In partnership with

MONITORING HONEY BEE COLONY LOSSES
&
B-RAP

Workshop Proceedings

Toledo, Spain, 4-6 February 2020

B-RAP

Topic

- This B-RAP workshop is focused on the questionnaires, which are conducted by B-RAP to learn about the characteristics of the COLOSS members in regard to dissemination and about the needs of beekeepers for information. We will discuss the results of the COLOSS members questionnaire and finalize the questions of the beekeeper questionnaire. Furthermore we will proceed with our focus on dissemination tools - this time we will discuss the advantages and disadvantages of "social media" and will define solutions for experienced problems with them. As in the last years it will be held in sequence with the Monitoring workshop.

When

- 5th February (half day) – 6th February 2020.

Where

- Escuela de Administración Regional, C/ Río Cabriel, 45007 Toledo, Spain.

2020 B-RAP AGENDA

Wednesday 5th of February 2020	
14:00-14:30	Welcome and B-RAP organisation
14:30-16:00	Final editing of the COLOSS questionnaire for beekeepers
16:00-16:45	Coffee break + poster presentation
16:45-17:15	Final editing of the COLOSS questionnaire for beekeepers
17:15-17:45	Talk M. Kirby: *The Bees as Seeds Experience: Integrated efforts to amplify voices from hive to table to lab.*
17:45-18:00	Wrap-up of the day + Group photo
18:00	Shuttle bus to Toledo
Social Dinner **Restaurant "La Clandestina de las Tendillas" (at 20:30 pm)**	
Thursday 6th of February 2020	
8:30	Shuttle bus to the venue. Same stops
09:00-09:30	Talk M. Doorn: *Salud Apicola 2020 Latino America.*
09:30-10:00	Discussion on the Intercontinental B-RAP cooperation
10:00-11:00	Planning for distribution of the COLOSS questionnaire for beekeepers
11:00-11:30	Coffee/snack break
11:30-13:00	Analysis and interpretation of the COLOSS members questionnaire
13:00-14:00	Lunch
14:00-15:30	Social media: Analyse problems, solutions and further questions
15:30-16:00	Coffee/snack break
16:00-17:00	Further plans and prospects (COST action application,…)
17:00	Shuttle bus to Toledo

ORGANIZER CONTACTS	
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Abstract

B-RAP surveys – aims, status and results

Linde Morawetz[1], Lotta Fabricius Kristansen[2]

[1]Austrian Agency for Health and Food Safety - Department for Apiculture and Bee Protection. [2]The Swedish University of Agricultural Sciences

A central goal of the B-RAP core group is to gather knowledge about the practice and problems of communication between the scientific community and the beekeeping community. To achieve this aim, three questionnaires were conceived at the workshops in Thessaloniki (April 2016) and Bologna (March 2017). The first questionnaire asks beekeepers about their information needs and sources (beekeeper-survey), the second asks the COLOSS-members – that is the honey bee researchers – about their dissemination abilities and practice (COLOSS-survey) and the third one aims to understand the structure of beekeeping education in different countries worldwide (structure-survey).

The COLOSS-survey was conducted in June 2019 and relaunched in October 2019, to increase the answers of COLOSS members from the Americas. It was distributed to the COLOSS members through the COLOSS newsletter and advertised at the COLOSS conference in Montreal in September 2019. During the first phase in June we received 157 answers and during the second phase in October 65 answers (only valid answers and after removing of double answers). The survey participants were from 56 countries, being from 59% of all COLOSS-member countries. Participants were mainly from Europe (50%) and Asia (15%). However, the survey relaunch increased the amount of participants from the Americas considerably: for North-America it changed from 9% to 14% and for South America from 4% to 9% of the total amount of participants. Thus, the relaunch was a success. The participation from Africa (7-8%) and Oceania (3%) stayed constant during the two phases of the survey.

A descriptive analysis of the survey results will be presented to the workshop-members for discussing the main messages of the questionnaire's four sections in small discussion groups: (A) characterization of COLOSS members, (B) contribution to the COLOSS network, (C) dissemination activity, (D) evaluation and improvement of the COLOSS conferences. It is planned to present the main outcomes of the survey at the 16th COLOSS conference in Belgrade and summarize them in a short manuscript.

The beekeeper-survey will be conducted in the year 2020 with the assistance of the monitoring group in translation and distribution of the survey. The current version of

the questionnaire consists of 47 questions divided in three sections: (A) general information about the beekeeper, (B) characterisation of the beekeeper and (C) the beekeeper's information sources. These questions will be discussed critically for a last time focusing on shortening the survey. The structure-survey will be finalized at the next annual workshop in February 2021 and is planned to be conducted in the year 2021.

Abstract

The Bees as Seeds Experience: Integrated efforts to amplify voices from hive to table to lab.

Melanie M. Kirby[1]

[1]Fulbright-National Geographic/Washington State University/Zia Queenbees

The exploration of scientific inquiry and dissemination through experiential online storytelling is a modern method for apicultural communications. It is a newer presentation for a modern world filled with colorful communications and fast-paced information exchange. However, a difference of terminology, a clear division between quantitative and qualitative expression, and a lack of aesthetics creates a disconnect between communication of research and communal understanding. It is this disconnect that has inspired a professional beekeeper and queen breeder to pursue consilience (interdisciplinary) research and digital storytelling as a 2019-2020 Fulbright-National Geographic Fellow. The Fulbright Fellowship was established in 1946 by the United States Bureau of International Educational and Cultural Affairs (ECA). This scholarship program fosters bilateral relationships between citizens and governments to explore international partnerships. The Fulbright-National Geographic Science Storytelling Fellowship is awarded annually to 5 applicants to pursue open research projects that promote research, exploration, and conservation throughout the globe that emphasize science, technology, and storytelling to help protect species-at-risk, better understand human history and culture, and conserve some of our planet's last wild places. One of the five candidates awarded a 2019-2020 Fulbright-National Geographic Storytelling Fellowship is Melanie Margarita Kirby, a professional beekeeper and queen breeder from the southern Rocky Mountain region of New Mexico, USA. For the past 20 years, she has been specializing in survivor stock bee breeding, conscientious rearing protocol, and applied field research through collaborative scientific inquiry. She is also an apiculture extensionist, photo-journalist and ceramicist. Through entomological field research, social science, and historical review of artistic expression, her open research study includes 3 distinct objectives and is titled, "Til Queendom Comes: How the Bees as Seeds Experience unfurls the perfumed stories from the hive mind to collective human consciousness."

1. Scientific: Investigation of mating behavior of *Apis mellifera iberiensis* at various elevations utilizing RFID (radio frequency identification). 2. Traditional: Interviews and field visits with Spanish beekeepers and researchers to share their stories and amplify their voices of resilience and adaptation via a bilingual podcast and blog. 3. Cultural: Exploration of the use of clay in historical apiculture from the cave paintings in Valencia

to the use of clay tube hives and honey vessels. Clay has been used to record stories (pictographs), build homes, store food and save seeds. A review of the uses of clay throughout Spanish apiculture will be explored. Project results are shared online to nurture a better understanding of nature and biology, epigenetics and ecology, and human learning, and biodiversity conservation.

Abstract

Factors affecting well-being of bees and beekeepers in Ukraine and Sweden- a systems analysis

Per Angelstam[1], Mariia Fedoriak[2]

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The desired range and amount of benefits in terms of food, feed, fibre and fuel as well as immaterial values from rural landscapes is increasing. This causes tensions among different users of nature's benefits as well as between rural and urban settings. Coping with this requires empowered and collaborating stakeholders at multiple levels of stewardship. It is therefore crucial to identify map actors, factors and interactions in social-ecological systems at multiple scales. Honey bees are important providers of provisioning ecosystem services (e.g., honey, wax, medicine, pollination, cultural ecosystem services), and beekeeping requires multiple skills and collaborative capacity. The diversity of social-ecological contexts on the European continent offers opportunity for innovative comparative studies of the factors affecting honey bee colony survival, of the benefits of honey bees, and also the role of beekeeping as a social factor that strengthens the opportunity for rural development in general. Focusing on rural-urban gradients in Ukraine and Sweden we used data from focus groups and interviews for an exploratory systems analysis of honey bees and beekeeping. Four main themes emerged, viz.; honey bee ecology (e.g., land use, disease, genetics, climate), honey bee keepers (e.g., personal satisfaction, social capital/local co-operation, income), honey producers (e.g., income, rural jobs), honey business (e.g., fake honey, international trade). The results show that comparative studies that include different social-ecological settings representing the European continent's gradients in landscape history and governance offer unique opportunities to explore factors that beekeepers perceive are affecting the viability of honey bees, bee products and other ecosystem services. Such benefits can be linked to human well-being and rural development in general.

Abstract

Salud Apicola 2020 Latino America

Marnix Doorn[1], Leslie Vallejos[1], Mayda Verde[1], Andrea Sanchez[1], Veronica Olate[2], Rafael Calderon[3], Leonel Perez[4], Calu Cortesa[4]

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World scientific literature highlights the deterioration of health in populations of honey bees (*Apis mellifera*), as the main cause of the decrease of these pollinators in ecosystems, even when there is an increase in the number of hives. Latin America is not exempt from the problem, however the information available on the factors that affect the health of this species in managed production systems is scarce and fragmented. In order to specify the factors involved and their possible relationship with this hypothesis, the health management model followed by Cuba was taken as a reference, proposing the Project "Apicultural Health 2020 LatAm", to be implemented in specific areas of Chile, Colombia, Argentina and Costa Rica. The proposal develops a baseline covering three areas: 1. Surveys collect information on productive and health management; 2. Considering what has been released, train beekeepers to manage their apiaries with better productive and sanitary practices; 3. Create networks to socialise knowledge. Variables related to management practices, hive structure, chemical residue analysis and clinical signs that show loss of health were evaluated. The trainings were adapted to each zone and evaluated through questionnaires. Preliminary results taken in 69 and 77 apiaries / beekeepers from Chile and Colombia respectively will be presented, as well as the relevant aspects of the training given to 169 beekeepers in the two countries worked. In both cases, there is an absence of public policies to reduce health risk and carry out health management with a preventive perspective; deficiencies in the knowledge of the beekeeper, which generate important health gaps; little knowledge transfer from the academy to the productive sector and little support to the sector to preserve health in bee populations. Common recommendations will be provided for both countries.

B-RAP Workshop Summary

Linde Morawetz[1] and Lotta Fabricius Kristansen[2]
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The goals of the workshop were the finalization and planning of the beekeeper-survey and the first interpretation of the COLOSS-member survey.
The beekeeper-survey was streamlined and reduced to the essential points. The now selected questions concentrate on the question areas ‘what channels do beekeepers use to gain information?’ and ‘ what institutions do beekeepers trust?`. It was decided that the beekeeper-survey will be connected to the COLOSS monitoring survey only if the respective country coordinator agrees. For the other participating countries it will be a stand-alone questionnaire, but will also conducted using Lime Survey. It is planned to translate the questionnaire to twelve languages. COLOSS members from four continents agreed to help distributing the questionnaire among the beekeepers from their countries (Europe, North America, South America, Oceania). The survey will be conducted between 1.5.2020 and 15.11.2020, whereas the exact time frame may vary between countries and hemispheres.
A descriptive analysis of the COLOSS-survey results was presented to the workshop-members for discussing the main results of the survey. The groups reached the following conclusions:

- Most COLOSS members characterize themselves as researchers, only few as advisors or veterinarians. They have a strong background in beekeeping and a high self-esteem.
- A high percentage of COLOSS members do not consider themselves as active members and also do not take part in conferences, workshops and COLOSS-connected dissemination.
- Generally, COLOSS members are well educated in the classical dissemination techniques, but lack education in modern techniques such as Social Media or video-skills. At the same time they think that one needs these modern tools to reach the beekeeper community.

It is planned to present the main outcomes of the survey at the 16th COLOSS conference in Belgrade and summarize them in a short manuscript.
Additionally we discussed the topic ‘social media’ in working groups to define the advantages, problems and questions. The discussion contents will be used to offer a social media lecture at one of the next conferences (planned: Belgrade 2020). A short information slot updated the B-RAP members about the COST-action proposal currently worked at and encouraged them to participate in the proposal.