not recollect ever to have seen any branched inflorescence in any *Trichopilia*, *Phymatidium*, *Macradenia*, *Trichocentrum*, *Ornithocephalus*, *Calanthe*, *Tipularia*.

Maxillarideæ.—Most *Polystachyas*, some *Eulophiads*, *Cyrtopodia*, *Ansellia*, *Grammatophylla*, are usually branched. A good many are commonly racemose. The one-flowered species bears sometimes two flowers, e. g. *Lycaste mesochlaena*, *Skinneri*, *Deppii*; some appear generally two-flowered, as *Bifrenaria atropurpurea*, *Harrisoniæ inodora*, *Lycaste tetragona*.

Eboriglossæ.—I do not remember to have ever seen any paniced inflorescence in any *Cynoches*, *Gongora*, *Houlletia*, *Coryanthes*, *Catasetum*, *Mormodes*, *Stanhopea*, *Lacæna*, *Peristeria*, *Acineta*, *Schlimia*.

Podochilideæ.—Some species are paniced.

DIANDROUS.—Many species are generally paniced, and a good many racemose species show, in a state of luxuriance, adventitious branchlets.

CYPRIPEDIE.—The single-flowered *Cypripedia* are sometimes two-flowered. There is a variety of *Cypripedium barbatum* which is generally two or even three-flowered. In the International Exhibition two-flowered specimens of *Cypripedium Hookeræ* and *C. hirsutissimum* were exhibited.

Species usually racemose, get sometimes panicled; finally *Selenipedium Lindleyanum* and *Schlimii*, develop, when in good health, panicles.

In the course of some remarks on certain of the subjects treated of in Professor Reichenbach's communication, DR. MASTERS took occasion to express his perfect concurrence with the views of Professor Reichenbach, as to the impropriety of founding generic distinctions, or of altering the limitations of established genera according to the exceptional data furnished by teratology.

With reference to the inflorescence of Orchids, Dr. Masters remembered to have seen at least one example of a branched spike in *Ophrys aranifera*. This spike was gathered, with many other variously malformed specimens of the same species, near Folkestone, in the summer of 1864, but unluckily it had not been preserved, Dr. Masters not being at the time aware of the rarity of such an occurrence.

Judging from analogy, there did not appear to be anything very striking in the branching of the spike of an *Ophrys* or of an *Orchis*, as a panicled inflorescence is so common a characteristic of other genera of the order. A prolongation of the axis within the flower (median proliferation) had been observed by Dr. Moore, of Glasnevin, in *Orchis pyramidalis*, and had been described by him in Seemann's *Journal of Botany*, 1864, p. 819; and other flowers of the same species, presenting still greater deviations from the usual structure, were sent by Dr. Moore to Dr. Masters, by whom they were described in *Seemann's Journal*, 1864, p. 845. (See also *Journal of the Linnean Society*, vol. 8, 1865, p. 211.) Hence as the axis is prolonged in one direction in some Orchid flowers, it seems reasonable to suppose that it may become branched elsewhere, as there do not appear to be any structural reasons forbidding such an occurrence. At any rate Professor Reichenbach has done good service by drawing attention to the excessive rarity of this peculiarity.
