

## REVIEWS

*The genus Lesquerella (Cruciferae) in North America.* By REED C. ROLLINS and ELIZABETH A. SHAW. 288 p., 32 pl., 28 maps. Harvard University Press, Cambridge, Mass. 6 Jun 1973. \$18.00

For those of us who have been intrigued by the diminutive members of the mustard family known as *Lesquerella*, the long awaited publication of this major monograph will allow us the opportunity to finally append a few species names to collections that have been tucked away in herbarium cases for years. It is a delight to now have a key that really works, good descriptions, and some indication where the various entities grow and can be found. What is somewhat unfortunate is the unusual layout and arrangement of the book itself and the high price.

What is said by Rollins—who wrote the majority of the text—is clear and well stated. He leads the reader briefly through a characterization of the genus and then a review of the past work done on *Lesquerella*. A few paragraphs are devoted to the limits of the genus wherein Rollins discusses the well-known problems of trying to differentiate between *Lesquerella* and *Physaria*, and these from *Alyssum*. He does not accept the recent contentions of Mulligan that some species of *Physaria* should be placed in *Lesquerella*, and retains the traditional separation between the two genera on the basis that the line “between the genera is an arbitrary one, and for this reason we think it should remain as it has been accepted for many years”. Briefer sections review the breeding system, interspecific hybridization, and types of evidences available to evaluate the species. Information, usually in sufficient detail, is given on chemical criteria, chromosome numbers, and the more traditional morphological features. These data are then summarized in a section on the various taxonomic characters used in distinguishing the species and how they should be arranged into groups. Rollins and Shaw recognize ten “groups” of species, but present no formal recognition of these at any taxonomic rank.

The taxonomic section accounts for sixty-nine species—all restricted to North America except one, *Lesquerella alpina*, a polar taxon. The keys are most useful and I found only Key III difficult to use, this being due to the large number of species included within it and the complexity of the members.

The descriptions are by Shaw and are generally of sufficient detail to allow confirmation of any collection. Unfortunately, the auriculate-leaved species, which were treated in detail by Rollins in the 1950s, are only briefly treated so that one must have at hand several papers to supplement the present book for a complete understanding of these eastern United States species. The habitat and distribution data are limited to a few terse comments, but supplemented by a list of representative specimens and dot maps. What is particularly painful to me in this part of the text is the lack of full and detailed discussions about each species. Having talked with Rollins on numerous occasions about *Lesquerella*, I know he has a keen insight into these plants, but this simply is not transferred to the printed page so that much of what he knows now will go unrecorded.

The maps are clear and easy to follow (although not to find), while the plates usually leave one wishing there were more! Some of the species have photographs of the general aspect of the plant with a poor (usually fuzzy) picture of the trichomes added. However, not all species are represented, and the few excellent line drawings present only serve to tease the reader. It is too bad that the authors couldn't have found some means of having each species fully illustrated and the photographs ignored entirely.

What is most strange about this publication is the format and layout. I talked with Rollins on this matter to discover who was responsible for it—it was not Rollins or Shaw. It is so curious that one wonders where to start. The first four pages are largely (and in one case totally) blank, but then so is the top quarter of



nearly every page! It was beyond me why this was done, so I asked and was informed that it was an experiment by the press. Great! All I could think was why didn't the press let Rollins discuss the species in more detail and fill the pages up? Then the pages in my copy are cut so that the text is crooked on most pages—but I forgot to ask if this was part of the experiment too.

The strangest part of the experiment was to avoid putting the left margin flush with the column on the species descriptions and the representative specimens sections. This makes the pages look thoroughly unprofessional and sloppy. These portions of the text are distinct enough to most taxonomists, and if "eye-catchers" were needed, titles in bold-face type would have worked much better. For my part, the experiment should be written off as a total failure, and the press urged to return to the usual means of presenting taxonomic work.

And then there is the index. Or perhaps I should say, there is a section called "Index" but any resemblance with one is difficult to discover. Normally, one uses an index to find items not usually found in a table of contents—such as synonyms. Frankly, I could care less that the description of *Lesquerella alpina* is on pages 179–180, and the key to the subspecies is on page 180. What I really wanted to find was whatever happened to *L. subumbellata* Rollins? You hunt for it and you'll find it (eventually) on page 182 right under *L. alpina* var. *laevis* (Payson) C. L. Hitchc., which isn't indexed either. An index to the names would have been much more useful than the one presented.

In short, what Rollins and Shaw have done is excellent and enjoyable. What the press did with their years of hard work and research is a crime.—JAMES L. REVEAL, Department of Botany, University of Maryland, College Park 20742.

*Alaska trees and shrubs.* By LESLIE A. VIERICK and ELBERT L. LITTLE, JR. 265 pp., 128 figs., 128 maps, color vegetation map in pocket. U. S. D. A. Agricultural Handbook 410. 1972. \$3.25. Available from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

This successor to *Pocket guide to Alaska trees* (Taylor and Little, 1950, USDA Handbook 5) is a much expanded and more useful work. As the title proclaims, all of the woody plants of Alaska are included, not just those species attaining the stature of trees, as in the earlier guide. The authors have divided the labor by life-forms, Little treating trees and Viereck shrubs. This has resulted in some anomalous treatments, such as Little's treatment of *Populus balsamifera* L. (Balsam Poplar) and *P. trichocarpa* Torr. and Gray (Black Cottonwood). Following extensive fieldwork in southern Alaska, Viereck reported in an earlier paper (Viereck and Foote, 1970, *Canad. Field-Naturalist* 84:169–173) that he agreed with the conclusion of Brayshaw (1965, *Canad. Field-Naturalist* 79:91–95) and Hultén (1968, *Ark. Bot.* 7:36–37), based upon the behavior of the two largely allopatric taxa in their region of sympatry in northwestern North America, that the two were conspecific, though to be recognized as subspecies. Little, who follows throughout the nomenclatural orthodoxies of his *Check list of native and naturalized trees of the United States (including Alaska)* (Little, 1953, USDA Handbook 41), takes no notice of these conclusions (despite the inclusion of two of the three cited papers in the bibliography), maintains the specific status of the two taxa, and merely remarks that the two intergrade or hybridize extensively wherever they come in contact. Aside from a very few such taxonomic quibbles, the species treatments seem quite sound. In addition to all of the data included in the "pocket guide", which are repeated here, the treatments of trees include much that is new, the remarks going far beyond the contents of the previous guide. The discussion of



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