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Book Review

O'Brien, D.D., and G.W. Hudler. 2011. ***Features from the Past for the Future. Branching Out: An Integrated Pest Management Newsletter for Trees and Shrubs.*** Department of Plant Pathology and Plant-Microbe Biology, Cornell University, Ithaca, New York, U.S. 296 pp. Technical Publication-2012-001.

Intended for technical practitioners whom are concerned with the management of ornamental trees and shrubs (i.e., arborists, urban foresters, and green industry professionals), *Features from the Past for the Future* is a compilation of 18 years of feature articles appearing in the ever-popular newsletter produced by Cornell University, *Branching Out: An Integrated Pest Management Newsletter for Trees and Shrubs*. As an extensively developed technical publication, this 296-page spiral-bound resource is informative, enlightening, and practical. Through years of careful observation and experience, O'Brien and Hudler earned their positions as two of the foremost authorities on pest management in ornamental landscapes. This publication leverages their experience and perspective to help Plant Health Care professionals manage existing pest-related outbreaks.

Formatted out in a user-friendly manner and with an easy-to-read table of contents, this book quickly sets the tone behind the authors' motives to create a resource that synthesizes the feature articles from *Branching Out*, as well as provides references for further information, notably in two internationally renowned texts, also produced by Cornell University: *Insects that Feel on Trees and Shrubs (second edition)* by W.T. Johnson and H.H. Lyon, and *Diseases of Trees and Shrubs (second edition)* by W.A. Sinclair, H.H. Lyon, and W.T. Johnson. A description of the 50°F threshold as being the basis for Growing Degree Day (GDD) calculations is also outlined early in the text, as GDDs are generally considered a reliable environmental marker relative to pest development throughout the growing season. The authors also take the opportunity to let the reader know that the pesticide recommendations that would normally found in *Branching Out* articles have been removed (as pesticide labels and regulations may vary from region to region, and even change).

The book is divided into three practical sections with further subdivisions: Insects (and other arthropods), Diseases, and Management.

Insects are initially discussed under the heading Host Specific Pests, and some of the most well-known (and timely) insects are highlighted in this section, including emerald ash borer (*Agrilus planipennis*), birch leafminer (*Agrilus planipennis*), bronze birch borer (*Agrilus anxius*), hemlock woolly adelgid (*Adelges tsugae*), and viburnum leaf beetle (*Pyrrhalta viburni*). The pests under the General Interest heading include well-known actors, like ambrosia beetles (*Xylosandrus* spp.), Asian longhorned beetle (*Anaplophora glabripennis*), black vine weevil (*Otiorhynchus sulcatus*), and white pine weevil (*Pissodes strobi*), as well as sawflies, scales, and a well-known arthropod pest, spruce spider mite (*Oligonchus ununguis*).

Host Specific Diseases include beech bark disease (*Nectria* spp.), bleeding cankers on European beech (*Phytophthora* spp.) and horsechestnut (*Pseudomonas* sp.), oak wilt (*Ceratocystis fagacearum*), and thousand cankers (*Geosmithia morbida*). Diseases of General Interest detailed *Armillaria* root rot (*Armillaria* spp.), bacterial leaf scorch (*Xylella fastidiosa*), and a plethora of general canker diseases (e.g., *Botryosphaeria* spp., *Eutypella* spp., *Nectria* spp., *Cytospora* spp.), needle rusts (e.g., *Coleosporium* spp., *Pucciniastrum* spp., *Uredinopsis* spp., *Milesina* spp.), cedar rusts (*Gymnosporangium* spp.), and the much talked about generalist-pathogen, *Verticillium* wilt (*Verticillium dahliae*). This section, no doubt of particular interest to commercial arborists/community foresters concerned with urban risk tree issues, closes with a Top 8—a list of wood decay fungi, complete with excellent color photos and succinct descriptions for easy identification.

The Management section of this compilation covers little-discussed topics pertaining to ornamental landscape pest management, including the use of alternative insecticides, organic products, how to attract natural enemies, and the use of biocontrols, like nematodes. Of particular use to any reader would be the "commonly observed beneficial insects" write-up, which also includes 18 color photos of known beneficials, like the assassin bug (Family: Reduviidae), damsel bug (Family: Nabidae), flower fly (Family: Syrphidae), minute pirate bug (Family: Anthocoridae), lacewing (Family: Chrysopidae), and spined soldier bug (Family: Pentatomidae), among others. This resource facilitates the quick ID of any of these insects that practitioners would naturally want to conserve and encourage on landscapes. Additionally, the section on insect traps details traps available for purchase and set-up. The inherent variability in ornamental landscapes may make trapping insects much more difficult than in traditional field crops settings or greenhouses that are more uniform in nature; practitioners should take note, however, that some clientele may be willing to pay for a pest trapping program to avoid a conventional pesticide application.

The final pages of the book are dedicated to miscellaneous plant-health-related problems. And although these scenarios may not garner the glam and fame associated with insects or diseases of intrigue, they often comprise a majority of plant-related samples that a given diagnostic lab may receive. Thus, the book's contributions to discussion of environmental stress, soil compaction, and site assessment by renowned researchers, like Dr. Nina Bassuk, make this guide all the more valuable and practical for the end user. Information about abiotic conditions, like herbicide injury (with numerous high-quality specimen photos), and discussion about plant-related the problems that ensue as a result of drought conditions, as well as problems that result in association with improper mulching, are of great importance. Finally, any individuals who have interacted with plant or soil lab diagnosticians or who have been on the receiving end of the sample submission process can appreciate just how important, and even limiting, a sample can be if it is not properly taken, packaged for transport, and delivered in a timely manner. *Features from the Past for the Future* addresses this by clearly outlining how to produce high-quality photographs of insects and diseases to submit for diagnosis.

In summary, this extensive compilation represents an important step in addressing the key need of enabling practitioners to have an arm's-length resource that will help them formulate answers to important and sometimes complex questions, aiding them in making informed decisions about pest management strategies. Differing from traditional fact sheets or whitepapers, the diverse array of contributing authors includes on-campus researchers and field-based extension specialists who are able to do more than simply illustrate pests and detail their life cycles—these contributing authors have the freedom to develop the IPM concepts that are the foundation of the management strategies of the many pests outlined in this book.

In addition to formal research conclusions, the authors also identify their personal, experientially-based findings, and how these might contribute to potential pest management recommendations. The book is filled with high-quality photos with helpful captions, and titles depicting pests and plant–problem scenarios. *Features from the Past for the Future* will make an excellent addition to the library of any professional with urban or ornamental Plant Health Care interests.

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