Book review

Sell P. & Murrell G.: Flora of Great Britain and Ireland. Volume 2. *Capparaceae – Rosaceae*. – Cambridge: University Press, 2014. – ISBN 978-0-521-55336-0. – xxviii + 588 p., 25 plates with b/w drawings, 253 × 178 × 35 mm, 1.39 kg; hardback. – Price: GBP 125 (http://www.cambridge.org).

The British Isles are geographically and climatologically very diverse and range from the Isles of Scilly and West Cornwall, with a remarkably mild oceanic climate, to the harsh Alpine highlands in Scotland. They count no less than four hardiness zones, so it is no wonder that the native flora is so extremely rich. In addition, and as a result of its important horticultural tradition, the British Isles harbour unusual amounts of plants that have escaped from cultivation. Everyone knows Clive Stace's *New Flora of the British Isles*, a practical field guide with the most recent (third) edition published five years ago (Stace 2010). However, reference must also be made to the impressive *Flora of Great Britain and Ireland*, a more luxurious identification manual, scheduled in five volumes of which volumes 5, 4 and 3 had previously been published (Sell & Murrell 1997, 2006, 2009, respectively). In 2014 volume 2 was published and, although the first author (Peter Sell) died in 2013, the manuscript of volume 1 is completed and ready for publication in due course.

The main aim of this flora is to supply full descriptions of all species treated in Stace's New Flora. It also deals with numerous extra taxa, often infraspecific taxa but also aliens that are extinct, rare or very rare casuals and cultivated plants (especially trees and shrubs) that have not been found in the wild, or are very marginal. Also, for apomicts – often omitted or only briefly dealt with in Stace's New Flora – detailed accounts are provided, many for the first time to such an extent.

The newly published volume 2 starts with foreword, preface and acknowledgements, followed by a short introduction, in which the historical background and contents of the Flora are drawn, as well as the geographical area covered (i.e. England, Scotland and Wales, Ireland + Northern Ireland, the Isle of Man, the Channel Islands and various smaller islands), some notes on classification, nomenclature and variation and, finally, a short list with literature references and herbaria consulted. What follows (p. xxi–xxviii) is a conspectus of the families treated, divided over the five volumes.

In total 18 families are treated in this volume although some are very small and of a lesser importance in western Europe (e.g. *Capparaceae*, *Diapensiaceae* and *Myrsinaceae*, each with a single genus and species; also *Clethraceae* and *Pittosporaceae*). It further contains large and important families like *Brassicaceae*. The bulk (c. ¾ of the volume), however, is dedicated to the *Rosaceae* with (partial) apomictic genera with a notoriously complex taxonomy like *Alchemilla* (20 species), *Cotoneaster* (124 species), *Potentilla*, *Rosa* (27 species and numerous infraspecific taxa), *Rubus* (354 species) and *Sorbus* (73 species + numerous infraspecific taxa). For each entry the following items are provided: accepted scientific name (often with one or several synonyms), vernacular name, species description, flowering period, pollination, chromosome numbers, residence status (native vs introduced), distribution (in the British Isles and beyond), ecology and, if applicable, additional useful information. The book ends with an overview of new taxa and combinations (nearly all from the *Rosaceae*, mostly from the genera *Potentilla* and *Sorbus*; p. 519–523), a very useful and copiously illustrated glossary (p. 525–540) and, finally, an index (p. 541–588).

The classification in the *Flora of Great Britain and Ireland* is that of Cronquist (1981) and, as a consequence, differs from that in many recent floras from neighbouring territories (e.g. van der Meijden 2005; Tison & de Foucault 2014), as well as from the third edition of Stace's New Flora (Stace 2010). This is understandable, the project having started almost 20 years ago. However, the authors admit that, if they would have started writing the flora now, they would have followed the classification proposed by the Angiosperm Phylogeny Group (APG III 2009). For this volume, this means that *Empetraceae*, *Ericaceae*, *Monotropaceae* and *Pyrolaceae* are treated as distinct families. A conservative taxonomy is also applied for lower taxonomic ranks (mainly genera) and, in some cases, is more or less out-of-date by now. For instance, *Cardaria*, *Coronopus* and *Lepidium* are accepted as three distinct genera, whereas molecular data demonstrate that they are best united. The same applies in numerous other cases; to name but a few: *Thlaspi* is treated in a broad sense (incl. *Microthlaspi* and *Noccaea*), as is *Potentilla* (incl. *Argentina*, *Comarum*, *Dasiphora* and *Drymocallis*), while *Anagallis*, *Glaux* and *Trientalis* are kept separate from *Lysimachia*, as is *Duchesnea* from *Potentilla*. Slightly annoying is that, in some cases, names in these alternative genera are not even mentioned as synonyms, for instance in *Dasiphora*, *Drymocallis* and *Lysimachia* s.l.

As a rule, a rather narrow species concept is applied in this series. The authors accept, for instance, two species of *Neslia* (*N. apiculata* and *N. paniculata*), *Pyracantha lalandei*, a segregate of *P. coccinea*, only distinguished on berry colour (and probably of little taxonomic value), *Lysimachia verticillaris* as a species distinct from *L. punctata*, not less than 11 species of *Cochlearia*, etc. Surprisingly, in other cases the reverse is true: *Capsella rubella*, for instance, is reduced to a synonym of *C. bursa-pastoris*, contrary to Stace's New Flora (and most other contemporary floras).

Like the previously published volumes, this book is a very welcome addition to Stace's New Flora. Species descriptions are very precise and often unusually extended. This is particularly true for critical, often apomictic genera like *Rubus* and *Sorbus*. The late Peter Sell being a specialist in nomenclatural issues, the nomenclature in this series was made "as accurate as possible according to the latest International Code of Botanical Nomenclature". For all genera numerous bibliographic references are provided (e.g. 185 references for *Sorbus* alone; see also *Rubus*). Another merit of this series is that many taxa are included that are ignored by other authors. This surely holds true for infraspecific taxa: not less than 65 subspecies, 221 varieties and 53 forms are recognized. An extreme example is *Rosa canina* (incl. *R. corymbifera*) that includes 38 varieties in the territory covered. Likewise, 93 hybrids are treated although these are not always keyed out (compare, for instance, *Rosa* with *Rorippa*; in the latter, three hybrids are included in the key, while none are in the *Rosa* key). Full accounts are provided for many aliens and garden escapes, some rare or even extinct. These are extremely helpful for anyone interested in this matter. *Cotoneaster*, for instance, accounts for not less than 124 species (although some have so far been found only in gardens), 38 more than in the already detailed account in Stace's New Flora. Also useful are the treatments of *Crassula* (12 species, many exclusive wool aliens), *Primula* (16 species), *Physocarpus* (3 species; in addition to the widely known *P. opulifolius*, *P. intermedius* is said to be commonly grown and could be overlooked so far as an escape, also elsewhere in Europe) and *Pyracantha* (five species), the recognition of two species related to *Potentilla fruticosa*, a key for distinguishing *Rhododendron ponticum* and its lookalikes (incl. the very invasive but poorly understood *R.* ×*superponticum*), etc. In some cases, the accounts are largely based on existing revisions: *Rubus*, for instance, on Edees & Newton (1988) and *Cotoneaster* on Fryer & Hylmö (2009).

There is, in fact, very little to criticize. Inevitably, there are some typographic errors that passed unrecorded during the editing process (e.g. "*Niellia*" instead of *Neillia* in the key on p. 136). In some cases distributional data are obviously more precise for the Cambridge area, the residence area of both authors. Remarkably, the authors state that the easiest way to identify a species of *Cotoneaster* is by matching a leaf with the drawings, then to check the plant against the description of the species. This is not only highly unusual but also impractical since many species are very similar in leaf size and shape; moreover, scale bars have been omitted on the plates. Also, this statement seems to imply that the authors do not seem to have too much confidence in their key. *Lysimachia verticillaris* is accepted as a species distinct from *L. punctata* but it is said to be much rarer than the latter. This seems to be in contradiction not only with Stace's New Flora but also with McAllister (1999). Glandular hairy forms of *Sedum album* will fail to key out since this species is said to be glabrous.

However, despite these minor issues, the *Flora of Great Britain and Ireland* clearly is a life work and the result of a long and scrutinous study of countless amounts of plant specimens, in herbaria as well as in the wild. Although fairly expensive (volumes 3–5 are priced at GBP 169.99 each), it is, for those who can afford it, a very welcome and invaluable companion to Stace's New Flora.

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