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CLOSELY ALLIED "SPECIES."

*Monographie der Gattung Euphrasia.* Von Dr. R. von Wettstein. 4to. Pp. 316. With 14 plates and 4 maps. (Leipzig: Wilhelm Engelmann, 1896.)

EUPHRASIA is one of those genera exhibiting a very limited range of variation, as compared with *Ranunculus*, *Senecio*, *Solanum* or *Euphorbia*; yet abounding in closely allied forms, concerning the rank of which there is great diversity of opinion amongst botanists. Bentham and Hooker in their various works, including a monograph of the genus by the former, estimate the number of species at about a score, whilst the author of the monograph under consideration defines nearly a hundred. Whatever our opinion may be respecting the utility of this extreme subdivision, most of us will agree that a profound study of the manner and extent of this limited kind of variation should furnish some interesting results. Moreover the genus *Euphrasia* is admirably suited for this purpose, because it is possible to have the entire plant in all cases.

First, with regard to the utility or convenience of naming such closely allied forms, whether they be ranked as species or varieties. Names are given, of course, as a means to an end. The botanist names his species and the florist his varieties, and there seems no reason why a specialist should not carry his naming as far as his studies lead him. Few may care to attempt to follow him, and he may be impossible to follow, as some of the hieraciologists of the present day are; but no harm is done, no confusion arises. The generally-accepted application of the name *Euphrasia officinalis* is not destroyed by giving names to the various forms it presents. But when the author claims for them that they are "good species," because they are constant under cultivation, or because they have a wide range, or for some other reason we reach a debatable point.

*Euphrasia* is a genus of small, slender annual and perennial herbs, parasitic on the roots of other plants, chiefly on grasses and sedges, according to Wettstein and other investigators. Bentham divided the 'species into three sections, which are practically adopted by Wettstein; and these sections inhabit as many widely separated geographical areas. First there is the *officinalis* group, which is confined to the northern hemisphere. Then there is a group restricted to Australia and New Zealand, with the exception of a single species inhabiting Mount Kinabalu, in North Borneo. The third group inhabits western South America, from about 15° S. lat. to Cape Horn. The Bornean species, and another in the Andes of Peru, are the only ones found within the tropics. The total absence of the genus in Africa, the African islands, the mountains of South India and Malaya, with the one exception noted, is a remarkable fact, especially as the genus reaches the north shores of the Mediterranean from end to end, and the Azores, where there is a very distinct endemic species. In eastern North America the genus extends as far south as the north shores of the lakes; it is absent from the centre, and its southern limit

in the west is the northern part of the Rocky Mountains. But by some mischance Dr. Wettstein has located the White Mountains of New Hampshire somewhere in Utah! At least he gives the White Mountains as the locality of the species in the text, whilst on his map it occupies the isolated position indicated.

The geography is weak in other places, more especially in the arrangement of the localities in Central Asia. Indeed the author has by no means made the most of the geographical aspects of the question. He has one map showing the general distribution of the genus, and three others showing the areas of the principal northern species; but the explanatory text is altogether insufficient, considering the small scale of the maps. It is interesting to note that many of these critical species have a wide area, and few are really very local. *E. stricta* has two pages of synonyms and seven pages of localities, from which it would appear that the author has examined some thousands of specimens. *E. rostkoviana*, a very common and widely-spread species in Europe, has also been found in Canada, whither it may possibly have been taken with grass-seed.

Without sharing the author's views on species, concerning which he is very confident, I would strongly recommend his monograph for study. It has been considered worthy of a De Candolle prize.

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THE AUTOBIOGRAPHY OF PROFESSOR  
W. C. WILLIAMSON.

*The Reminiscences of a Yorkshire Naturalist.* By the late William Crawford Williamson, LL.D., F.R.S. Edited by his Wife. Pp. xii + 228. (London: George Redway, 1896.)

IN the "Reminiscences of a Yorkshire Naturalist," Prof. Williamson has left an autobiographical sketch, containing much that is of general scientific interest, and many delightful records of his own personal history. This simple story of a student's life, which Mrs. Williamson has done wisely to publish in its original form, takes us back to a period which, to the present generation of students, suggests the dawn of modern science.

These reminiscences link, in a picturesque and striking manner, the past with the present. In speaking of his boyhood spent by the Scarborough cliffs, Williamson describes how he examined, with a pocket-lens, the little cups at the tips of *Polytrichum* stems, and wondered whether the reproductive organs, which so many botanists were in search of, were enclosed within these cups. His graphic description of the Father of English geology, recalls the infancy of geological science. As a boy he remembered William Smith, with "the drab knee-breeches and grey worsted stockings, the deep waistcoat with its pockets well furnished with snuff, . . . and the dark coat with its rounded outline and somewhat quakerish cut." It was during his apprenticeship to Mr. Weddell, a Scarborough medical practitioner, that he first contributed to palæo-botanical literature; many of the plates in Lindley and Hutton's "Fossil Flora" were drawn by the young