

## **Book review: Metherell C. & Rumsey F. J., Eyebrights (Euphrasia) of the UK and Ireland**

Author: Vitek, Ernst

Source: Willdenowia, 50(1) : 77-78

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: <https://doi.org/10.3372/wi.50.50107>

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ERNST VITEK<sup>1</sup>

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Metherell C. & Rumsey F. J. [illustrated by Rumsey F. J.; edited by Edmondson J.], *Eyebrights (Euphrasia) of the UK and Ireland*. – BSBI Handbook No. 18. – Bristol: Botanical Society of Britain and Ireland, 2018. – ISBN 978-0-901158-53-6. – 14.8 × 21 cm, 220 pp., colour photographs & black/white line drawings, softback. – Price: GBP 17.50.

Version of record first published online on 10 March 2020 ahead of inclusion in April 2020 issue.

**Citation:** Vitek E. 2020: Book review: Metherell C. & Rumsey F. J., *Eyebrights (Euphrasia) of the UK and Ireland*. – *Willdenowia* 50: 77–78. doi: <https://doi.org/10.3372/wi.50.50107>

The genus *Euphrasia* L. (*Orobanchaceae*) is a notoriously difficult genus. Species are hard to distinguish and often misunderstood. The authors have undertaken a brave task to give an overview of the knowledge of British *Euphrasia*. The result is the book reviewed here.

At the beginning, there is a good overview of the characters, such as branching, leaves (size and shape), teeth characters, indumentum and floral characters. This chapter is very helpful for everybody who wants to determine *Euphrasia* specimens. It helps to understand the descriptions and the keys provided. The chapter “Historical background” explains the problems with taxonomy discussed further down. The authors give three different ways for identification: standard key, tabular key and local keys, confessing that “most keys tend to break down”. Is this a problem of the keys or of the species concept?

When compiling the species list, every alarm bell should have rung. There are 21 species and 71 (!) hybrids listed, and some more are mentioned in the text, even between diploid and tetraploid species. These numbers can never be a natural taxonomic concept. (My personal estimation is c. 10 species for the British Isles and most of the hybrids have to be assigned to one of the “parental species” as aberrant forms.)

The presentation of the species – or better what the authors think to be a species – includes very detailed descriptions, photographs and drawings. After the species, the supposed hybrids with other species are presented. These presentations are the real high value of this book. Here it is possible to understand what British botanists mean by the different taxonomic units, although basic taxonomic work, such as stating types, is missing. But this was obviously not the impetus of this book: “We have also ... resisted the temptation ... to tinker with the taxonomy”.

The authors possess a wide knowledge of British literature and they followed tradition, giving strong weight to the first flowering node, but they did not see (or ignored) important recent publications. The most important is that of Karlsson (1976), who showed that different species react in the same way on ecological drivers, thus leading to similar forms – therefore characters as the first node of flowering are minor evidence for distinction of species. Vitek (1998) discussed and showed that the taxonomic concepts of agamosperous genera should not be used for autogamous groups such as *Euphrasia*. The authors even went back to before Silverside (1991), who with good reasons included *E. anglica* Pugsley, *E. montana* Jord. and *E. rostkoviana* Hayne within a more natural species *E. officinalis* L.

<sup>1</sup> Department of Botany, Naturhistorisches Museum Wien, Burgring 7, 1010 Wien, Austria; e-mail: [ernst.vitek@nhm-wien.ac.at](mailto:ernst.vitek@nhm-wien.ac.at)

Smaller mistakes: The only monograph of the complete genus by Wettstein (1896) is cited in the text but missing from the references. The chromosome number of *Euphrasia anglica* is given as diploid in the table, but as tetraploid in the text.

In conclusion, the book is recommended for everybody who wants to go deeper into this difficult genus. This publication will hopefully also be the impulse to work on a more natural treatment based on modern techniques.

## References

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## Willdenowia

Open-access online edition [bioone.org/journals/willdenowia](https://bioone.org/journals/willdenowia)



Online ISSN 1868-6397 · Print ISSN 0511-9618 · 2018 Journal Impact Factor 1.156

Published by the Botanic Garden and Botanical Museum Berlin, Freie Universität Berlin

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