



## The COLOSS *BEEBOOK* – Volume III, Part 1: Standard methods for *Apis mellifera* product research

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## EDITORIAL

### The COLOSS BEEBOOK – Volume III, Part I: Standard methods for *Apis mellifera* product research

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#### Introduction

The COLOSS (Prevention of Honey Bee Colony Losses) network was founded in 2008 as a consequence of the heavy and frequent losses of honey bee colonies experienced in many regions of the world (Neumann & Carreck, 2010). The network has many accomplishments, with the COLOSS BEEBOOK being among those. The COLOSS BEEBOOK was developed to provide honey bee scientists a single reference where standard research methods related to various honey bee-related topics were available and promoted. The first two volumes of the COLOSS BEEBOOK were published in 2013 and focused on honey bee (Volume I) and honey bee pest/pathogen (Volume II) research methodologies. In keeping with this tradition, we are happy to announce that COLOSS BEEBOOK Volume III will be published in two special issues of JAR, one in 2019 and the final in 2020. The COLOSS BEEBOOK Volume III is a practical manual compiling standard methods for research on *Apis mellifera* hive products.

#### Motivation for the COLOSS BEEBOOK

As many of the world's honey bee research teams began to address elevated colony loss rates in various areas globally, it quickly became obvious that a lack of standardized research methods was seriously hindering scientists' ability to compare and interpret the results on colony losses obtained internationally. In its second year of activity, during a COLOSS meeting held in Bern, Switzerland, the idea of a manual of standardized honey bee research methods emerged. The manual, to be called the COLOSS BEEBOOK, was inspired by publications with similar purpose for fruit fly research (Ashburner, 1989; Greenspan, 2004; Roberts, 1987). Production of the BEEBOOK started after recruiting experts to lead the compilation of each research domain. These senior authors (first in the author list) were tasked with recruiting a suitable team of contributors to select the methods to be used as standards and

then to report them in a user-friendly manner (Williams, Dietemann, Ellis, Neumann, 2013). The initial BEEBOOK project was planned to contain three volumes. This special issue contains the first series of articles of the COLOSS BEEBOOK Volume III: Standard methods for *Apis mellifera* product research.

#### Overview of Volume III

Volume III of the COLOSS BEEBOOK contains papers on royal jelly, beeswax, propolis and brood as human food (Part I), honey, pollen and venom (Part II). These seven papers have been written by 125 authors representing 23 countries. The papers will be published in two special issues of the *Journal of Apicultural Research*, one in the present special issue (part I) and the second in 2020 (part II).

Like in the previous volumes, papers in the Volume III are organized according to research topics. The authors have compiled the most relevant methods in each domain of research. These methods are for both laboratory and field research. We recognize that it is often necessary to use methods from several domains of research to complete a given experiment with honey bees. Whenever there is a need for multi-disciplinary approach, the manual describes the specific instructions necessary for a given method, and cross-references all general methods from other sections of the BEEBOOK.

The BEEBOOK is a tool for all who want to do research on honey bees. It was written in such a way that those new to honey bee research can use it to start research in a field with which they may not be familiar. Of course, such an endeavor is often limited by the availability of complex and expensive machinery. However, provided access and training on the necessary equipment are secured, the instructions provided in the BEEBOOK can be followed by everyone, from undergraduate student to experienced researcher. All details on how to implement instructions are given.

The editors and author team hope that the *BEEBOOK* will serve as a reference tool for honey bee and other researchers globally. As with the original *Drosophila* book that evolved into a journal where updates and new methods are published, we hope that the honey bee research community will embrace this tool and work to improve it.

The papers from the first two volumes of the COLOSS *BEEBOOK* have been downloaded over 50,000 times and cited close to a thousand times. Citations are beginning to appear in a large percentage of manuscripts published on honey bee-related topics. We feel that this resource has been a powerful tool for scientists at every level, from student to professor, from around the globe. We have no doubt the Volume III will have a similar impact.

### Acknowledgements

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