



PACKER L. 2023: BEES OF THE WORLD. A GUIDE TO EVERY FAMILY. Princeton University Press, Princeton, NJ, 240 pp. ISBN 9780691226620. Price USD 29.95 / GBP 25.00.

Laurence Packer is a professor at York University (Canada) and a well-known melittologist who specialises in the systematics of wild bees. He teaches bee identification courses around the world and has described dozens of new bee species during his career. The book *“Bees of the World – A Guide to Every Family”* (Fig. 1) is another volume in the successful Princeton book series *“A Guide to Every Family”*. It contains an “Introduction” followed by seven chapters introducing seven bee families: *“Melittidae”*, *“Andrenidae”*, *“Halictidae”*, *“Stenotritidae”*, *“Colletidae”*, *“Megachilidae”* and *“Apidae”*. The overview of families is followed by *“Glossary”*, *“Further reading and useful resources”* and *“Index”*. The book contains over 200 illustrations (incl. photographs) and over 100 maps.

The *“Introduction”* is divided into eight subchapters (*“What are bees”*, *“Bee anatomy”*, *“Bee Classification”*, *“Bee-nesting biology”*, *“The bee life cycle”*, *“Bee Food and Pollination”*, *“Social bees”*, *“Enemies”*, *“How to help bees”*) and contains information on various topics such as the evolutionary origin of bees, bee di-

versity and the global importance of bees. The entire chapter is well written and I must say that even a professional entomologist may find some of the information helpful.

The systematic part of the book, *“Bee Families”*, describes 106 genera in seven bee families and covers all known bee tribes. Each chapter begins with a general description of the discussed bee family, with information on its diversity, biology and morphology. Each genus is processed into a card containing a general introduction and information on its distribution (incl. distribution map), habitats and characteristics (see Fig. 2). All information is complemented by high quality and incredible photos of various representatives of the genus, mostly photographed in their natural habitats, feeding, nesting, etc.

Overall, *Bees of the World – A Guide to Every Family* is an excellent publication, suitable not only for the general public and hobby enthusiasts, but also for students, conservationists and even professional entomologists. I am pleasantly surprised by the quality of the book. Of course, this is not a book at the level of an

NOMADINAE: MELECTINI **THYREUS**

BELOW | Some people call *Thyreus* neon cuckoo bees because of the bright blue hairs that often adorn their bodies as shown in this image. However, some are largely covered in snow-white pubescence.

This is a genus of relatively large, handsome cuckoo bees, often with large patches of white to brilliant blue and occasionally purple appressed hairs on the mesosoma and especially the metasoma. These bright colors give them their common name of neon cuckoo bees. Identification keys to the species are difficult to use because they require distinguishing numerous shades of blue and careful assessment of the shape and size of the hair patches. Unfortunately, bee hairs get paler and sparser as the insect ages. There are more than 100 described species, from throughout Africa, Asia, and Australia, and much of Europe except the colder areas. They attack nests of the bee genus *Amegilla* (page 178) and, as with other Melectini, break open the completed cells of their ground-nesting hosts and lay their eggs inside before rescaling them with moist soil.



GENUS <i>Thyreus</i>	CHARACTERISTICS <ul style="list-style-type: none">• Cuckoo Apidae• Apex of midtibial spur lacking teeth• Flabellum not divided• Scutellum developed as a flat plate that extends posteriorly, its posterior margin concave• Marginal cell rounded, not, or scarcely, extending beyond submarginal cells
DISTRIBUTION Throughout Africa, Asia (including many tropical islands), southern Europe, and mainland Australia	
HABITAT Diverse, arid scrub to wet forests where host species are common	

184 Apidae

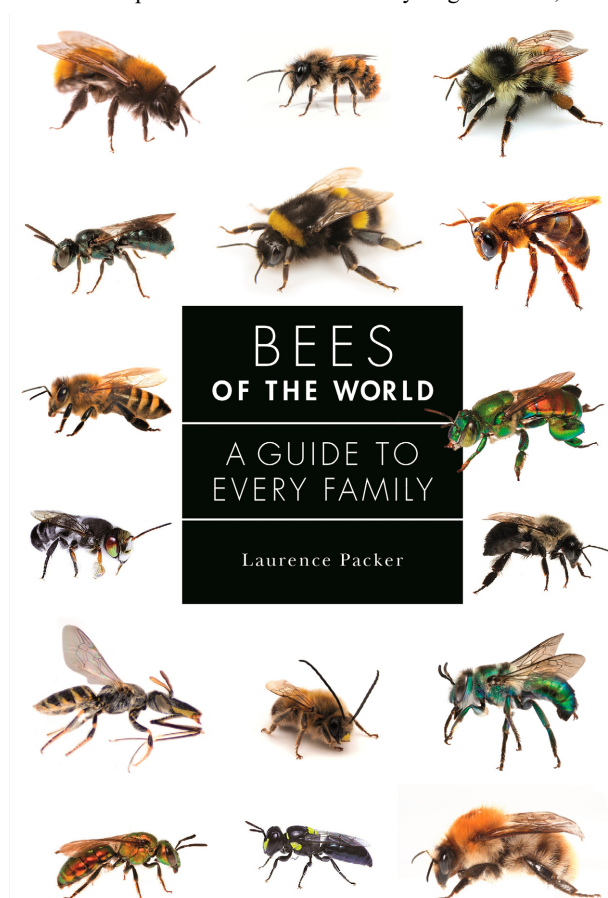


Fig. 1. The book cover (from Packer, 2023).

Fig. 2. The genus card of *Thyreus* Panzer, 1806 (from Packer, 2023).

identification guide, but even with the amount of information and photographs provided by the author, this book goes far beyond the typical coffee table genre. I also like the selection of genera in each family. The author has really focused on the largest, most common and most important genera, so the book will not disappoint readers in Europe or North America.

To summarise, the book has outstanding content at a very reasonable price for a printed hardcopy and should not be missing from any entomological, pollinator conservation or beekeeping library.

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