

Book Review

Chris Alice Kratzer [Author, Illustrator]. 2022. *The Social Wasps of North America*. Owlfly Publishing, Frenchtown, New Jersey, USA. 424 pp. with 900 full color illustrations. ISBN 978-1-7378927-0-0. USD \$24.99 (softback).

The first thing you will notice about this book is how big and heavy it is for a field guide. It starts with a humorous introduction on how to not get stung by wasps and quickly dives into the ecology, evolution, and taxonomy of social wasps.

The introduction has scientific diagrams that are easy to understand and contain a great deal of information at the college level. The anatomy diagrams are very detailed and go above and beyond what you would find in a common general entomology field guide. These first sections also contain numerous photographs of wasps taken in the field displaying interesting behaviors, disease symptoms, and interactions with other organisms. The introductory section ends with a nice tutorial on how to use the guide including how to read the maps, which are packed with information, symbols for sexes and castes, and how to visualize the color variations of wasps, also known as forms.

The field guide portion covers 208 species of social wasps in North America spanning 22 genera. Each species has a dedicated page, with a range map, detailed, colored digital illustration of the species, a description of identifying characteristics, distinctive habits, nesting biology, and how likely you are to see it in the field and be able to correctly identify it. The book is organized into groups including hornets and yellow jackets, paper wasps, hilted wasps, honey wasps, cushion wasps, and other smaller groups. The guide does a great job at noting different color patterns within a species due to caste system and sex. It also includes the different regional color forms for species such as paper wasps and yellow jackets, with an impressive 62 species and forms of paper wasps described!

This guide checks most of the boxes for an informative and visually appealing book on an interesting group of insects. However, due to its size, level of detail, and organization, it would be the perfect companion for someone who enjoys identifying wasps from photographs or dead specimens while eating pizza and ice cream on a Friday or Saturday night. I would buy this book since those are my kind of nights. It is less ideal for someone out in the field trying to identify wasps on the fly. It would be difficult to use the guide for identification purposes in the field since it does not organize the wasps according to visual characteristics such as color or size or according to region. In general,

it lacks the natural intuition other field guides have that allows for easy navigation.

The strengths and weaknesses of this guide lie in the amount of information it contains. The illustration of the wasps can be disorienting if you don't read the introduction on how to interpret the visualizations and symbols. Confusion also can arise due to the words chosen to describe color variation. For example, the word leucistic is used to describe a form that has more white markings.

Nonetheless, this guide has the potential to contribute to scientific studies. I would even go as far as to say that this guide could be used to identify collected specimens for a biodiversity survey. While it is not a dichotomous key, for some groups, the descriptions are impressively detailed and with explicit comparison to similar-looking species. I believe this guide is a big step up from the general *Field Guide to Insects of North America*, which has been used in previously published biodiversity surveys.

It is remarkable how much effort the author put into the color pattern variation within a species, or forms. While forms are considered by some as arbitrary and without taxonomic significance, they can lead to improper identification and differentiation if you don't have access to an entomological collection, cannot find a mentor to check your work, or don't have hundreds of spare hours to painstakingly look at specimens. There are few taxonomists in the world (even fewer that specialize in wasps), and very few collections that have dedicated staff to show novice wasp enthusiasts around. This guide has brought the collection and mentor to you!

In conclusion, this guide may be perfect for the insect macro photographer, professional or semi-professional doing a wasp survey, or wasp enthusiast with some level of background knowledge. It may be overwhelming and not ideally organized for a novice in the field. I give this guide a 4 out of 5.

Shiala M. Naranjo and Rachel E. Mallinger
Entomology and Nematology Department
University of Florida
Gainesville, Florida, USA
E-mail: shialamorales@ufl.edu (S. M. N.),
rachel.mallinger@ufl.edu (R. E. M.)