

XXIII. *Remarks on some British Ferns.* By Mr. DAVID DON, *Libr. L.S.*

Read March 18th, 1834.

MY attention having been lately directed to the examination of some species of Ferns more recently added to the British Flora, with a view to determine how far they merited the rank which has been assigned to them, I beg leave to lay the results of my investigation before the Linnean Society, being persuaded that any attempts to clear up the synonymy of our native plants will meet with its approbation and encouragement. I shall commence with the

ASPIDIUM DUMETORUM,

a species first proposed by our late President in the 4th volume of the English Flora. This is made up of two plants, the one from Cromford Moor being a dwarf state of *A. dilatatum*, and the other from Ravelston Wood, near Edinburgh, having the segments of the frond abruptly truncate, and the habit, at first sight, altogether peculiar; but an inspection of the original specimens in the Smithian herbarium proves it to be nothing more than an accidental variety of the same species, namely, *Aspidium dilatatum*, arising from disease, which is shown by the sudden termination of the costæ, and by the partial decay of the other segments. Specimens of the more ordinary state of *A. dilatatum* gathered at the same time and from the same locality are similarly affected, but in a less degree. The distinctions derived from the fructification in the English Flora are altogether fallacious, and are partly dependent on the age of the frond, and partly on that of the individual plant. It is clear, therefore, that the *Aspidium dumetorum* must be erased from the list of species.

The next species I shall have to notice is the

NEPHRODIUM RIGIDUM.

I formerly expressed a suspicion of the correctness of the plant published

in the Supplement to English Botany under the name of *rigidum*, but having been lately favoured by the Rev. W. T. Bree with cultivated specimens of the plant gathered by him on Ingleborough, I am now satisfied that my suspicions were unfounded, and that it is really the same with the plant of Swartz, which is accurately figured by Schkuhr in his *Kryptogamische Gewächse*, tab. 38. There is a Swiss specimen from Davall, and another collected in Dauphiny in the Smithian herbarium, which only differ from Mr. Bree's cultivated specimens in their smaller size. The species, which is truly distinct, evidently ranks next to *dilatatum* and *spinulosum*, but differs from both in its larger and more crowded sori, and in its broader and more depressed indusium. The fronds are lanceolate, and both the stipes and rhachis are copiously clothed with long narrow ramentaceous scales, as in *Aspidium aculeatum*. In *dilatatum* and *spinulosum* the rhachis is nearly naked, and the stipes is furnished with fewer and broader scales.

The more delicate fronds, having the pinnulæ pinnatifid, with the lobes serrated with pointed incurved teeth, and the more scaly rhachis essentially distinguish it from *Nephrodium Filix mas*, between which and *spinulosum* it appears to be intermediate in its habit and characters.

I beg to propose the following character for the species :

N. rigidum, fronde lanceolatâ bipinnatâ : pinnulis oblongis pinnatifidis : laciniis argutè dentato-serratis : venulis inconspicuis, soris biseriatim contiguis, indusio scarioso dilatato, stipite rhachique densè paleaceis.

Aspidium rigidum. Swartz, *Syn.* p. 53. Schkuhr, *Krypt. Gew.* p. 40. t. 38. Willd. *Sp. Pl.* v. p. 265. Spreng. *Syst.* iv. p. 106. Hook. in *Engl. Bot. Suppl.* t. 2724.

Polypodium rigidum. Hoffm. *Germ.* ii. p. 6.

P. Villarsii. Bellard. *App. ad Fl. Pedem.* p. 49.

P. fragrans. Vill. *Delph.* iii. p. 843. (excl. synonym.)

Polystichum strigosum. Roth, *Germ.* iii. p. 86.

Habitat in Angliæ borealis comitatûs Eboracensis montosis. Gul. T. Bree. 4. (v. s. c.)

3. ASPLENIUM FILIX FÆMINA.

There are two very marked varieties of this plant; the one with broader

segments of a dark green, and with the stipes and rhachis of a pale purple hue ; the other, and that the commonest, with the segments of a more delicate texture, and the whole frond of a pale green. The latter variety varies much in size according to soil and situation ; in damp shady places it becomes the *Filix fœmina* of English Botany, and in more open exposed situations, the *irriguum* ; but neither of these states is entitled to be regarded as a distinct form. A specimen of the larger variety in the Linnæan herbarium is marked *Polypodium rhæticum*, and with the usual mark of authenticity attached to the specimen.

4. CYSTEA DENTATA.

This is the *Polypodium dentatum* of Dickson, who first distinguished it from *fragilis*. It was discovered by that acute and zealous botanist on Ben Lawers, and afterwards by my late father on the Clova mountains. The plant appears to be peculiar to the Scottish alps, for after an attentive comparison of specimens from various stations, both in the Smithian herbarium and in that of my worthy friend Mr. Forster, I am satisfied that the Welsh plant is not different from *fragilis*. The Scottish plant is distinguished by its broader, rounded pinnæ, with short, blunt teeth, rather crenate than serrated, with the costæ more conspicuous and flexuose. The indusium is much less divided at the margin, which character, if constant, will materially assist in distinguishing it from all the varieties of *fragilis*, among which, I fear, must be reckoned the *angustata*, as I can find no essential mark whereby to separate it. The figure in English Botany is altogether an indifferent one, with the stem and rhachis much too stout for any British species of this genus, and most probably belongs to *fragilis*, for it clearly does not represent the plant now under consideration. It is probable that the *Aspidium tenue* of Schkuhr (tab. 53. b. p.), and the “*Filix non ramosa, alpina, foliolis, quæ ad alas rotundioribus, omnibus autem dentatis*” of Seguier (*Veron.* 3. p. 53. t. 1. f. 2.) belong to *dentata*.

5. CYSTEA REGIA.

Dr. Hooker in his British Flora regards this and the *alpina* as identically the same ; but I cannot agree to this opinion of my learned friend, for the two plants appear to me to be essentially different. It is distinguished from *alpina* by its more compact frond, by its shorter, broader, and cuneiform segments,

and by the still more important characters of its more copious sori, and of its narrower and tapering indusium. In the *alpina* the segments are linear, and the sori much fewer, being mostly solitary on the lobes, and the indusium broader, truncate, and not taper-pointed.

It is hoped that some fortunate botanist will discover a British station for this plant; for the original one at Low Layton no longer exists, and the Welsh specimens belong to *fragilis*.

The *alpina* is accurately represented by Schkuhr, Jacquin, Seguiér, and several other authors; but of the present species there are no authentic figures, except the one in English Botany, and that of Vaillant (*Bot. Paris. t. 9. f. 1.*).



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