



Book Review

Gangloff-Kaufmann, J.L. 2011. *Wasp and Bee Management: A Common-Sense Approach*. Natural Resource, Agriculture, and Engineering Service (NRAES). Cornell University, Ithaca, New York, U.S. 88 pp. ISBN 978-1-933395-22-7

Intended for a broad audience, this guide is an informative, enlightening, and practical resource. Composed by one of the foremost authorities in the field of structural/urban pest management, the guidelines and recommendations in this book offer tremendous application to help reduce the risks associated with the inevitable human–stinging insect conflict that will arise for many, including arborists.

Laid out in a user-friendly manner, this book is divided into two sections: the first chapter, titled “Bees and Wasps,” and the second chapter, titled “Common Wasps and Bees of the Northeastern United States.” Chapter 1 outlines the hands-on strategies involved in a successful stinging-insect management program in the “human environment” (p. vii), and chapter two examines the successful identification and natural history of species of importance from the stinging-insect community.

From the preliminary stages of this book, the author gives voice to what is probably one of the most important issues concerning stinging insects: human allergic reactions to stings. The author clearly makes the point that a “relatively small number” (p. 1) of wasps and bees pose actual risks to humans, and that certain population levels of stinging insects should be tolerated, since they perform important environmental functions. The guide is quick to define, advocate, and establish protocols pertaining to the use of a sustainable, holistic, integrated pest management (IPM) approach. For example, the author presents accepted, published action thresholds that are relative to population levels of specific types of stinging insects, including honey bees (*Apis mellifera mellifera*), bumble bees (*Bombus* spp.), and yellow jackets (*Vespula* spp.). Cultural

management options (e.g., removal of food sources or harborage) are emphasized, as is the judicious use of minimal amounts of least-toxic insecticides.

Continuing through the first chapter of the book, detailed regular assessment (i.e., inspection and monitoring) guidelines are outlined pertaining to the most common types of stinging-insect pests: paper wasps (*Polistes* spp.), yellow jackets, and bald-faced hornets (*Dolichovespula maculata*). Frequently, shrubs are used in landscape settings as habitat for nest construction by stinging insects such as bald-faced hornets. Potential conflicts with this insect for arborists and landscape professionals, especially when they are pruning or shearing suitable host plant material [e.g., arborvitae (*Thuja occidentalis*), burning bush (*Euonymus alatus*), yew (*Taxus* spp.)], makes awareness for this insect during hot-summer months a priority. The author also makes similar inspection guidelines relative to other lower-risk stinging insects, such as honey bees, bumble bees, and cicada killer wasps (*Sphecius speciosus*).

Other integrated management options of emphasis include preventing the establishment and build up of stinging-insect populations through proper sanitation, food source elimination, nest exclusion/removal, and trapping. The book outlines discussion of the elimination of often overlooked food sources, such as pet food, compost piles, and other protein sources, like dead animals. Sources for wood fiber that may be used in nest construction are also recommended for elimination, including dead trees, wood chips, and dead limbs. For members of the arboriculture community, knowing this additional benefit about common practices, like dead-wooding and removals/take-downs of dying or dead trees, may be of particular interest.

Sometimes, practices employed to detect and remove stinging-insect nests from structures include the use of sensitive sound-detection equipment (e.g., a stethoscope) to detect feeding vibrations or buzzing, and thermal imaging to locate stinging-insect

colonies in a structure. Arborists may take note, as these same practices are occasionally employed to detect insect activity and decay in trees. Additionally, the author even includes a cautionary note about the removal of stinging-insect nests when working from heights with a ladder. Arborists are more than familiar with the risks associated with the use of ladders and the care that must be taken. Once detected, nest removal using mechanical means (e.g., insect-specific commercial vacuums) and exclusion through void sealing are outlined in detail.

Arborists who offer landscape pest management services may be familiar with the use of traps for pest emergence timing and possibly even pest population reduction. From proper trap construction and placement, to specified baiting instructions, *Wasp and Bee Management: A Common-Sense Approach* details the use of select trapping strategies that include the use of food-based attractants as a pesticide-free means of temporarily reducing numbers of select stinging insects.

There are no specific pesticide recommendations in this book; however, the author does share best management practices relative to a last-resort, chemical-based approach to the treatment of a stinging-insect-related issue. These include the use of personal protective equipment (PPE), timing strategies regarding the treatment of stinging-insect nests (e.g., may be most effective if carried out in the cool of night), and even proper use of certain chemical formulations (e.g., the use of dusts for the treatment of cavities or the use of long-distance aerosol-based sprays for the treatment of stinging-insect nests at a greater distance). Nicely wrapping up the stinging-insect portion of this guide is a seasonal IPM “checklist,” detailing stinging-insect monitoring and prevention strategies.

The risks and concerns about stinging insect conflicts are further noted in the final pages of Chapter 1. Injury and even death as a result of a sting are discussed, as is the fact that while most people have been stung, many individuals remain woefully unaware of their true sensitivity to a sting. Important first-aid information, in response to single-sting or multiple-sting incidents, includes the use of cold compresses, oral/topical antihistamine treatments, and the assistance of medical professionals. Although only a small number of people are identified as being highly allergic to a sting (approximately 2 out of every 1000, accord-

ing to this guide), anaphylactic shock and even death are discussed as possible outcomes that may occur in a relatively short period (15–30 minutes). Appropriately, the final page of this chapter is a two-sided stinging-insect prevention/first-aid summary.

Chapter 2 of this guide regards the identification and natural history of wasps and bees common to the northeastern United States. After highlighting the benefits of stinging insects (e.g., they are important predators of pests; they pollinate more than one-third of food crops at an annual value estimated to be upwards of USD \$15 billion), the book then delves into the specific identification of more than 20 groups and/or species of stinging insects. Some of these include yellow jackets, paper wasps, bald-faced hornets, honey bees, the Africanized honey bee (*Apis mellifera scutellata*), bumble bees, and carpenter bees (*Xylocopa virginica*). A color-coded risk-rating system and color photographs are used to help the reader more readily visualize and identify the stinging insect(s) in question. The final pages of this chapter comprise a chart that offers a useful “quick identification of wasps and bees” and their associated sting-risk level.

In summary, this guide represents a needed step toward addressing the current information shortage and lack of awareness of the risks associated with human–stinging insect conflicts for members of the arboriculture community. *Wasp and Bee Management: A Common-Sense Approach* spurs questions and thought about applications that translate directly to arboriculture, especially to arborists that offer a landscape IPM service. These applications include the emphasis of safe work practices and the commitment to both ongoing innovation and authentic practice of holistic pest management. For arborists in communities across the United States where the use of pesticides is strongly discouraged, selecting a commercial pest vacuum, instead of using a more traditional see-it and spray-it approach, may prove the smarter alternative, given the information in this guide. Conflicts between humans and stinging insects can be properly addressed, minimizing pain and suffering, and even possibly saving a life.

Reviewed by:
Richard W. Harper
Department of Environmental Conservation
University of Massachusetts
Amherst, Massachusetts, U.S.
rharper@eco.umass.edu