Book Reviews

An Illustrated Guide to Pruning, 3rd ed.

Edward F. Gilman. 2012. Delmar, Cengage Learning, Clifton Park, NY. 476 pages incl. appendices, glossary, index, full-color photographs, and illustrations. \$129.95, Softcover. ISBN-13: 978-1-111-30730-1.

"Pruning is both an art and a science" is an adage that appears in a multitude of print and electronic publications. However, proper pruning—artistic expression coupled with research-based techniques—needs to be practiced more widely in nurseries, landscapes, and streetscapes. In fact, a prevailing idea (especially among the nescient) is that if you can afford a pair of loppers or a chainsaw, you know how to prune shrubs and trees properly. Sadly, we know that concept is not true.

Pruning is a skill that requires knowledge and practice. Happily, Gilman hit a grand slam with his 3rd edition of *An Illustrated Guide to Pruning*. Comprised of 18 chapters, nine appendices, a glossary, and 115 references, *An Illustrated Guide to Pruning* is, in my opinion, the pruning bible for nurserymen, horticulturists, and arborists.

The first four chapters provide introductory information: pruning objectives and strategies; ways to minimize pruning needs with appropriate plant selection, placement, and management; and understanding the impacts of pruning on shrub and tree biology and health.

Chapters 5 through 7 define and explain the implications of three pruning cuts—reduction, heading, and removal cuts, various types of pruning tools that range from shears to chainsaws, and timing—knowing when to prune fruit and ornamental trees from the nursery to the landscape.

Nurserymen will be interested in chapters 8 and 9, which address nursery tree production strategies to develop quality trees with dominant leaders, well-spaced lateral branches, well-tapered trunks, and a uniform crown.

To satisfy the artful aspects of pruning, Gilman devotes Chapter 10 to developing an espalier, pollarding, and other forms of "architectural pruning."

Chapters 11 and 12 address the crux of *An Illustrated Guide to Pruning*—structural pruning. For years Dr. Gilman has written and spoken about the importance of structural or formative pruning to eliminate defects (such as codominant stems, low-growing branches), to increase the life span of a tree, and to reduce potential of a tree to harm people and property. For individuals who interact with trees from the nursery to the landscape, these two chapters address the concepts and practices involved in developing a tree with a strong architectural framework comprised of a dominant leader and well-spaced, supportive scaffold limbs.

In the remaining chapters of the book, Gilman discusses approaches for pruning

established, mature, and storm-damaged trees, provides detailed instructions for pruning specific trees that include crape myrtles, conifers, palms, and cycads, and offers techniques for pruning shrubs. Chapter 16, "Root Pruning and Management," canvasses the scientific literature and introduces the reader to our current understanding of root growth and the effects of root pruning on regrowth in the nursery, at planting, and in the landscape environment. Typical of all of the chapters, Gilman deftly weaves the scientific literature into practitioner-friendly prose that enlightens and empowers the reader to employ the right techniques.

A feature that raises the bar for currently available or impending pruning publications is Gilman's use of more than 500 full-color photographs and illustrations that allow readers to visualize pruning techniques, terms, and concepts. In some of his illustrations Gilman simplifies his "how to" instructions by using red-colored branches to denote limbs that need to be removed. This clever use of color to teach readers how to make proper cuts reminds me of Ernie Christ's 1975 Rutgers Cooperative Extension Bulletin (377-A): "How to prune young and bearing apple trees." This simple use of color engages our visual senses and enhances the process of learning how to prune properly.

The following nine appendices round-out this instructional manual: Nonconiferous trees requiring only moderate pruning to develop reasonably good structure; Trees often grown successfully with a multileader or multitrunk habit; Trees suited for training into a standard; Plants suited for espalier training; Sample pruning specifications; A schedule for training shade trees in the urban landscape ("Trees are like children; they require about 25 years of training to create good, solid structure that will last them a lifetime"); Nursery production protocol for upright trees; Trees that often form multiple trunks; and Handy cue cards for using in the field (which can also be downloaded at www.urbantree.org).

While this book appears to be aimed at professional nurserymen, arborists, and horticulturists, Gilman broadens its appeal to students. At the beginning of every chapter is a list of objectives and key words that are boldfaced and defined in the chapter. Gilman concludes every chapter with the following three sections: "Check Your Knowledge" multiple choice questions; a cognitive "Challenge Question" that asks the reader to discuss a particular concept or technique; and "Suggested Exercises" that engage the student in an experiential learning activity.

An Illustrated Guide to Pruning can be used as a reference or as a companion textbook for teaching nursery production and arboriculture courses. Very simply, it is a must-have book for anyone interested in learning or teaching the art and science of pruning.

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Dirr's Encyclopedia of Trees & Shrubs.

Michael A. Dirr. 2011. Timber Press, Portland, OR. 951 p., incl. indices (botanical and common names). \$79.95 hardcover. ISBN-978-0-88192-901-0.

At first glance, I suspected that the publisher grafted Dirr's *Hardy Trees and Shrubs* (1997) with Dirr's *Trees and Shrubs for Warm Climates* (2002) to create Dirr's *Encyclopedia*. I was mistaken. The copy on the back cover accurately states that the *Encyclopedia* combines "two classic and best-selling books under one cover, fully updated with hundreds of new plants, photographs, and commentary in Dirr's signature style."

The author made wholesale changes to the text and fortified it with higher quality photographs than in his two earlier books. Also, Dirr updated the botanical names (thankfully he included their synonyms), a taxonomic necessity that chafes horticulturists, especially students studying plant materials.

The layout of the *Encyclopedia* is identical to Dirr's *Hardy* and *Warm Climates* books with an A to Z arrangement of taxa from *Abelia* to *Ziziphus jujube*. Dirr writes each entry in an authoritative but conversational tone. The author succinctly discusses the overall appearance and use of a species, its height and width, identification features, such as leaf size and color, and ornamental attributes, such as fall leaf color, flowers, and fruits. Dirr also includes the USDA cold hardiness zone (avoiding the a and b designations) and native range. He also lists and briefly describes selected varieties and cultivars.

Thankfully, he avoids a dry encyclopedic approach and retains his signature style that proves to be informative, entertaining, affectionate, reflective, opinionated, and empathetic.

I counted 134 additional taxa that were not included in the *Hardy* or *Warm Climates* books. I was pleased to see *Olea europaea* in the *Encyclopedia* but disappointed that *Citrus* was not included despite the growing trend of cultivating hardy citrus by commercial and residential audiences.

The expertly laid-out photos in the *Encyclopedia* trump the quality of photographs in his earlier books in terms of color and clarity. The wide shots of species and cultivars showcase their form and function in the landscape; the close-ups of leaves, flowers, and fruit beautifully complement the prose.

The photographs are especially important to readers when Dirr describes lesser known, uncommon species that deserve widespread commercial acceptance. His compelling endorsement of obscure species and accompanying comments may lead readers to covet species that include *Diervilla sessilifolia* ("This species will doubtfully make anyone's list of the top 50 flowering shrubs."); *Forestiera acuminata* ("What is it? Who cares? Why is it here?"); and *Picrasma quassiodes* ("Rare. Worthy? I will allow the reader to decide. I have a plantsman's affinity for the species and am at a loss to explain its remoteness in cultivation").

The *Encyclopedia* caters to green industry professionals, particularly landscape designers, landscape architects, grounds managers, and nursery and garden center operators, who will value it as a reference and a teaching and learning tool for their employees and customers. Serious gardeners with a facile use of botanical names also will cherish this book. As an instructor of a landscape plant materials course, I envision the *Encyclopedia* to be a supplement to but not a substitute for the *Manual of Woody Landscape Plants*.

Users of the *Encyclopedia* will enjoy the 28-page section at the end of the “A–Z Encyclopedia of Trees and Shrubs” titled “Selecting Plants for Specific Characteristics or Purposes.” Dirr arranges the taxa in the *Encyclopedia* into the following 15 categories: flower color; flowering sequence; fragrant flowers; fruit color; fall color; winter interest; shade tolerance; salt tolerance; tolerance to moist or wet soils; tolerance to dry soils; street and urban planting; hedging; evergreens for specimens; grouping; screens and groves; weeping or fastigiata/columnar habit; and

vines for flowers, fruit and fall color. The reader can refer to any of these lists to select appropriate plants for particular purposes and designs and then refer to the A–Z directory for more information.

For its informative and engaging prose interspersed with more than 3,500 photographs, the *Encyclopedia* has earned a spot on my desk.

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Corrigendum

In the article titled “Organic Soil Amendment and Tillage Affect Soil Quality and Plant Performance in Simulated Residential Landscapes,” by S. Loper, A.L. Shober, C. Wiese, G.C. Denny, C.D. Stanley, and E.F. Gilman [HortScience 45(10):1522–1528; January 2010], there were a few errors in the values listed in the Abstract (p. 1522) and in the Materials and Methods section (p. 1523, second column, middle paragraph):

In the abstract:

1. “Composted dairy manure solids were applied as an organic soil amendment at a depth of 5 cm ($\approx 256 \text{ Mg}\cdot\text{ha}^{-1}$)” The value $256 \text{ Mg}\cdot\text{ha}^{-1}$ should be $25.6 \text{ Mg}\cdot\text{ha}^{-1}$.

In the Materials and Methods:

2. “Composted dairy manure solids (compost; Agrigry, Palm Harbor, FL) were applied

as an organic soil amendment at a rate of $508 \text{ m}^3\cdot\text{ha}^{-1}$ (5-cm depth, equaling $\approx 256 \text{ Mg}\cdot\text{ha}^{-1}$)” The value $508 \text{ m}^3\cdot\text{ha}^{-1}$ should be $50.8 \text{ m}^3\cdot\text{ha}^{-1}$ and the value $256 \text{ Mg}\cdot\text{ha}^{-1}$ should be $25.6 \text{ Mg}\cdot\text{ha}^{-1}$.

3. “Plots that received compost applications received total N and EPA 3050 digestible P at a rate of ≈ 3277 and $1385 \text{ kg}\cdot\text{ha}^{-1}$, respectively.” The values 3277 and 1385 $\text{kg}\cdot\text{ha}^{-1}$ should be 327.7 and 138.5 $\text{kg}\cdot\text{ha}^{-1}$, respectively.