

Book Reviews

Book Review Editor's Note: *The Canadian Field-Naturalist* is a peer-reviewed scientific journal publishing papers on ecology, behaviour, taxonomy, conservation, and other topics relevant to Canadian natural history. In line with this mandate, we review books with a Canadian connection, including those on any species (native or non-native) that inhabits Canada, as well as books covering topics of global relevance, including climate change, biodiversity, species extinction, habitat loss, evolution, and field research experiences.

Currency Codes: CAD Canadian Dollars, USD US Dollars, EUR Euros, AUD Australian Dollars, GBP British Pound.

BOTANY

Catalogue of the Vascular Plants of New York State, Memoirs of the Torrey Botanical Society, Volume 27

By David Werier. 2017. Torrey Botanical Society, New York Botanical Gardens. 542 pages, 35.00 USD, Cloth or E-book.

David Werier's recent *Catalogue of the Vascular Plants of New York State* presents an extremely thorough revision of previous New York state lists, resting on at least two centuries of botanical exploration and documentation. The volume incorporates comprehensive taxonomic updates, reflecting the significant research that has resulted in revisions at the species, generic, and even family levels. Importantly, older synonyms are well-indexed, which is very helpful in these days of frequently changing nomenclature.

The catalogue is the result of extremely thorough herbarium research by Werier, who personally reviewed and confirmed specimens of all but 107 of the 3922 taxa reported for the state. Werier has undertaken a dedicated and even dogged correction of previous misidentifications. In addition to the list of accepted taxa, the catalogue also contains an updated list of excluded and (helpfully) expected taxa. Werier has painstakingly documented his methods including rationales for inclusion, exclusion, and the inevitable cases of doubt. Specimen and sometimes barcode numbers are cited directly. There is also extensive documentation of hybrids. I have yet to find anything absent from the index.

It is interesting that in a populous state as well-botanized as New York, 24 native species have been added to the flora since 2003 (not including changes in taxonomic concepts). Tellingly, the majority of recent additions to the New York flora are non-native. It is the attention to non-native species that presents the greatest innovation in this catalogue. Unusually, Werier includes not only naturalized but also "not-naturalized" species in this category, meaning that he includes even those species that are not believed to persist over winter. He has created a unique and fairly effective method of categorizing these taxa, providing baseline information on each taxon's first documentation in New York, which may well be extremely valuable in the years ahead.

At times, one might wish Werier were a bit less comprehensive in this regard, as the "not-naturalized" flora includes even single waifs collected around grist mills in the 19th century. About half of his 1585 documented non-native species are "not-naturalized" (i.e., not persistent), or their status is unknown. In groups with large numbers of introduced species (e.g., Poaceae), the inclusion of these can be somewhat distracting, and Werier admits that the vast majority have little influence on the ecology of natural areas. Some inclusions are even an amusing stretch (e.g., Avocado [*Persea americana*] collected "from new compost"). But to be comprehensive is a worthy goal, and such distractions will probably prove insignificant compared to the long-term value of this catalogue.

If I had a wish for this volume, it would be the inclusion of a bit more ecological information and a map on New York's physiographical or ecological regions in the introduction, in order to place the checklist in context. It would also be helpful to see brief information on the abundance and range of each taxon within the state. With the hardcover volume already totalling 542 pages, one understands that space was limited. Admittedly, the catalogue is intended to be used together with the excellent New York Flora Atlas website (<http://newyork.plantatlas.usf.edu>) to which it is linked, and where one can find range maps. A catalogue such as this can spur botanists to document lesser-known groups, and Werier strongly encourages this. It seems likely that new discoveries and further iterations of this edition will follow.

This catalogue will appeal most strongly to the professional or serious amateur botanist. For botanists in regions of Ontario and Quebec adjacent to New York State, it offers many attractions. Plants know no jurisdictional boundaries, and this work provides a quick reference to determine the presence and conservation status of species and hybrids just across the border. This can offer some interesting surprises. I have also been

using it as a quick hardcopy reference for its reliably current taxonomy and extensive inclusion of synonymy. Used with distribution maps of species in the online New York Flora Atlas, it can also point to species that are relatively common in New York, but which may be overlooked in adjacent areas north of the border. With its thorough inclusion of non-native species, it may

(alas) offer a bellwether of things to come. And, more positively, it presents a tantalizing list of southern rarities for the dedicated botanical tourist. New York botanists are fortunate to have such a resource for their state for the foreseeable future.

HOLLY BICKERTON
Ottawa, ON, Canada