

Contents

Part I Origin, Biodiversity and Behavior of the Stingless Bees (Meliponini)

1 The Meliponini	3
Charles D. Michener	
2 Historical Biogeography of the Meliponini (Hymenoptera, Apidae, Apinae) of the Neotropical Region	19
João Maria Franco de Camargo [†] and Patricia Vit	
3 Australian Stingless Bees.....	35
Megan Halcroft, Robert Spooner-Hart, and Anne Dollin	
4 Stingless Bees from Venezuela	73
Silvia R.M. Pedro and João Maria Franco de Camargo	
5 Stingless Bees (Hymenoptera: Apoidea: Meliponini) of French Guiana	87
Alain Pauly, Silvia R.M. Pedro, Claus Rasmussen, and David W. Roubik	
6 Stingless Bees of Guatemala.....	99
Carmen Lucía Yurrita Obiols and Mabel Vásquez	
7 Stingless Bees of Costa Rica.....	113
Ingrid Aguilar, Eduardo Herrera, and Gabriel Zamora	
8 Stingless Bees in Argentina	125
Arturo Roig-Alsina, Favio Gerardo Vossler, and Gerardo Pablo Gennari	
9 Mexican Stingless Bees (Hymenoptera: Apidae): Diversity, Distribution, and Indigenous Knowledge	135
Ricardo Ayala, Victor H. Gonzalez, and Michael S. Engel	

10	The Role of Useful Microorganisms to Stingless Bees and Stingless Beekeeping.....	153
	Cristiano Menezes, Ayrton Vollet-Neto, Felipe Andrés Felipe León Contrera, Giorgio Cristino Venturieri, and Vera Lucia Imperatriz-Fonseca	
11	Microorganisms Associated with Stingless Bees	173
	Paula B. Morais, Paula S. São Thiago Calaça, and Carlos Augusto Rosa	
12	Stingless Bee Food Location Communication: From the Flowers to the Honey Pots	187
	Daniel Sánchez and Rémy Vandame	
13	On the Diversity of Foraging-Related Traits in Stingless Bees	201
	Michael Hrnčir and Camila Maia-Silva	
 Part II Stingless Bees in Culture, Traditions and Environment		
14	Stingless Bees: A Historical Perspective.....	219
	Richard Jones	
15	Medicinal Uses of <i>Melipona beecheii</i> Honey, by the Ancient Maya	229
	Genoveva R. Ocampo Rosales	
16	Staden's First Report in 1557 on the Collection of Stingless Bee Honey by Indians in Brazil.....	241
	Wolf Engels	
17	Melipona Bees in the Scientific World: Western Cultural Views.....	247
	Raquel Barceló Quintal and David W. Roubik	
18	Taxonomy as a Tool for Conservation of African Stingless Bees and Their Honey.....	261
	Connal Eardley and Peter Kwapong	
19	Effects of Human Disturbance and Habitat Fragmentation on Stingless Bees.....	269
	Virginia Meléndez Ramírez, Laura Meneses Calvillo, and Peter G. Kevan	
 Part III What Plants Are Used by the Stingless Bees?		
20	Palynology Serving the Stingless Bees.....	285
	Ortrud Monika Barth	
21	How to Be a Bee-Botanist Using Pollen Spectra	295
	David W. Roubik and Jorge Enrique Moreno Patiño	

22	Important Bee Plants for African and Other Stingless Bees.....	315
	Robert Kajobe	
23	Botanical Origin of Pot-Honey from <i>Tetragonisca angustula</i> Latreille in Colombia.....	337
	Diana Obregón, Ángela Rodríguez-C, Fermín J. Chamorro, and Guiomar Nates-Parra	

Part IV Sensory Attributes and Composition of Pot-Honey

24	Sensory Evaluation of Stingless Bee Pot-Honey.....	349
	Rosires Deliza and Patricia Vit	
25	<i>Melipona favosa</i> Pot-Honey from Venezuela	363
	Patricia Vit	
26	<i>Tetragonisca angustula</i> Pot-Honey Compared to <i>Apis mellifera</i> Honey from Brazil.....	375
	Ligia Bicudo de Almeida-Muradian	
27	Honey of Colombian Stingless Bees: Nutritional Characteristics and Physicochemical Quality Indicators	383
	Carlos Alberto Fuenmayor, Amanda Consuelo Díaz-Moreno, Carlos Mario Zuluaga-Domínguez, and Martha Cecilia Quicazán	
28	The Pot-Honey of Guatemalan Bees	395
	María José Dardón, Carlos Maldonado-Aguilera, and Eunice Enríquez	
29	Pot-Honey of Six Meliponines from Amboró National Park, Bolivia.....	409
	Urbelinda Ferrufino and Patricia Vit	
30	An Electronic Nose and Physicochemical Analysis to Differentiate Colombian Stingless Bee Pot-Honey	417
	Carlos Mario Zuluaga-Domínguez, Amanda Consuelo Díaz-Moreno, Carlos Alberto Fuenmayor, and Martha Cecilia Quicazán	
31	Nuclear Magnetic Resonance as a Method to Predict the Geographical and Entomological Origin of Pot-Honey	429
	Elisabetta Schievano, Stefano Mammi, and Ileana Menegazzo	
32	Nonaromatic Organic Acids of Honey.....	447
	María Teresa Sancho, Inés Mato, José F. Huidobro, Miguel Angel Fernández-Muiño, and Ana Pascual-Maté	

Part V Biological Properties

33	Flavonoids in Stingless-Bee and Honey-Bee Honey.....	461
	Francisco A. Tomás-Barberán, Pilar Truchado, and Federico Ferreres	

34	Antioxidant Activity of Pot-Honey	475
	Antonio Jesús Rodríguez-Malaver	
35	Use of Honey in Cancer Prevention and Therapy.....	481
	Patricia Vit, Jun Qing Yu, and Fazlul Huq	
36	Bioactivity of Honey and Propolis of <i>Tetragonula laeviceps</i> in Thailand.....	495
	Chanpen Chanchao	
37	Costa Rican Pot-Honey: Its Medicinal Use and Antibacterial Effect	507
	Gabriel Zamora, María Laura Arias, Ingrid Aguilar, and Eduardo Umaña	
38	Immunological Properties of Bee Products	513
	José Angel Cova	
39	Chemical Properties of Propolis Collected by Stingless Bees	525
	Omur Gençay Çelemlı	
 Part VI Marketing and Standards of Pot-Honey		
40	Production and Marketing of Pot-Honey	541
	Rogério Marcos de Oliveira Alves	
Appendix A	Taxonomic Index of Bees.....	557
Appendix B	List of Bee Taxa.....	569
Appendix C	Common Names of Stingless Bees.....	581
Appendix D	Taxonomic Index of Plant Families.....	585
Appendix E	List of Plant Taxa Used by Bees	595
Appendix F	Common Names of Plants Used for Nesting by Stingless Bees.....	613
Appendix G	Common Names of Medicinal Plants Used with Honey by Mayas	615
Appendix H	Microorganisms Associated to Stingless Bees or Used to Test Antimicrobial Activity.....	617
Appendix I	Summary of Meliponine and Apis Honey Composition.....	621
Appendix J	Information of Collected Stingless Bees	625
Index.....		629

Pot-Honey

A legacy of stingless bees

Vit, P.; Pedro, S.R.M.; Roubik, D. (Eds.)

2013, XXI, 697 p. 127 illus., 57 illus. in color., Hardcover

ISBN: 978-1-4614-4959-1