

BOOK REVIEW

The Illustrated Flora of Illinois. Flowering Plants: Smartweeds to Hazelnuts. R. H. Mohlenbrock and P. M. Thomson, Jr. 1986. Southern Illinois University Press, Carbondale. 229 pp.

This was my first close look at a book from this series, so I was initially pleased to see such a simple, well-organized format and truly beautiful illustrations. Closer examination showed that the illustrations were so fine that incorrect captions could be readily identified. The more difficult genera treated in the book are *Polygonum*, *Rumex*, *Betula*, and *Quercus*. The Fagaceae and other taxa contributed by the junior author seem very well-treated, so his work is not discussed below.

The Polygonaceae, with which I am most familiar, are treated in a very uneven way. Characters like heterostyly, late-season achene dimorphism, exsertion and leaf blotches, long known to be inapplicable, are resurrected, perhaps in homage to the ghost of John Kunkel Small. Unreliable or misquoted characters are common in the keys. With *P. erectum* and *P. achoreum*, erectness is used incorrectly, whereas floral differences are not properly explained. The illustration of a fruiting calyx of the latter is too immature to show key characters; the "*P. erectum*" illustrated is not properly heterophyllous, as stated in the key. Very surprising is the lumping of Eurasian *P. dumetorum* of Linnaeus under American "*P. cristatum*," named in 1847. The flower illustrated for *P. lapathifolium* is that of *P. persicaria*, since it lacks the very distinctive anchor-shaped veins which provide the most reliable character separating the two species. Varietal names are dredged up, based on pubescence forms of *P. pennsylvanicum*, for instance, whereas distinctive infraspecific taxa of other species are ignored. For example, *P. amphibium* var. *emersum*, which is totally buried in synonymy in this book, is such a well-defined entity that some botanists still consider it a species (*P. coccineum*), despite a clinal merge with amphibious plants.

Consultation (and citation) of the literature for many taxonomic groups was inadequate. No mention is made of McNeill's studies when placing *P. monspeliense* in syn-

onymy under *P. aviculare*, against his carefully documented recommendation. In the same species-complex, *P. arenastrum* is illustrated by a young shoot of *P. aviculare*, but it may be seen substituting for *P. neglectum* in late-season or street-trampled condition. The maps probably aren't dependable for members of this group. *Polygonum aviculare* is listed as rare in a state which has enough suitable farm habitat to support it as a monoculture. In a different group, *P. careyi* is specifically cited as occurring in one county only, but it is dotted in two, with a contradictory explanation. Further examples are omitted.

The *Rumex* treatment is much better, except that *R. triangulivalvis*, a weed in the midwestern and eastern U.S., is treated as an Illinois native, while placed in synonymy under western *R. mexicanus*. Also, the illustration of a fruiting valve of *R. patientia* shows relatively prominent teeth, which it should not have, and the tubercle is not the right shape. It is difficult to determine what was being illustrated; possibly it was a slightly-tubercled valve of *R. longifolius* or perhaps of *R. orbiculatus*. In the birches, the author recognizes two hybrids, *Betula* × *sandbergii*, and *B.* × *purpusii*. They are both said to have the same parentage (*B. alleghaniensis* × *pumila*). If true, the international code dictates the choice of a single hybrid binomial. Some northern Illinois specimens of *B.* × *sandbergii*, including plants from Kane County and at least two Lake County locations, are white-barked (not "dark brown"), and may represent hybrids of *B. papyrifera*, as suggested by Gleason.

The book certainly has its merits, despite the foregoing comments. It is a pleasure to peruse, and is accessible to the non-botanist, due to its convenient format. This fifth volume has far fewer faults than former books of the series, which have now come to my attention. This upward trend in quality is welcomed.

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