

REVIEW.

FERNS: British and Foreign; By John Smith, A. L. S.

The well-known ex-curator of the Royal gardens, Kew, has lately published this most useful fine manual; intended primarily to assist fern cultivators, it is nevertheless valuable also to botanists. He gives a very interesting history of the introduction of exotic ferns into European gardens; an essay on the genera of ferns and their classification; an enumeration of the ferns at present cultivated, and very full instructions on their cultivation. Mr. Smith's mode of classification aims to be natural and his tendency is to multiply genera unduly. His enumeration extends to 1084 species (nearly half of those known to science); he gives many synonyms, a reference to the best descriptions and engravings in standard works, and wood-cut illustrations of the genera. Sir William Hooker recently said of our author:—

“The formation of this fine collection [of cultivated ferns in “Kew gardens] is mainly due to the exertions and ability of Mr. John Smith. His knowledge of ferns and his writings upon “them, justly entitle him to rank among the most distinguished “Pteridologists of the present day.”

Mr. Smith gives us, northern North Americans, no credit for having the following ferns in our native flora:

Phegopteris rhaetica (the *Polypodium alpestre* of British botanists), which is found on the eastern side of the Rocky Mountains; *Dryopteris Thelypteris*, one of our commonest ferns; *Polystichum Lonchitis*, which has a wide range and is locally plentiful; *Scolopendrium vulgare*, which is local but also abundant; *Asplenium Ruta-muraria*, which is found in all the neighboring States, as far west as Michigan and further south than Virginia; *A. viride*, which ranges from Newfoundland to the Rocky Mountains, and perhaps thence to the Pacific Ocean; and *A. septentrionale*, not uncommon on the Rocky Mountains. We learn nothing of our author's views on *Woodsia*; he gives only two species, *Ilvensis* and *hyperborea*, and gives North America credit for neither of them; moreover his wood-cut, which is said to be a frond of *Ilvensis*, is unmistakably *hyperborea*, as we understand that species.

We believe the following to be bad species:—*Asplenium Michauxii* is *A. Filix-femina*, one of the most variable of ferns; *Cystea tenuis* is merely a form of the protean *C. fragilis*; *Aspidium atomarium* should have been referred to *C. bulbifera*; *Osmunda spectabilis* is not separable from *O. regalis*, nor does our *Onoclea Struthiopteris* differ from the European form. *Onoclea gracilis*, and *Ophioglossum pedunculatum* are unknown to us. Mr. Smith's arrangement of the following species of the genus *Dryopteris* (or *Lastrea*) is not understood by us. He places American plants thus: *Filix-mas*, *remota*, *rigida*, *marginalis*, *Goldiana*, *dilatata*, *cristata*, *intermedia*, *spinulosa*. We look on their affinities