

ART. XXXIV.—*Note on Donatia novæ-zealandiæ, Hook, f.*

By GEORGE M. THOMSON, F.L.S.

[Read before the Otago Institute, 29th June, 1880.]

THIS interesting little plant, in the absence of the fruit, was placed originally by Sir J. D. Hooker in the order Saxifragæ, and in his Handbook he speaks of it* as the only representative in New Zealand of the herbaceous tribe of Saxifragæ proper. Up to within a very recent period, however, its exact systematic position was matter of considerable uncertainty. A few years ago, Baron Ferd. von Mueller expressed his decided opinion† that its resemblances were so near those of *Phyllachne*, that it should be placed along with that genus among the Styliidiæ, and this opinion he again published in Trimen's "Journal of Botany" for 1878, p. 174. In the absence of fruit, however, this affinity could not be considered as finally established. Mr. Petrie, Inspector of Schools for Otago, having recently obtained, at considerable trouble, numerous specimens of *Donatia* in fruit, forwarded them to Baron von Mueller, who has thus been enabled to prove his former assertions. It is to be regretted that Baron von Mueller in publishing the results of his last examination of the plant in question, should have elected to do so in an Italian journal, instead of in one accessible to the majority of those interested in the subject. The following description of the fruit and seed, together with the other information I record on the subject, is translated from "*Dal Nuovo Giornale Botanico Italiano*," Vol. XI., N. 3, (July, 1879):

"Fruit indehiscent, turbinate, completely bilocular, rarely trilocular, flat on the top and almost tumid on its margin, about 2 lines long. Placentæ short, situated almost at the apex or above the middle of the dissepiment. Seeds few in each loculus, rarely many ripening, pendulous or patent, attached without a funiculus, obliquely ovate or ellipsoid, $\frac{1}{3}$ — $\frac{1}{2}$ line long; testa membranous, dark, shining, reticularly striated; hilum basal with the chalaza at the extremity more strongly coloured, almost brown; raphe not prominent; albumen amygdaline; embryo very small, remote or quite free from the hilum, often shorter than the albumen; cotyledons ovate-rotundate, almost equalling in length the central thin radicle, or the radicle united with the cotyledons into an almost ovate body."

Baron von Mueller regards the corolla of *Donatia* as gamopetalous, but having its tube shortened or suppressed, as occurs in the Rubiaceous genus *Galium*. The other points adduced are (1) the union of the stamens with

* "Handbook of the N.Z. Flora," p. 58.

† "Fragmenta," VIII., 39-41.

the style (as in the Stylidiæ), which, though not complete in *Donatia*, nevertheless places the filaments really in the centre of the flower, and entirely away from the calyx; (2) the minute embryo similar to that of *Stylidium* though its position may not be near the hilum; (3) the placentation, which is that of *Stylidium*, and not that of the normal Saxifrageæ; (4) the internal structure of the seeds, which agrees better with that of Stylidiæ than of Saxifrageæ; and (5) the normal number of two stamens in *Donatia*, which is not represented in any other Saxifrage. From these various considerations he places the genus among the Stylidiæ, of which the following enumeration of the known genera is given, which will prove useful to New Zealand botanists.

Candollea, Labill. in Ann. du Mus. Paris, VI., 453, t. 63-64.

Stylidium, Sw. in Willd. Spec. Plant. II. 146, an. 1805.

Leeuwenhockia, R. Brown, Pr. 572.

Phyllachne, R. and G. Forst. Char. Gen. 115, t. 58.

Fostera, L. fl., in Nov. Act. Soc. Reg. Upsal, III., 184, t. 9.

Donatia, R. and G. Forst. Char. Gen. 9, t. 5.

ART. XXXV.—*New New-Zealand Plants*. By Dr. S. BERGGREN. Hon. Mem. N.Z. Inst. Communicated by G. M. Thomson, F.L.S.*

[Read before the Otago Institute, 29th June, 1880.]

Phyllachne haastii, Berggr.

Leaves imbricating at the oblong plano-convex base, semi-terete, scarcely thickened at the apex, with a simple nerve, upper half of the column exerted, stigmatic lobes oblong, recurved, capsule turbinate, seeds 6-12 on the central undivided placenta.

Kelly's Hill, Canterbury Alps.

This is the plant which I referred to *P. colensoi*, Hook f., in Lund's "Physiograph. Sältskaps Minnesskrift," 1878, tab. III., figures 1-27. From that plant this is distinguished by the dull olive-green leaves, the upper half of which is terete, and not swollen at the tips. The single nerve is unbranched, whereas in *P. colensoi* there is a lateral branch on each side. The seeds are few in number, and the upper part of the placenta is not divided into two branches as in that species.

* From the Journ. of Botany, Vol. IX., p. 104, April, 1880.