

## BOOK REVIEW (MULTI-VOLUME TITLE)

KELLY W. ALLRED. 2020. **Flora Neomexicana I: Annotated Checklist, 3rd edition.** (ISBN-13: 979-8652307523, pbk). Published by the author. (Orders: [www.lulu.com](http://www.lulu.com)). \$20.00 US, 612 pp., 6" × 9".

KELLY W. ALLRED. 2020. **Flora Neomexicana II: Glossarium Nominum, A Lexicon of New Mexico Plant Names, 3rd edition.** (ISBN-13: 979-8651684618, pbk). Published by the author. (Orders: [www.lulu.com](http://www.lulu.com)). \$15.00 US, 167 pp., 6" × 9".

KELLY W. ALLRED AND EUGENE M. JERCINOVIC, ILLUSTRATED BY ROBERT DEWITT IVEY. 2020. **Flora Neomexicana III: An Illustrated Identification Manual, part 1, 2nd edition.** (ISBN-13: not given, pbk). Published by the author. (Orders: [www.lulu.com](http://www.lulu.com)). \$20.00 US, 290 pp., maps, illustrations, 8½" × 11".

KELLY W. ALLRED AND EUGENE M. JERCINOVIC, ILLUSTRATED BY ROBERT DEWITT IVEY. 2020. **Flora Neomexicana III: An Illustrated Identification Manual, part 2, 2nd edition.** (ISBN-13: not given, pbk). Published by the author. (Orders: [www.lulu.com](http://www.lulu.com)). \$50.00 US, 799 pp., maps, illustrations, 8½" × 11".

KELLY W. ALLRED AND EUGENE M. JERCINOVIC. 2020. **Flora Neomexicana IIIa: Field Keys, 2nd edition.** (ISBN-13: 979-8652294076, pbk). Published by the author. (Orders: [www.lulu.com](http://www.lulu.com)). \$25.00 US, 399 pp., 6" × 9".

The recently updated and expanded *Flora Neomexicana* from Kelly Allred, Eugene Jercinovic, and collaborators is all you really need in order to identify plants in the wild in New Mexico. The set of five volumes is a splendid and comprehensive flora, covering all 3817 species (4184 total taxa) known for the state. The project is led by Allred, a specialist in *Aristida*, *Bothriochloa*, and other grasses, an expert on southwestern vascular plants and mosses, and an independent-minded researcher and scholar. The list of collaborators includes regional experts such as Patrick Alexander, Max Licher, Timothy Lowrey, Glenn Rink, and Robert Sivinski. This publication is a major contribution to botanical knowledge in the Southwestern U.S. and a must-have for New Mexico botanists, researchers, and plant lovers as well as those in nearby Arizona, Colorado, Sonora, and Texas.

The *Annotated Checklist* lists current names, synonyms and earlier nomenclature, and common names for all New Mexico plants, along with an introduction to the state's climate, geology, soils, ecoregions, vegetation, botanical history, and endemic plants. It also gives an overview of exotic plants (525 species, 14% of the total flora), including noxious weeds.

The *Glossarium Nominum* gives the derivation and meaning of all genus, species, and infraspecific taxon names in the flora. Allred's years of original research in etymology and botanical history make this lexicon an extremely thorough sourcebook. For lovers of both words and plants, it is a treat to learn that *Echinopepon* means "spiny melon," *Erodium* means "heron" (referring to the carpel shape), *Myosurus* means "mouse-tail," *nummularia* means "money-like" (referring to round leaves), *pterocarpa* means "winged fruit," *quercifolia* means "oak-leaved," *repens* means "creeping," and *Sarcomphalus* means "fleshy stone." In addition, there are biographical details about such notable botanists as Edward Palmer (e.g., *Agave palmeri*) and Sara Plummer Lemmon (e.g., *Ipomoea plummerae*).

The revised and expanded *Illustrated Identification Manual*, now more than 1080 pages, is published in two parts: Part 1 covers ferns and fern allies, gymnosperms, and monocotyledonous plants; Part 2 covers dicotyledonous plants. New for this edition—and immensely welcome—are botanical descriptions of every family, genus, and species occurring in the wild (and some cultivated species that might escape) in New Mexico, along with user-friendly but effective identification keys, habitat notes, and maps of distribution by county. Line drawings by Robert DeWitt Ivey are included for nearly 1600 species. The volume of information packed into these two books is remarkable, though the small print might be a challenge for some readers. *Flora Neomexicana* is specimen-based: species reported for New Mexico but not confirmed by specimens (e.g., *Phlox tenuifolia*) are noted as doubtful, and selected species from neighboring regions that might be found in the state

(continued on p. 350)

## BOOK REVIEW (MULTI-VOLUME TITLE)

(continued from p. 348)

(e.g., *Heteropogon melanocarpus*, *Salvia arizonica*) are included in keys but excluded from descriptions and species counts. The abbreviated *Field Keys* contains all identification keys plus brief habitat and county occurrence notes; descriptions, illustrations, and maps are omitted to make this a packable, portable volume.

Updated taxonomy is incorporated throughout the new *Flora Neomexicana*. Family designations generally follow the Angiosperm Phylogeny Group (APG III, IV; Stevens 2001). Chenopodiaceae is included in Amaranthaceae, Asclepiadaceae is included in Apocynaceae, and Sterculiaceae is included in Malvaceae. Some Boraginales taxa formerly combined in Boraginaceae are treated in Ehretiaceae, Heliotropiaceae, Hydrophyllaceae, and Namaceae. But Allred, always an independent thinker, deviates from APG for several monocot genera often placed in Amaryllidaceae and Asparagaceae. Citing Judd et al. (2016), he maintains Agavaceae for *Agave*, *Yucca*, and others; *Allium* and *Nothoscordum* are treated in Alliaceae; and Rusaceae is used for *Dasyllirion*, *Nolina*, and others. Genus and species updates include the following: *Cheilanthes* ferns (the majority of North American species, including those in New Mexico) are moved to genus *Myriopteris*. The key to *Leptochloa* also directs the user to *Dinebra*, *Diplachne*, and *Disakisperma*. *Funastrum hartwegii* (the narrow-leaved taxon, sometimes treated as *Sarcostemma cynanchoides* var. *hartwegii*) is now correctly *F. heterophyllum*. *Chamaesyce* species are treated in *Euphorbia*. Native *Lotus* species are now in *Acmispon*. New World *Orobanche* species have moved to *Aphyllon*, following a forthcoming treatment for Flora of North America. Some *Polygala* species are moved to *Euploca*. The native *Ziziphus obtusifolius* is now *Sarcomphalus obtusifolius*. Botany marches on!

The website <https://floraneomexicana.org> provides additional information about the books, prices and purchasing, errata, and links to other resources for New Mexico botany.—Susan D. Carnahan and Richard S. Felger, Associated Researchers, University of Arizona Herbarium, Tucson, Arizona, U.S.A.

## REFERENCES

- JUDD, W.S., C.S. CAMPBELL, E.A. KELLOGG, P.F. STEVENS, & M.J. DONOGHUE. 2016. *Plant Systematics: A Phylogenetic Approach*, 4th edition. Sinauer, Sunderland, Massachusetts, U.S.A.
- STEVENS, P.F. 2001 onwards. Angiosperm Phylogeny Website. Version 14, July 2017 [and more or less continuously updated since]. <http://www.mobot.org/MOBOT/research/APweb>