



An alternative way to control matings of honey bee queens for maintaining
quality characteristics -Dr. Fani Hatjina – GREECE 1 / 20



Sharm El Sheikh- EGYPT,

14 December 2017



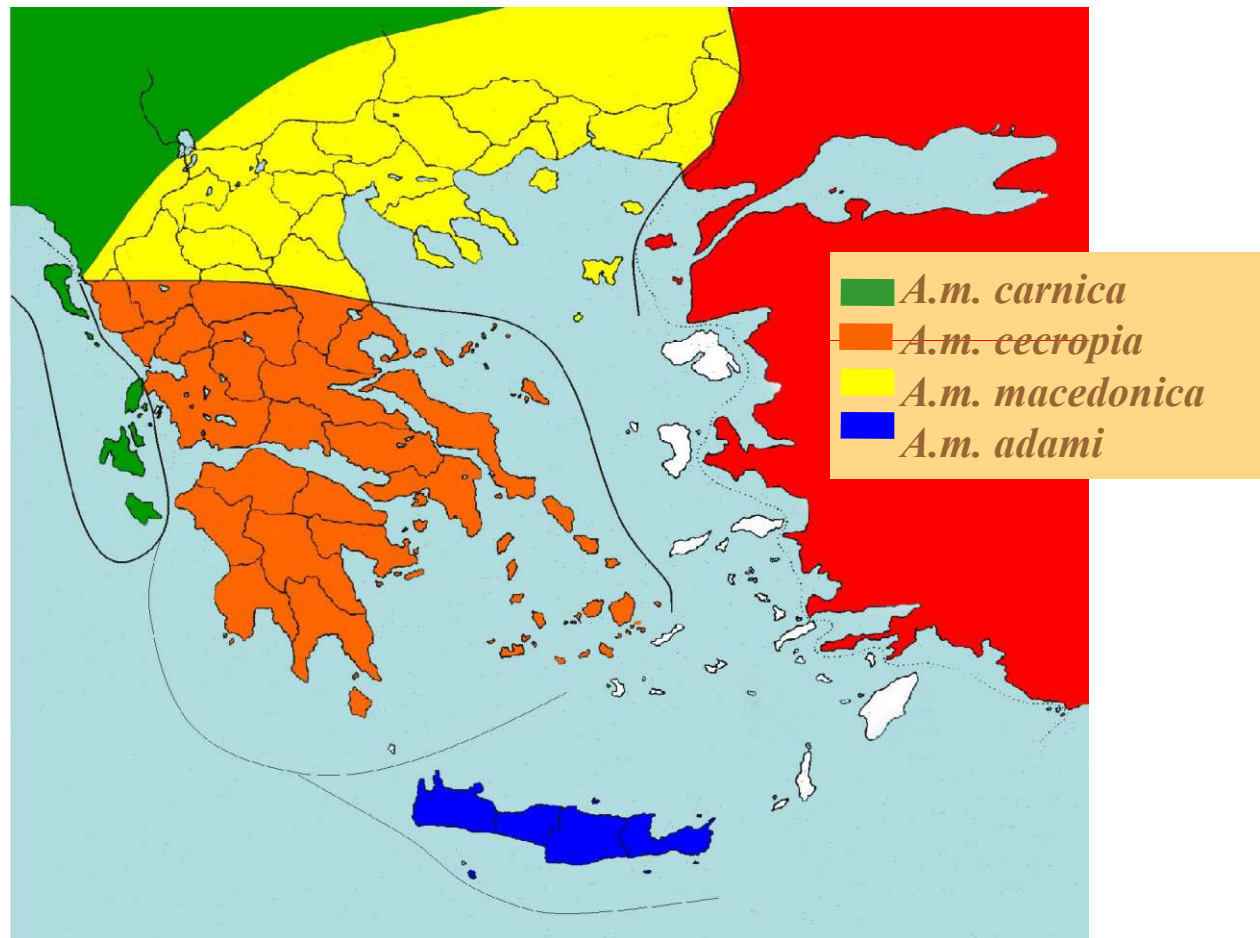
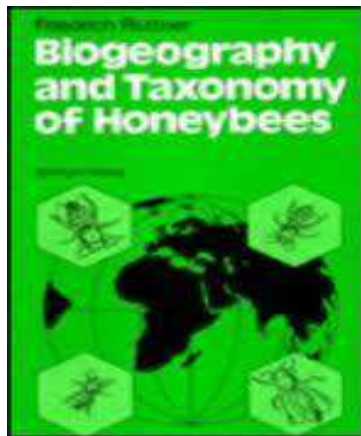
Breeding activities in Greece

- No National program- a private initiation
- A Breeding Association is set up just now
- Production of about 40.000- 50.000 queens for sale
- No quality control of the queens
- No support for the local strains
- Regional and international cooperation through **COLOSS** & **RNSBB**
- Data on adaptation of local strains



Honey bee subspecies in Greece according Ruttner's (1988) morphometrics analysis

Aegean islands:
“Aegean race
near to adami”
(Ruttner, 1988)





Standing Commission of Bee Biology



GENETIC STRUCTURE OF THE BEE FROM CRETE ISLAND (GREECE)

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Abstract

The genetic structure of honey bee populations from different areas of Crete Island (Greece), corresponding to *Apis mellifera* adami, (according to morphometric analysis Ruttner, 1988), were studied by means of RFLP's analysis of two mtDNA gene segments. Sixty samples were studied, taken from different queens. Total DNA was extracted, then 16s rDNA (965 bp) and CO I (1028

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ORIGINAL RESEARCH ARTICLE

Phylogenetic relationships of Greek *Apis mellifera* subspecies based on sequencing of mtDNA segments (COI and ND5)



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Genetic structure of *Apis mellifera macedonica* in the Balkan Peninsula based on microsatellite DNA polymorphism

Aleksandar Uzunov^{1*}, Marina D Meixner², Hrisula Kiprijanovska¹, Sreten Andonov¹, Aleš Gregorc³, Evgeniya Ivanova⁴, Maria Bouga⁵, Petrit Dobi⁶, Ralph B uchler², Roy Francis⁷ and Per Kryger⁷

ORIGINAL RESEARCH ARTICLE



The genetic variability of honey bees from the Southern Balkan Peninsula, based on alloenzymic data

Evgeniya Ivanova^{1*}, Maria Bouga², Teodora Staykova¹, Mica Mladenovic³, Sladjan Rasic³, Leonidas Charistos⁴, Fani Hatjina⁴ and Plamen Petrov⁵

DOI: 10.2478/JAS-2014-0007 J. APIC. SCI. VOL. 58 NO. 1 2014



Original Article

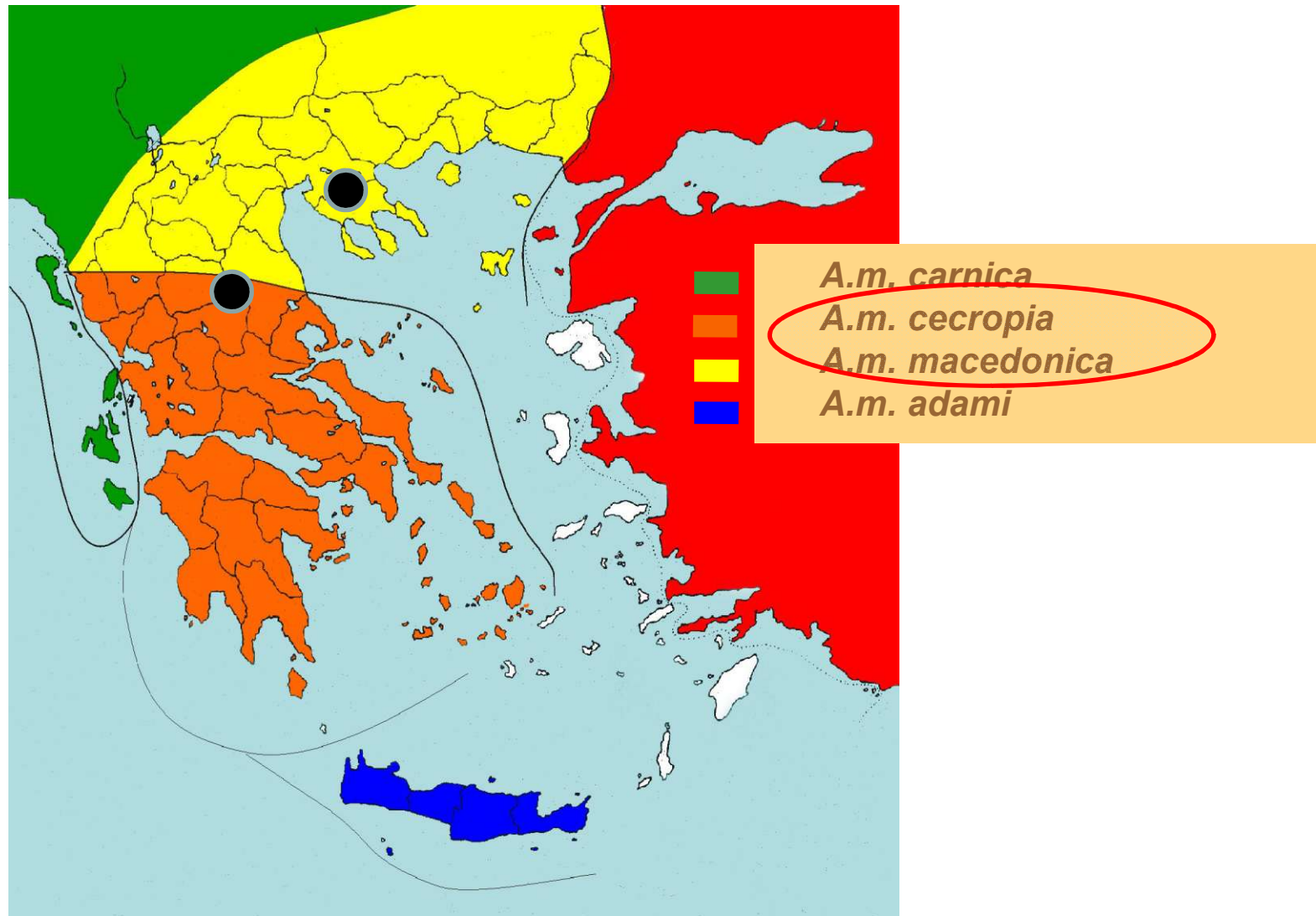
MORPHOLOGICAL DISCRIMINATION OF GREEK HONEY BEE POPULATIONS BASED ON GEOMETRIC MORPHOMETRICS ANALYSIS OF WING SHAPE

Leonidas Charistos¹

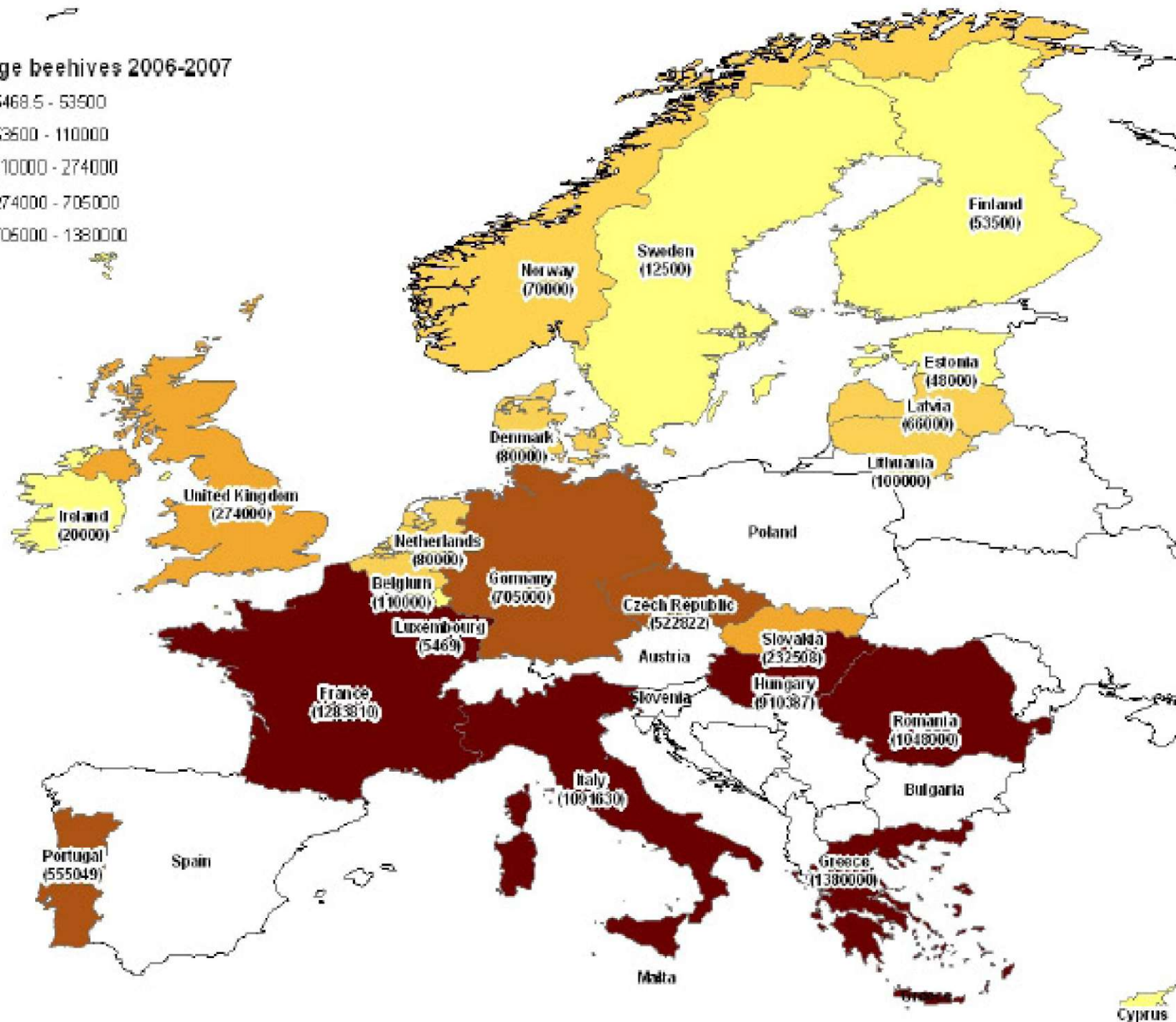
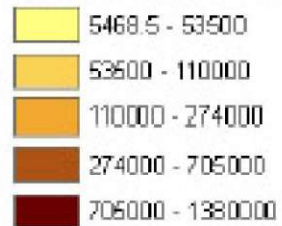
Fani Hatjina^{1*}

Maria Bouga²

Mica Mladenovic³



Average beehives 2006-2007





Project title:

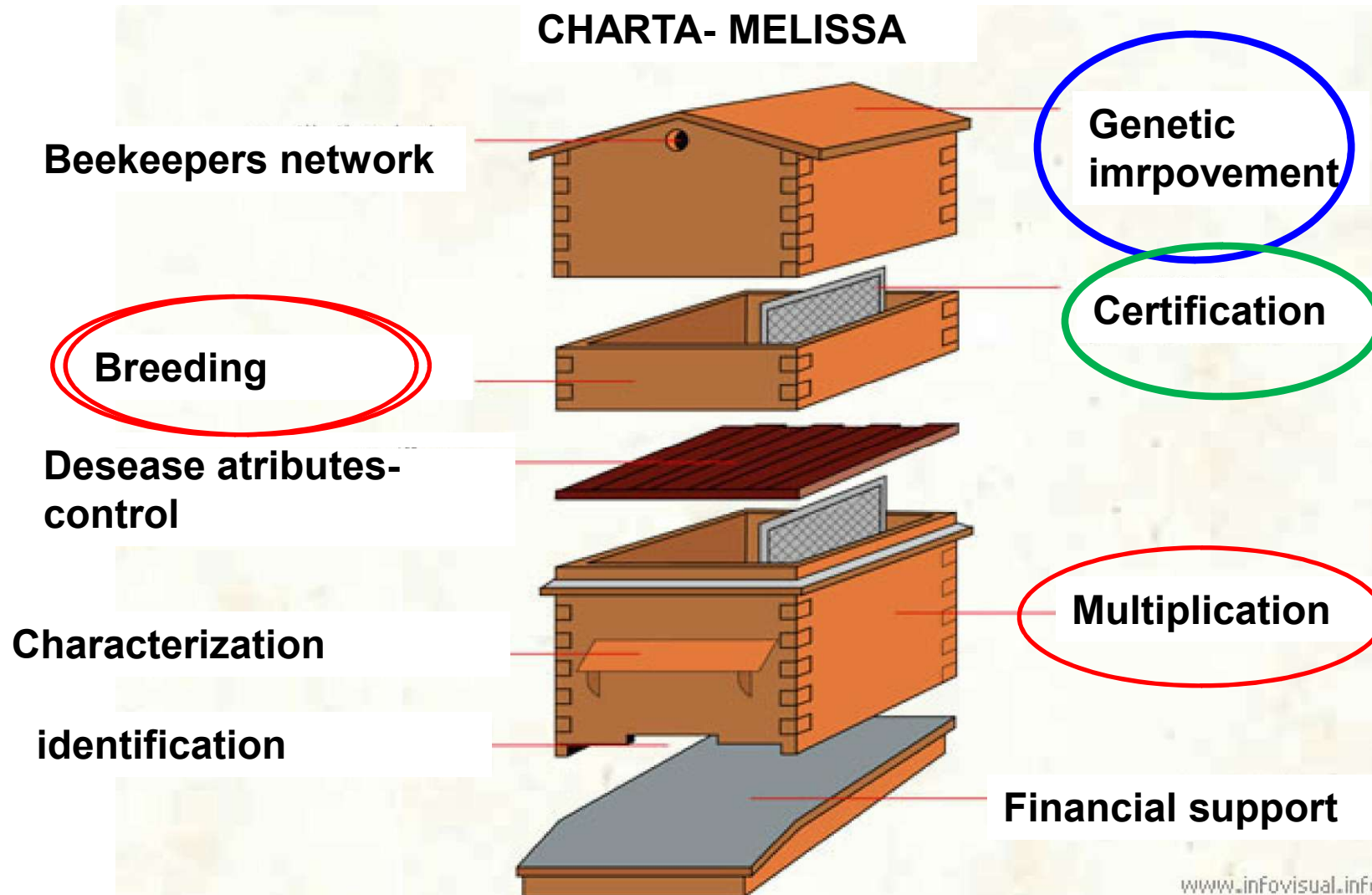
CHARTA MELISSA- Characterization, breeding and conservation of A.m. macedonica, A.m. cecropia and A.m. adami.

Financed under EC Reg. 1234/07
for the years 2014- 2016

Project title:

SMART BEES: Sustainable management of resilient
bee populations

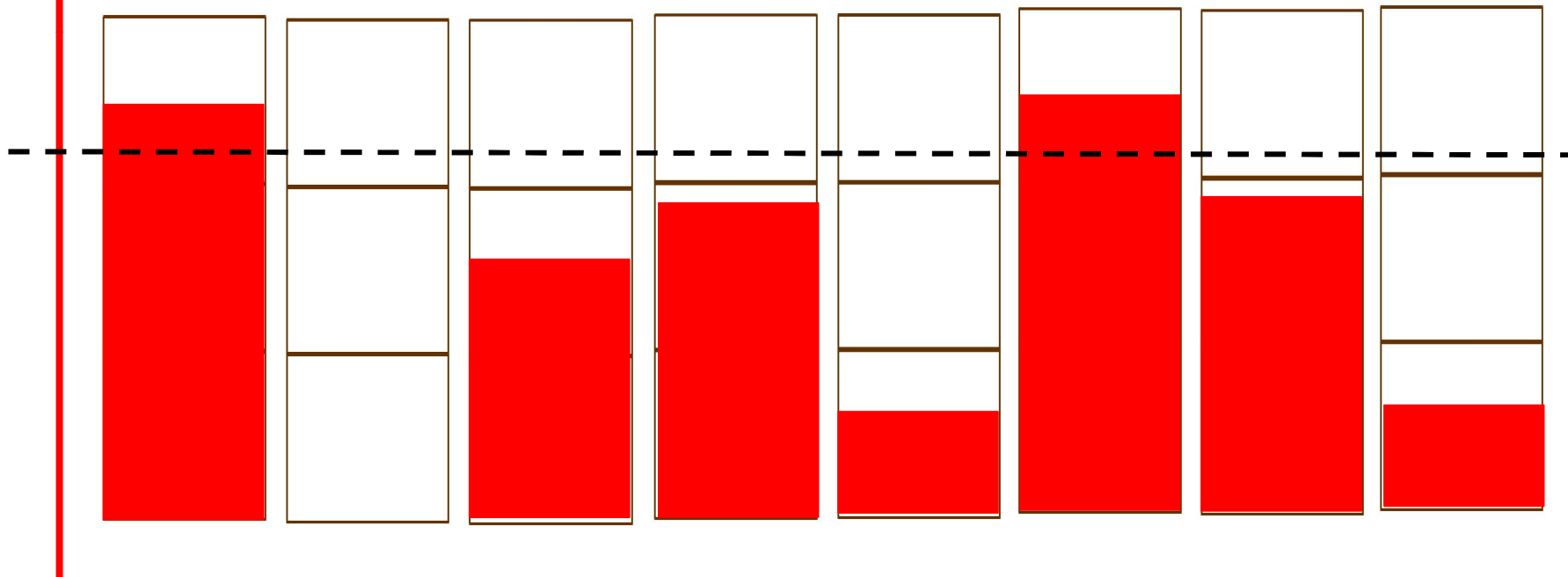
Financed under FP7
for the years 2015- 2018





PERFORMANCE Characteristics

Increase of production: higher than the average





Hygienic behaviour



Lower varroa mite reproduction



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-Dr. Fani Hatjina – GREECE

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The 'Train of virgin queens' (TVQ)

- The method requires a cage, in which the virgin queens kept at a temperature of 14-15 C and in the darkroom,
- The nuclei with the virgin queens are rolling on rails.
- At the afternoon and when all available free drones have returned to their colony a) we release the selected drones and b) we pull over the nuclei with the virgin queens
- Then the nuclei are placed in specific positions and the queens are released for natural flight and mating

More information in :

<https://www.youtube.com/watch?v=V8jXQeScgVg&t=2s>





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QUEENS TESTED 2015-2016

Apiculture Division-Institute of Animal Science
H.A.O. "DEMETER"- Greece



www.hellenic-beereseach.gr

Queen (1a)	Mother queen (2a)	Drone colonies mother (4a)	Testing apiary	TOTAL BREEDING VALUE	Honey yield		Gentleness		Calmness	
					Breeding value	Reliability of b.v.	Breeding value	Reliability of b.v.	Breeding value	Reliability of b.v.
GR-3-1-8-2015	GR-3-1-1-2013	NA	GR-1-1-1-2016	✓ 129	↓ 99	0,01	↑ 110	0,75	↑ 131	0,69
GR-2-3-5-2015	GR-2-1-1-2013	NA	GR-1-3-1-2016	✓ 119	↑ 119	0,56	↑ 106	0,74	↑ 110	0,68
GR-2-3-3-2015	GR-2-1-1-2013	NA	GR-1-3-1-2016	✓ 112	↑ 114	0,56	↓ 89	0,74	↑ 110	0,68
GR-1-2-14-2015	GR-1-1-2-2013	NA	GR-1-2-1-2016	✓ 103	↑ 101	0,01	↑ 109	0,75	→ 100	0,69
GR-1-2-13-2015	GR-1-1-2-2013	NA	GR-1-2-1-2016	✓ 101	↑ 101	0,01	↑ 109	0,75	↓ 93	0,69
GR-2-3-1-2015	GR-2-1-1-2013	NA	GR-1-3-1-2016	✓ 101	→ 100	0,56	↑ 106	0,74	↑ 103	0,68
GR-1-1-11-2015	GR-1-1-1-2013	NA	GR-1-1-1-2016	✗ 95	→ 100	0	↓ 91	0,75	↓ 99	0,69
GR-2-3-2-2015	GR-2-1-1-2013	NA	GR-1-3-1-2016	✗ 95	↓ 87	0,56	↑ 106	0,74	↓ 90	0,68



Thank you for your attention

