

various meteoric memoirs, especially his "Memoir on Meteorites" (1855), are among the more elaborate of his valuable contributions. His two papers on the "Determination of Alkalies in Minerals," 1853 and 1872, are very important contributions to analytical chemistry, which have become incorporated into the permanent literature of the science. If full reference to the journals in which the several papers originally appeared had been given, it would have added to the value and convenience of the volume, which also lacks an index.

6. *Parthenogenesis in Ferns.*—An interesting paper by Dr. Wm. G. FARLOW, late Assistant in the botanical department at Harvard University, and at the time a student in the laboratory of Professor De Bary of Strasburg, entitled *An asexual growth from the Prothallus of Pteris serrulata*, was read in January last at a meeting of the American Academy of Arts and Sciences, and is just printed in its Proceedings. A fern, as is well known, comes to fructification and produces spores without any fertilization. The spores in germinating produce a Liverwort-like structure, the prothallus, on which the two kinds of sexual organs are developed; the fertilization of a cell in the one by a spermatozoid from the other results in the development and growth of the former into a bud and so into a fern-plant. Now Dr. Farlow has discovered in a sowing of the spores of the common *Pteris serrulata*, prothalli which were developing fern-plantlets from their substance quite apart from any archegonium, starting in a different way by a direct outgrowth from the prothallus, beginning with a scalariform duct, but producing plantlets thus far undistinguishable from those which arise from an archegonium through fertilization. The paper is illustrated by figures which show the earlier stages, and the difference between this asexual outgrowth and the ordinary development.

Dr. Farlow, confining himself strictly to the facts of the case and their direct interpretation, does not use the word *parthenogenesis*. But the case seems to be substantially analogous to that of parthenogenesis in Phænogamous plants, the few cases of which that have been probably, if not unequivocally, made out, are much fortified by the present discovery. If it be demurred that the case is one of bud-growth, and therefore not of the nature of parthenogenesis proper; the reply is, that it comes from a parthenogenic spore, which here develops plants without the sexual fertilization of that class of plants. The conclusion, if the facts hold good, is that sexual fertilization, however necessary, is not absolutely necessary in every generation of plants, somewhat as cross-fertilization, however necessary in the long run, is generally unnecessary in every generation, only the rule in the former is far more strict.

A. G.

7. *Sarracenias as Fly-Catchers.*—It has not rarely happened that after some curious discovery has been made, and perhaps perfected by a series of observers, it then comes to be seen that the discovery has been long before made, recorded, and forgotten.

*Drosera* is a case in point, although the sensitiveness of the leaf in responding to organic rather than to inorganic matter—to such matters as it can feed on—was wholly unknown to Roth, and was left for Darwin to demonstrate. As to *Sarracenia*, referring to our notes, last year, on p. 149 and p. 467 of the sixth volume of the present series, we add that the source of the statement in the English edition of Le Maout and Decaisne's Treatise is at length apparent, and may be traced back to its origin. The last volume of De Candolle's Prodrômus contains the omitted order *Sarraceniaceæ*. To the character the careful editor added a reference thus,—“De causis quibus insecta in ascidiis cadunt [confer] ad Macbride in Trans. Linn. Soc. 12, p. 48 (gall. in Rev. Hort., 1852, p. 123, et Robinson, l. c.).” This sends us to a long-overlooked paper, in the 12th volume of the Transactions of the Linnean Society, 1818, entitled, *On the power of Sarracenia adunca to entrap Insects, in a letter to Sir James E. Smith, Pres. Linn. Soc., from James Macbride, M. D., of South Carolina*; read Dec. 19, 1815. It appears that this paper, written nearly sixty years ago, was noted and referred to by Decaisne in the first volume of the Revue Horticole, more than twenty years ago; that Mr. Robinson, probably the editor of The Garden, has more recently referred to this, and that Dr. Hooker last year noted either the one or the other. De Candolle's reference “Robinson, l. c.,” however, remains a puzzle, as there is no antecedent citation of his name, none under *Sarracenia*, and the one under *Darlingtonia*, upon verification by reference to the Gardener's Chronicle, throws no light on the matter in hand.

Dr. Macbride was a collaborator with Elliott upon the Botany of South Carolina and Georgia, and from all we know, must have been a first-class observer. He died at the early age of thirty-three, between the years 1821 and 1823, that is, between the publication of the first volume and the printing of the first sheet of the second volume of Elliott's Sketch. To his memory Elliott dedicated the distinct and pretty Labiate plant, *Macbridea pulchra*, and in the preface pays a beautiful tribute to him and to Dr. Baldwin, as the two individuals who took most interest in his work, who would have been throughout, as they were at first, the most important contributors to its value, but who “scarcely lived to see the commencement of its publication.” On p. 12 of the second volume Elliott refers to this paper of his deceased friend, and gives an abstract of its main points. This reference to so curious a fact, although occurring in a book very familiar to botanists, seems to have been as completely overlooked as was the original paper; doubtless, because botanists, until lately, saw in it only a matter of idle curiosity, and thought it a matter of no consequence whatever whether *Sarracenia* and *Drosera* caught flies or not. Even *Dionæa* excited little more than unreflecting wonder, as an unique anomaly,—as if any member of the organic world stood alone.

*Sarracenia adunca* is a synonym of *S. variolaris*. It seems to be the most active fly-catcher of the genus, and to offer as a lure the greater amount of the sweet secretion. Dr. Macbride intimates that the open mouth and upraised lid of *S. flava* may favor the escape of the attracted insects after sipping their fill. But more likely the greater success of the former is due rather to the greater abundance of the sweet secretion,—almost certainly so if this stupifies the flies, as Mr. Grady asserts; and to this point should now be directed the careful observation of those who have *Sarracenia variolaris* within their reach. The Director of the Botanic Garden of Harvard University, Cambridge, would be glad to receive a stock of living roots of this species. A. G.

8. *Hooker's Flora of British India*, published by L. Reeve & Co., under the authority of the Secretary of State for India, in Council.—The second part, just issued, carries on the Polypetalous Orders from *Frankeniaceæ* to near the close of *Geraniaceæ*, from p. 209 to p. 464, which ends with the 74th (out of 122) species of *Impatiens*. Dr. Hooker has himself re-elaborated this genus; the rest of the order, as well as the *Caryophyllaceæ*, etc., was undertaken by Mr. Edgeworth; Dr. Masters is responsible for the Malvaceous orders; Mr. Dyer for the *Ternstræmiaceæ*, *Dipterocarpeæ*, etc.; and the late Dr. T. Anderson worked out the *Guttiferæ* just before his lamented death. In this flora, unlike the other and very similar British colonial ones, the characters of vegetation are put foremost, both of genera and orders, which seems to us most natural and convenient. A. G.

9. *Pachystigma Canbyi* Gray.—This Alleghanian analogue of the species common from the Rocky Mountains to the coast of Oregon, before the only representative of the genus, was published only last autumn in the Proceedings of the American Academy of Arts and Sciences, although Mr. Canby discovered it a dozen years ago. Being an interesting accession to the Botany of the Northern Atlantic United States, it is well to note that a second station has already been discovered, by Howard Shriver, Esq., of Wytheville, Virginia. He finds it in the vicinity of that town, on the banks of Reed Creek, etc., growing at one place in company with *Carex Fraseriana*. A. G.

10. *Woodsia Ilvensis*, why so named?—In a foot-note in Bull. Soc. Bot. France, 19, p. 138, Dr. FOURNIER raises the question often asked before, how this specific name *Ilvensis* came to be given to a fern not known to grow upon the island of Elba. The Abbé Chaboiseau, in the next volume of the Bulletin, p. 70, gives the result of his investigation into the origin of the name. It appears, in short, that the name originated with Dalechamp as *Lonchitis aspera Ilvensis*; this was cited by Linnæus in his *Flora Suecica* as a synonym of his *Polypodium fronde duplicato-pinnata*; to this in the *Species Plantarum* he gives the name of *Acrostichum Ilvense*, omitting, however, to cite the synonym of Dalechamp, and also the habitat which gave the name. M. Chaboiseau thinks it probable that Dalechamp's figure represents a