

# 2024 GENREGISTRERING KYNDIGE BIAVLERE



# DAGENS PROGRAM

---

Smittespredning og smittehindring  
EU's forordning for dyresundhed

Pause

Meldepligtige skadegørere  
Indsendelse af prøver og data  
EU projekter

# SMITTESPREDNING OG SMITTEHINDRING

---

Hvorfor er dette emne relevant i forhold til biavl ?

- vi kan ikke helbrede sygdomme hos honningbier

Hvilken sygdom tror I er mest udbredt ?

- varroasyge

Hvordan smitter den ?

- det er nok værd at se nærmere på

Ved du nok, til at hindre smittespredning ?

# VARROASYGE SMITTER

Er det er godt eksempel? Typisk eksempel?  
Lad os se hvad faglitteraturen har af viden

*Apidologie* (1990) 21, 547-550  
© Elsevier/INRA/DIB/AGIB

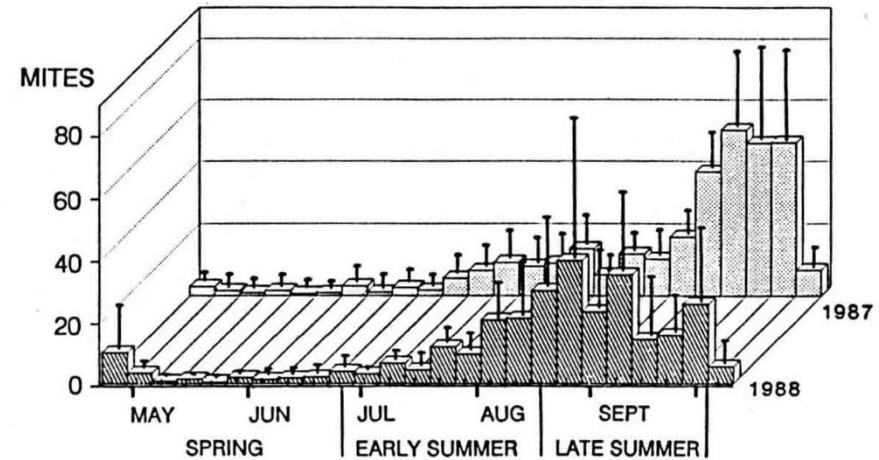
547

Rapid communication

## Seasonality of honey bee colony invasion by *Varroa jacobsoni* Oud

F Sakofski \*, N Koeniger, S Fuchs

Sæsonmæssig invasion af varroa



**Fig 1.** Numbers of *Varroa* mites monitored weekly from April to October during 1987 and 1988. Ab-scissa : time of year. Ordinate : means and standard deviations from all monitor colonies, 1987:  $n = 6$ ; 1988:  $n = 10$ .

[Artiklen](#) er citeret 87 gange ifølge [google.scholar.com](https://scholar.google.com)

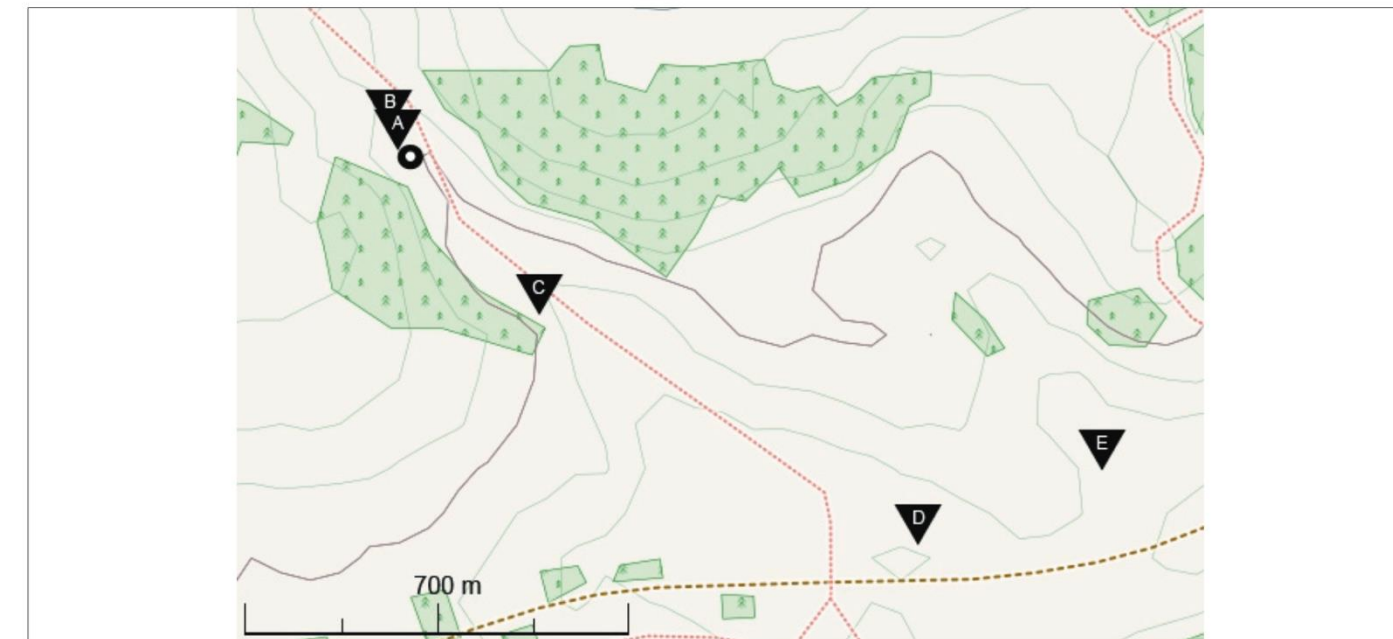
# Invasion of *Varroa destructor* mites into mite-free honey bee colonies under the controlled conditions of a military training area

Invasion af varroa mider ind i midefri bifamilier under kontrollerede forhold på militært øvelsesområde

Eva Frey<sup>1\*</sup>, Hanna Schnell<sup>1</sup> and Peter Rosenkranz<sup>1</sup>

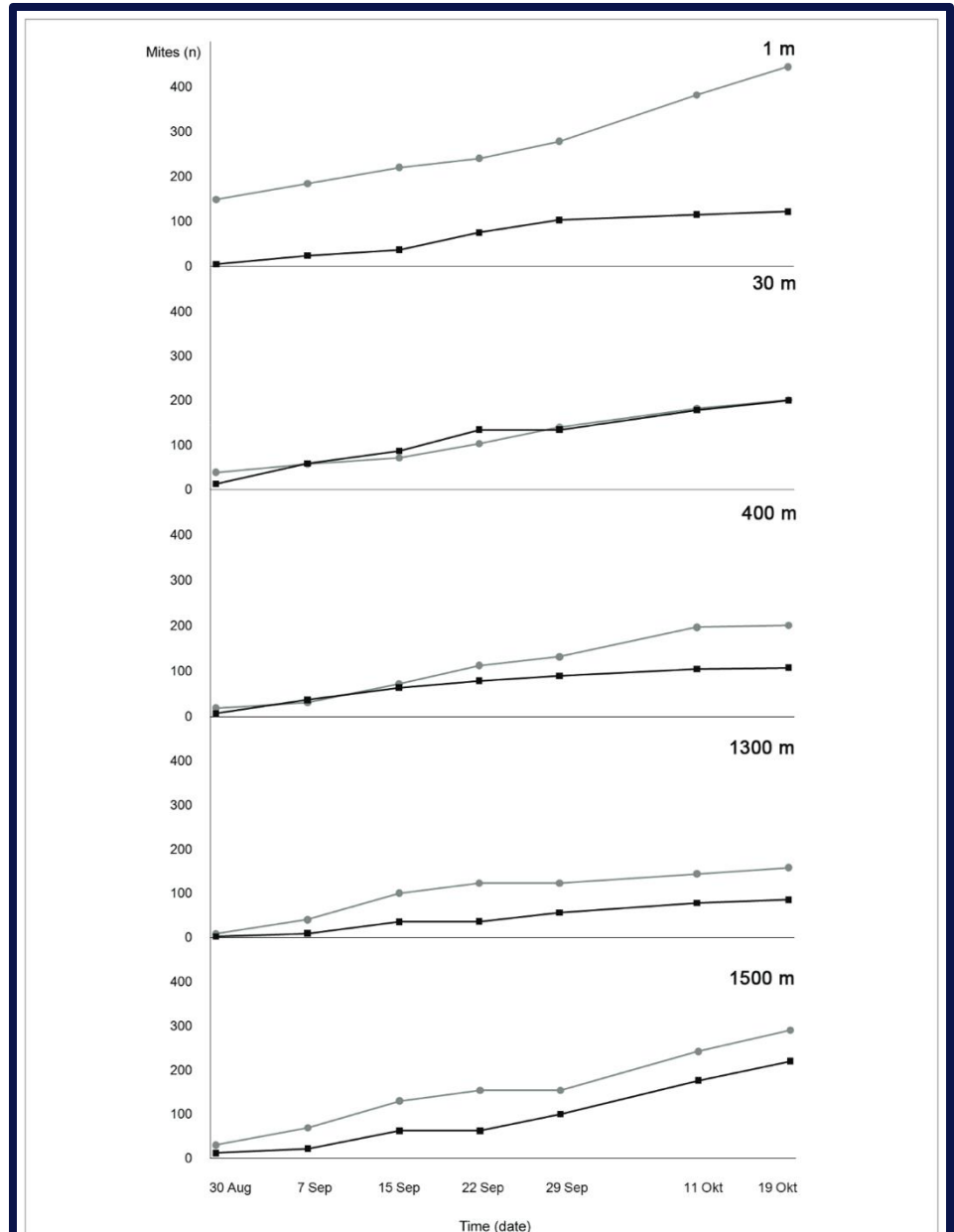
*Journal of Apicultural Research* 50(2): 138-144 (2011)

DOI 10.3896/IBRA.1.50.2.05



**Fig. 1.** Study site at the military base near Münsingen, Swabian Alb and the positioning of the experimental colonies. ○: four mite donor colonies (MDC) heavily infested with *V. destructor*. A – E: Apiaries of the mite receiver colonies (MRC) with different distances to the MDC: A (1 m), B (30 m), C (400 m), D (1,300 m) and E (1,500 m).

Mider spredes effektivt op til 1,5 km, og der er stor forskel på hvor mange mider enkelte stader modtager



**Fig. 2.** Summarized number of mites imported into 10 monitoring colonies and killed by acaricide treatment in different distances from donor colonies; at site A (1 m), B (30 m), C (400 m), D (1,300 m) and E (1,500 m) in each graph the two treated colonies are shown.

# Autumn Invasion Rates of *Varroa destructor* (Mesostigmata: Varroidae) Into Honey Bee (Hymenoptera: Apidae) Colonies and the Resulting Increase in Mite Populations

[Efterårs invasions hyppighed af varroa mider ind i bifamilier og den resulterende øgning af midetrykket](#)

EVA FREY<sup>1</sup> AND PETER ROSENKRANZ

J. Econ. Entomol. 107(2): 508–515 (2014); DOI: <http://dx.doi.org/10.1603/EC13381>

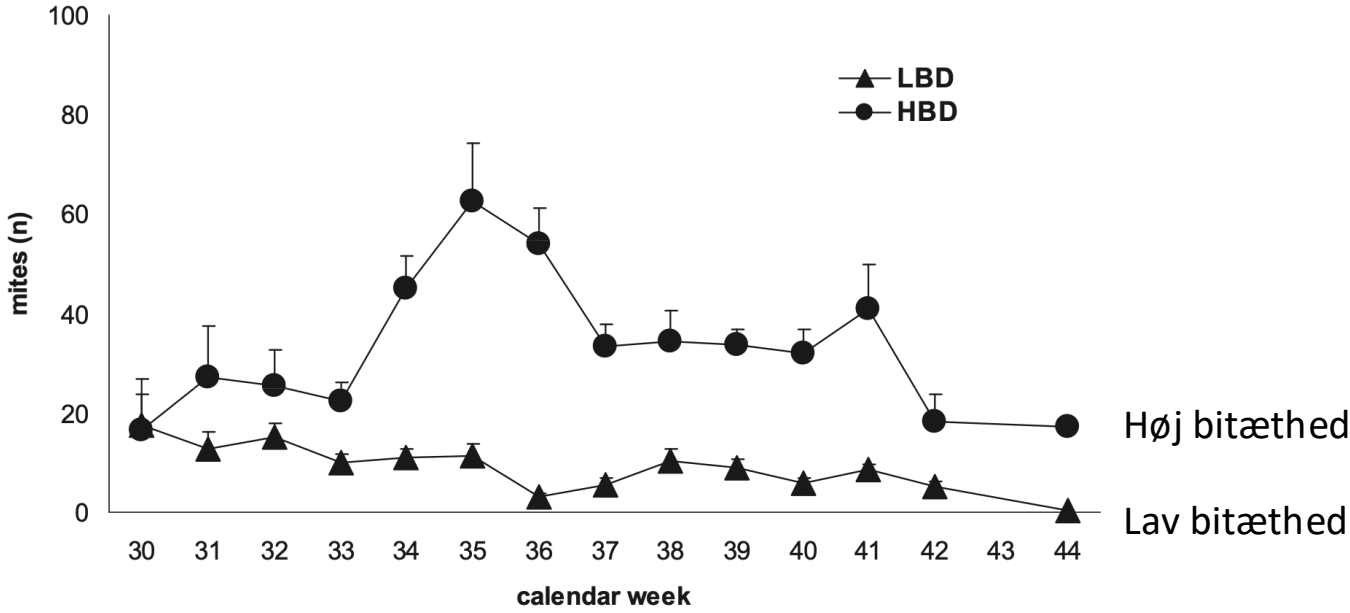


Fig. 2. Average number of *V. destructor* that invaded treated colonies at the LBD ( $n = 7$ ) apiary and HBD ( $n = 7$ ) apiary from the end of July until the beginning of November (means  $\pm$  SE).

Behandlede bifamilier modtog flere mider i bigårde med høj bitæthed i lokal området. Der er en miljøeffekt i august!



# Population growth of *Varroa destructor* (Acari: Varroidae) in honey bee colonies is affected by the number of foragers with mites

Gloria DeGrandi-Hoffman<sup>1</sup> · Fabiana Ahumada<sup>2</sup> ·  
Victor Zazueta<sup>1</sup> · Mona Chambers<sup>1</sup> · Geoffrey Hidalgo<sup>1</sup> ·  
Emily Watkins deJong<sup>1</sup>

Exp Appl Acarol (2016) 69:21–34  
DOI 10.1007/s10493-016-0022-9

# Accelerated *Varroa destructor* population growth in honey bee (*Apis mellifera*) colonies is associated with visitation from non-natal bees

Kelly Kulhanek<sup>1</sup>✉, Andrew Garavito<sup>2</sup> & Dennis vanEngelsdorp<sup>2</sup>

Scientific Reports | (2021) 11:7092

| <https://doi.org/10.1038/s41598-021-86558-8>

# Crowding honeybee colonies in apiaries can increase their vulnerability to the deadly ectoparasite *Varroa destructor*

Thomas D. SEELEY, Michael L. SMITH

Apidologie (2015) 46:716–727

© INRA, DIB and Springer-Verlag France, 2015

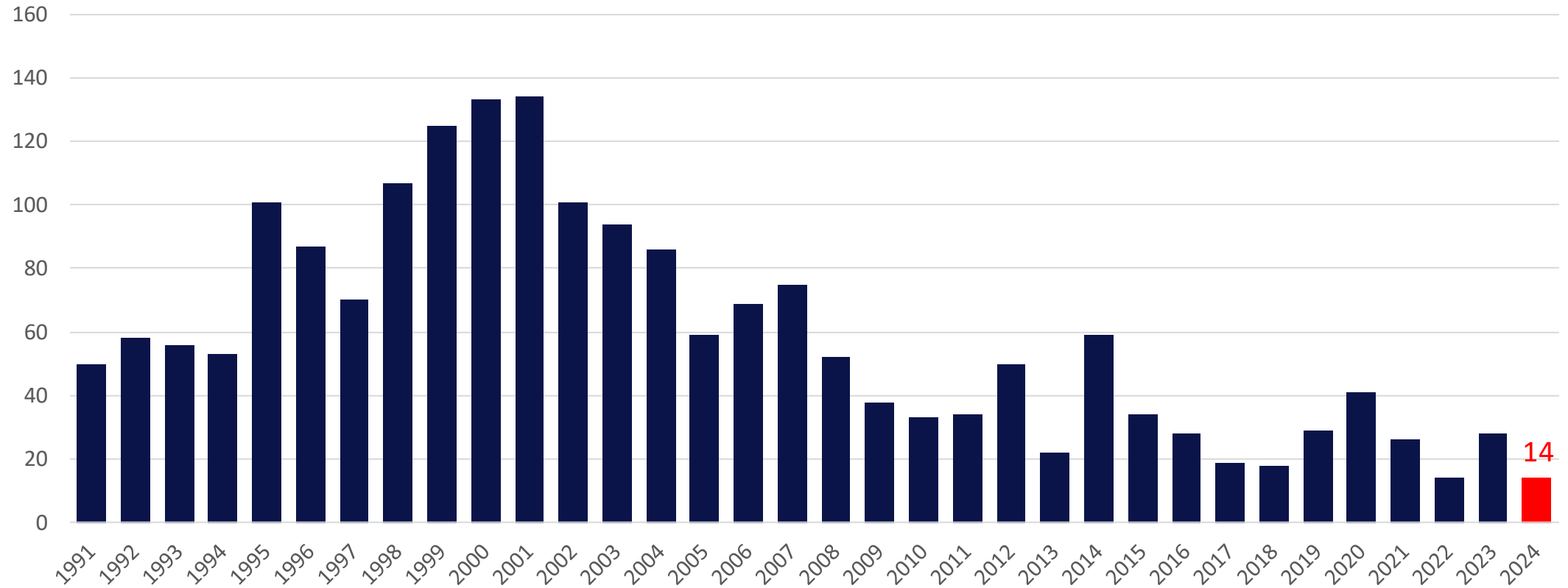
DOI: [10.1007/s13592-015-0361-2](https://doi.org/10.1007/s13592-015-0361-2)

Der sker stor smittespredning med varroa og nogle stader optager flere mider fra nabo-bifamilier end deres egen yngel producere



# ONDARTET BIPEST

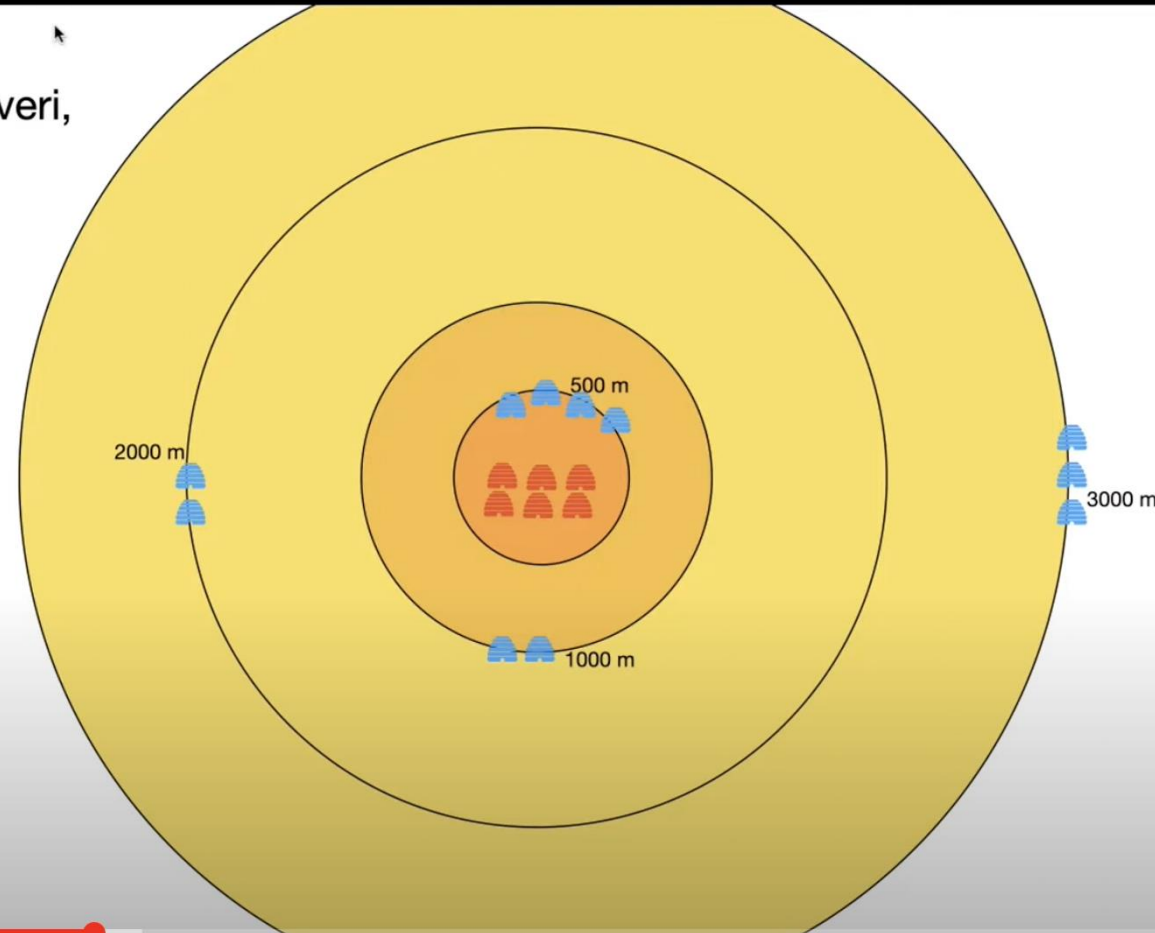
## Udbrud siden 1991





# SMITTESPREDNING VED ONDARTET BIPEST

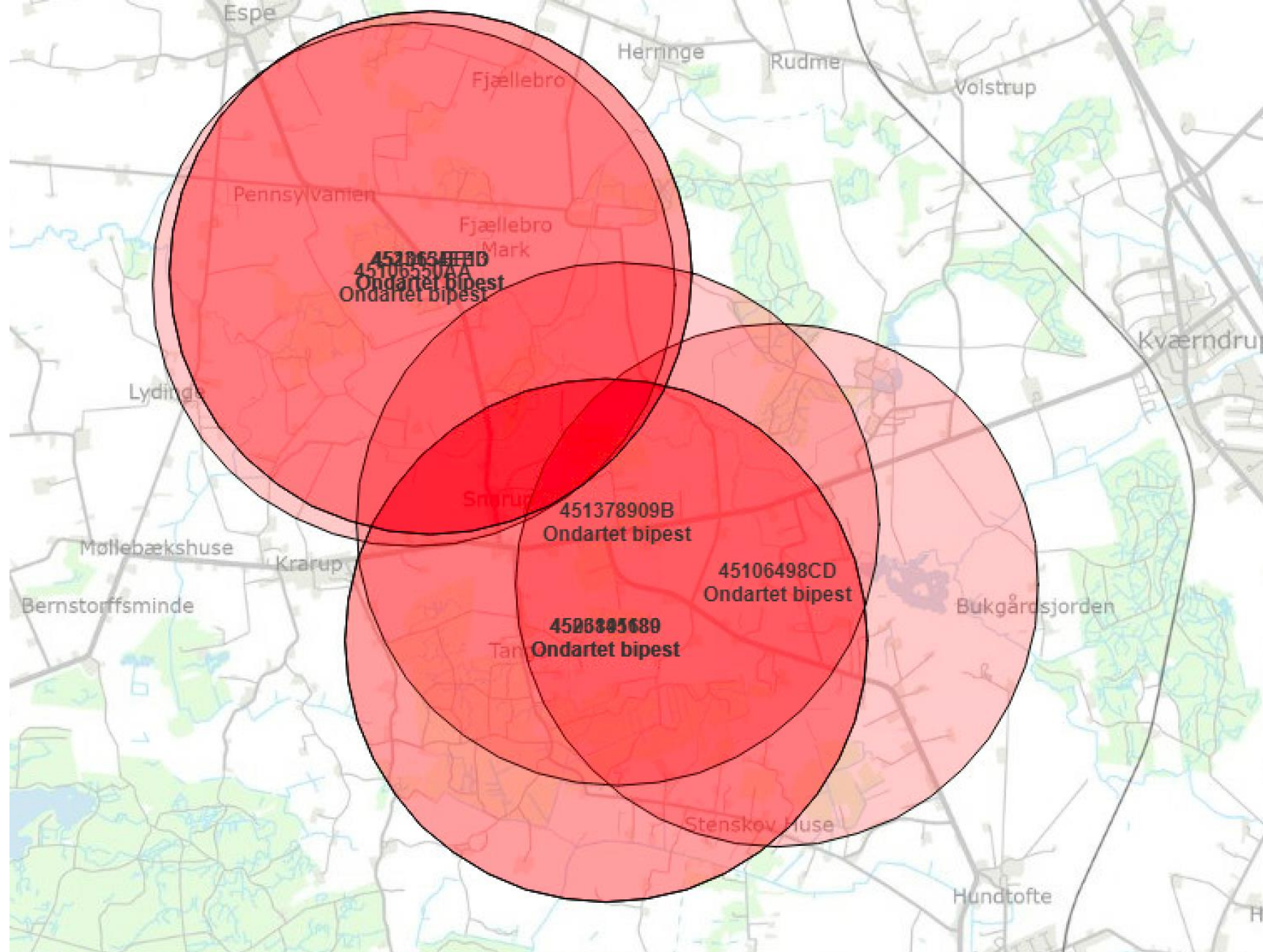
Forsøgsår 2 til 4:  
Smitten spredtes ved røveri,  
og sporer findes  
helt op til 3000 m fra  
udbruddets start.  
Især i efteråret sker der  
spredning mellem  
bifamilier og  
bigårde. Mængden  
af sporer falder  
med afstanden, nok  
fordi der er mindre  
røveri.



Fra bisygdoms-kursus:  
Søg på YouTube  
Bisygdomskursus  
Smittespredning

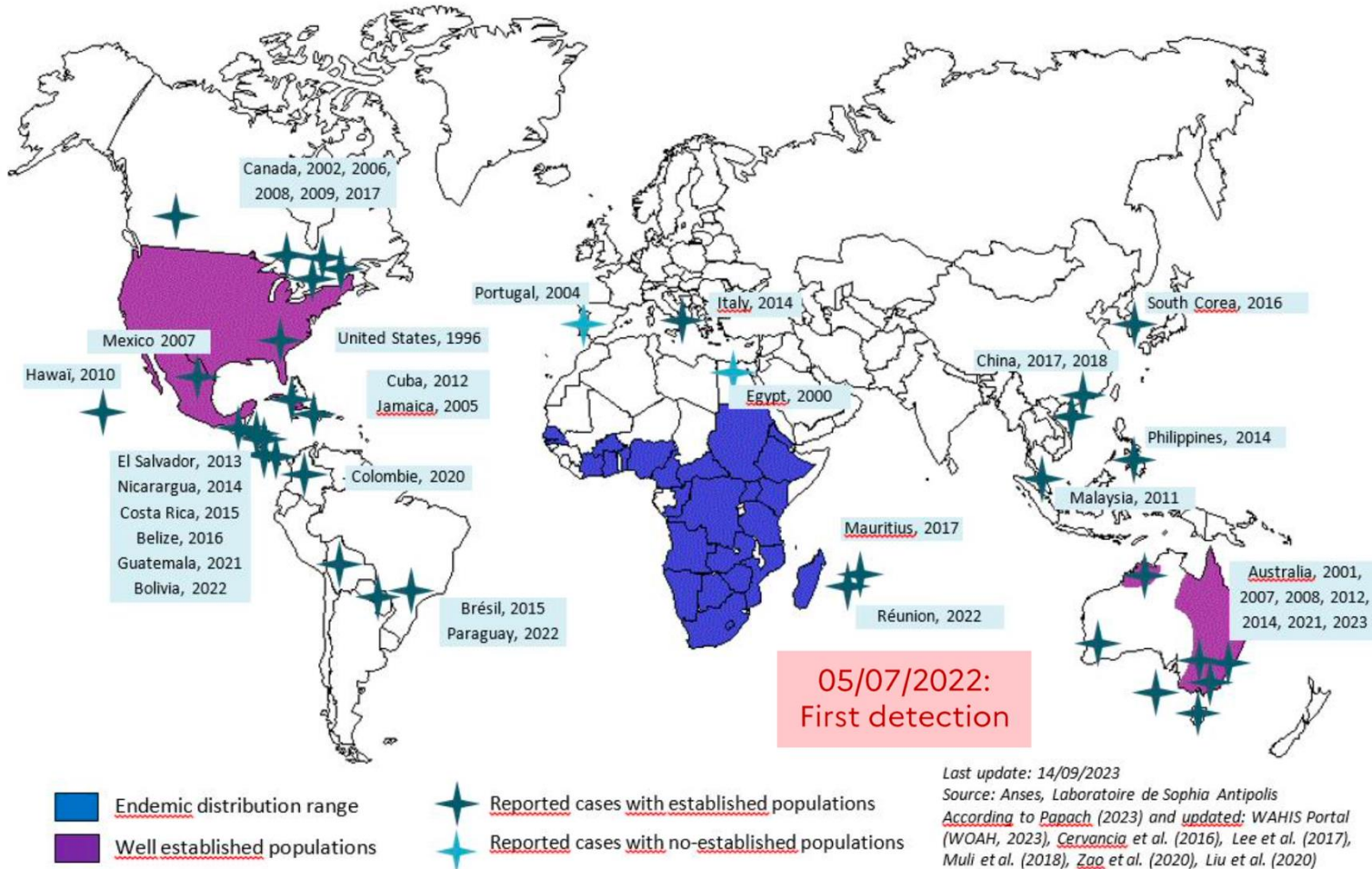
<https://www.youtube.com/watch?v=MZaE7iOPce0>

# Fra Centralt BigårdsRegister: Et massivt angreb af ondartet bipest på Fyn i 2024



# LILLE STADEBILLE - GLOBAL SPREDNING

## Epidemiological context: *A. tumida* distribution



Last update: 14/09/2023

Source: Anses, Laboratoire de Sophia Antipolis  
According to Papach (2023) and updated: WAHIS Portal  
(WOAH, 2023), Cervancia et al. (2016), Lee et al. (2017),  
Muli et al. (2018), Zao et al. (2020), Liu et al. (2020)



# LILLE STADEBILLE SMITTEHINDRING

## —●— SHB epidemiology in Calabria (Italy): 2014 vs 2022

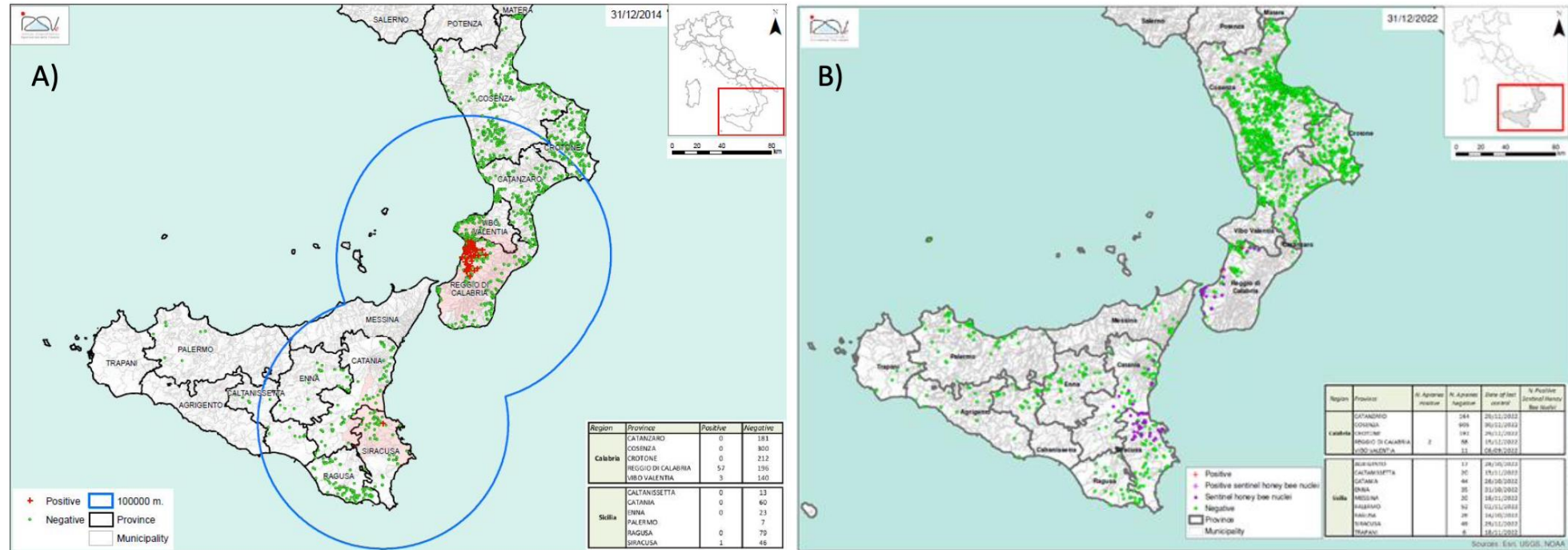


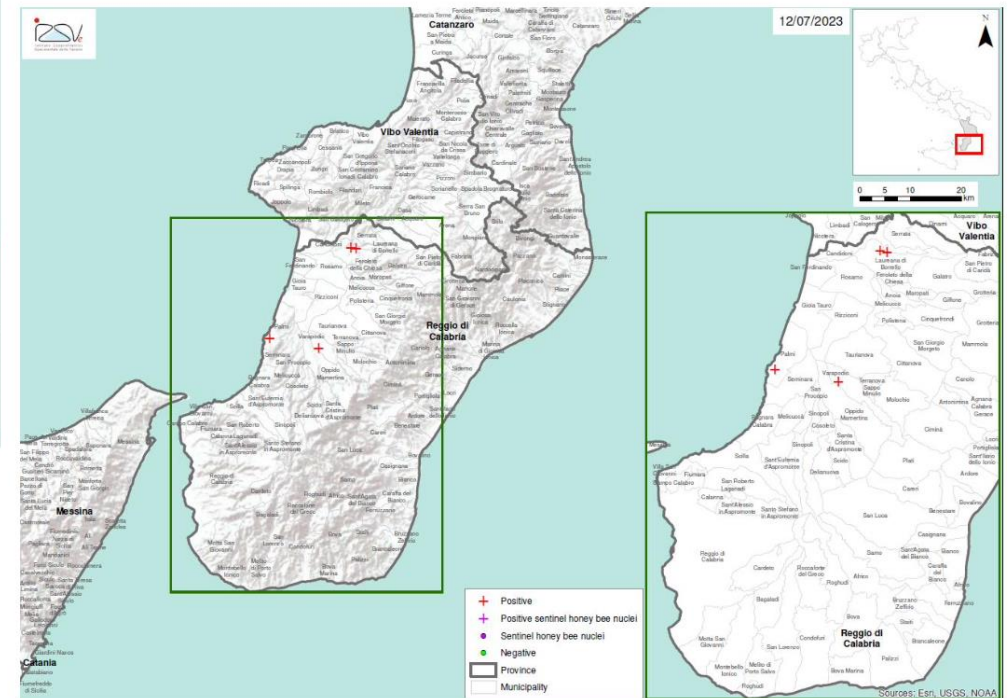
Figure 1: Small hive beetle in Italy. A) Surveillance zone for SHB in Calabria and Sicily regions (as of 29 December 2014). B) Surveillance zone for SHB in Calabria and Sicily regions (as of 31 December 2022). Red cross: infested apiary. Green dot: visited apiary but no SHB detected. Purple dot: sentinel nuclei. Blue line: 100 km radius from the initial outbreaks.

# LILLE STADEBILLE STATUS ITALIEN

## Epidemiological situation: Calabria, July 2023



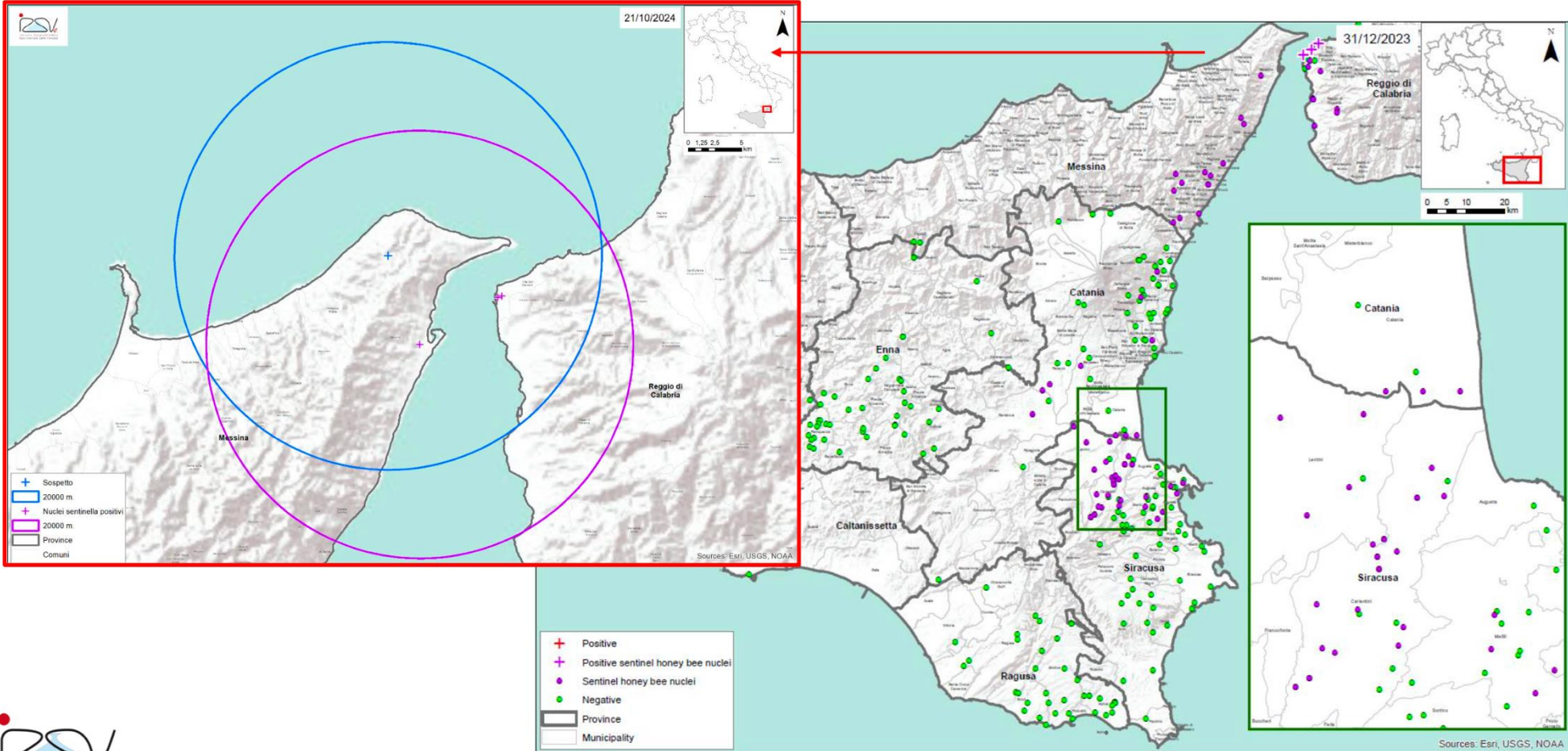
Small hive beetle surveillance in Italy. Data on surveillance carried out in Spring 2023 have been collected but not yet sent to the NRL. Red cross: infested apiary. Green dot: visited apiary but no SHB detected.





# NY SPREDNING TIL SICILIEN 2024

— ● **News** about SHB in Italy: new detection in northeastern of Sicily



Franco Mutinelli



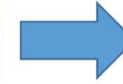
# RESTRIKTIONER I BEVÆGELSE AF BISTADER

## HURTIG OPDAGELSE OG BEKÆMPELSE !

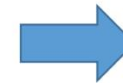
Visual  
apia



Destruction of infested  
apiaries + pyrethroid  
treatment of the rests



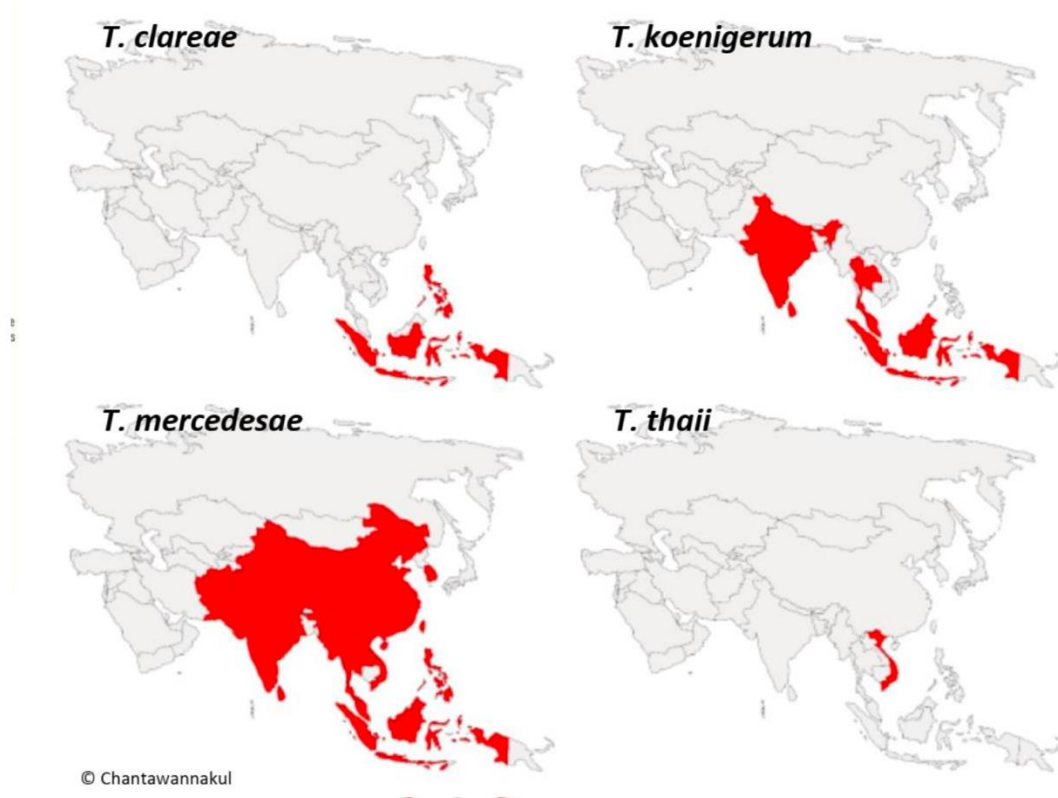
Ploughing and pyrethroids  
drenching of the apiary  
surrounding soil





# KLAR TIL TROPILAEELAPS MIDER?

Geographical repartition of the four *Tropilaelaps* mite species



Lever oprindeligt på kæmpebier *Apis dorsata* og *Apis laboriosa* i Asien. Har smittet *Apis mellifera* og trives fint på "vores" bier.



# SPREDNING TIL RUSLAND?

Infested countries and areas (according to the video)



Ifølge uofficiel rapport i video på YouTube.



Review article

## TROPILELAPSOSIS OF BEES – A NEW THREAT TO RUSSIAN BEEKEEPING

*Anna Z. Brandorf<sup>1</sup>, Alexey B. Sokhlikov<sup>2</sup>*

Обзорная статья

УДК 638.162:669.018.674

doi: 10.36871/vet.sa

EDN: ZEQPND

**Abstract.** Currently, a severe epizootic situation is developing on the territory of the Russian Federation for the spread of the dangerous infectious disease of honey bees tropilaelapsosis.

1. Krasnodar Krai dand Sochi
2. Ossetia
3. Dagestan
4. Orenburg
5. Irkutsk

EURL Annual Meeting 2023



AARHUS  
UNIVERSITET  
INSTITUT FOR AGROØKOLOGI

11

10/10/2023

2. OG 9. NOVEMBER 2024

PER KRYGER  
SENIORFORSKER



# TO NYE FUND AF TROPILAEELAPS

JOURNAL OF APICULTURAL RESEARCH  
<https://doi.org/10.1080/00218839.2024.2343976>



Taylor & Francis  
Taylor & Francis Group

DOI: 10.2478/JAS-2024-0010 J. APIC. SCI. VOL. 68 NO. 2 2024

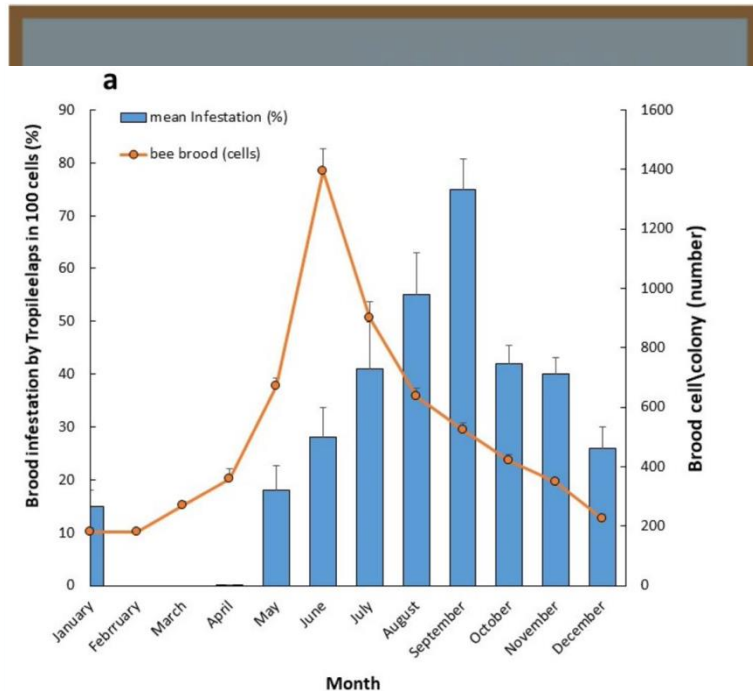


NOTES AND COMMENTS



## First report of established mite populations, *Tropilaelaps mercedesae*, in Europe

Anna Brandorf<sup>a</sup> , Marija M. Ivoilova<sup>a</sup>, Orlando Yañez<sup>b</sup> , Peter Neumann<sup>b</sup> and Victoria Soroker<sup>c</sup>



Short communication

## FIRST REPORT ON *TROPILAEELAPS MERCEDESAE* PRESENCE IN GEORGIA: THE MITE IS HEADING WESTWARD!

Results of inspection of brood samples (N = 7) from three (N = 3) apiaries: single and multispecies infestation level by *T. mercedesae* or/and *V. destructor* in individual cells, rate of mites in reproductive status and recapping rate for both ectoparasitic mite species

Sample	Apiary (altitude)	Inspected sealed worker brood cells	<i>T. mercedesae</i> infestation in % (% reproductive*)	<i>V. destructor</i> infestation in % (% reproductive*)	Co-infestation in % (% reproductive *, V = <i>V. destructor</i> , T = <i>T. mercedesae</i> )	Total infestation (%)	Recapping % (V = <i>V. destructor</i> , T = <i>T. mercedesae</i> , C = combined)
1		100	19 (89.5)	14 (78.6)	1 (0)	32	6 (V - 2 / T - 4)
2		100	24 (95.8)	13 (100.0)	5 (V - 100 / T - 80)	32	5 (V - 1 / T - 2 / C - 2)
3	1 (278)	100	14 (100.0)	5 (80.0)	1 (V - 100 / T - 100)	17	0 (0.0)
4		100	18 (100.0)	9 (100.0)	5 (V - 100 / T - 100)	22	2 (T - 1 / C - 1)
5		100	10 (100.0)	5 (100.0)	0 (0.0)	15	0 (0.0)
6	2 (500)	300	1 (100.0)	0 (0.0)	0 (0.0)	1	0 (0.0)
7	3 (550)	100	7 (100)	14 (85.6)	0 (0.0)	20	1 (T - 1)

\*Reproductive status of the foundress mites. Percentage of infested cell/foundress with offspring.



# PROCEDURER FOR SMITTEHINDRING

---

Er det indarbejdet i dit daglige gøremål med bierne?

Forener du bifamilier ?

Forener du bigårde ?

Fodring af bier ?

Forebyggende behandling ?

Rengøring af brugte stader? Rammer ? Handsker ?

Stadejern ?

Omsmelter du dine jomfrutavler ?



# BIOSIKRING

—  
Forebyggelse er  
bedre end  
helbredelse!

Tænk over hvad  
der kan mindske  
smittespredning.







EAAP

European Federation of Animal Science

WEBINAR SERIES

# Beekeeping Today



*November 12 - 15:00 CET*

# INVITATION TIL VIRTUELT MØDE

---

15.00 - 15.10 Giulietta Minozzi & Gerardo Caja Lopez: Chairs introduction

15.10 - 15.40 Gerardo Caja Lopez:

The EU's current beekeeping panorama and horizon 2030: strengths and weaknesses

15.40 - 16.00 Nicola Bradbear:

Beekeeping for rural livelihoods

16.00 - 16.15 Per Kryger:

Which honey bee diseases are occurring in Denmark and why ?- Part 1

16.15 - 16.30 Virtual coffee break

16.30 - 16.45 Annette Bruun Jensen:

Which honey bee diseases are occurring in Denmark and why ?- Part 2

16.45 - 17.05 Giulietta Minozzi:

Insights into Honeybee Genetics and Breeding

17.05 - 17.20 Wrap-up discussion

<https://meetings.eaap.org/webinar/beekeeping-today/>

# ENDNU ET VIRTUELT MØDE: BEEGUARDS

---

BeeGuards holder virtuelt møde 21. november 2024 :

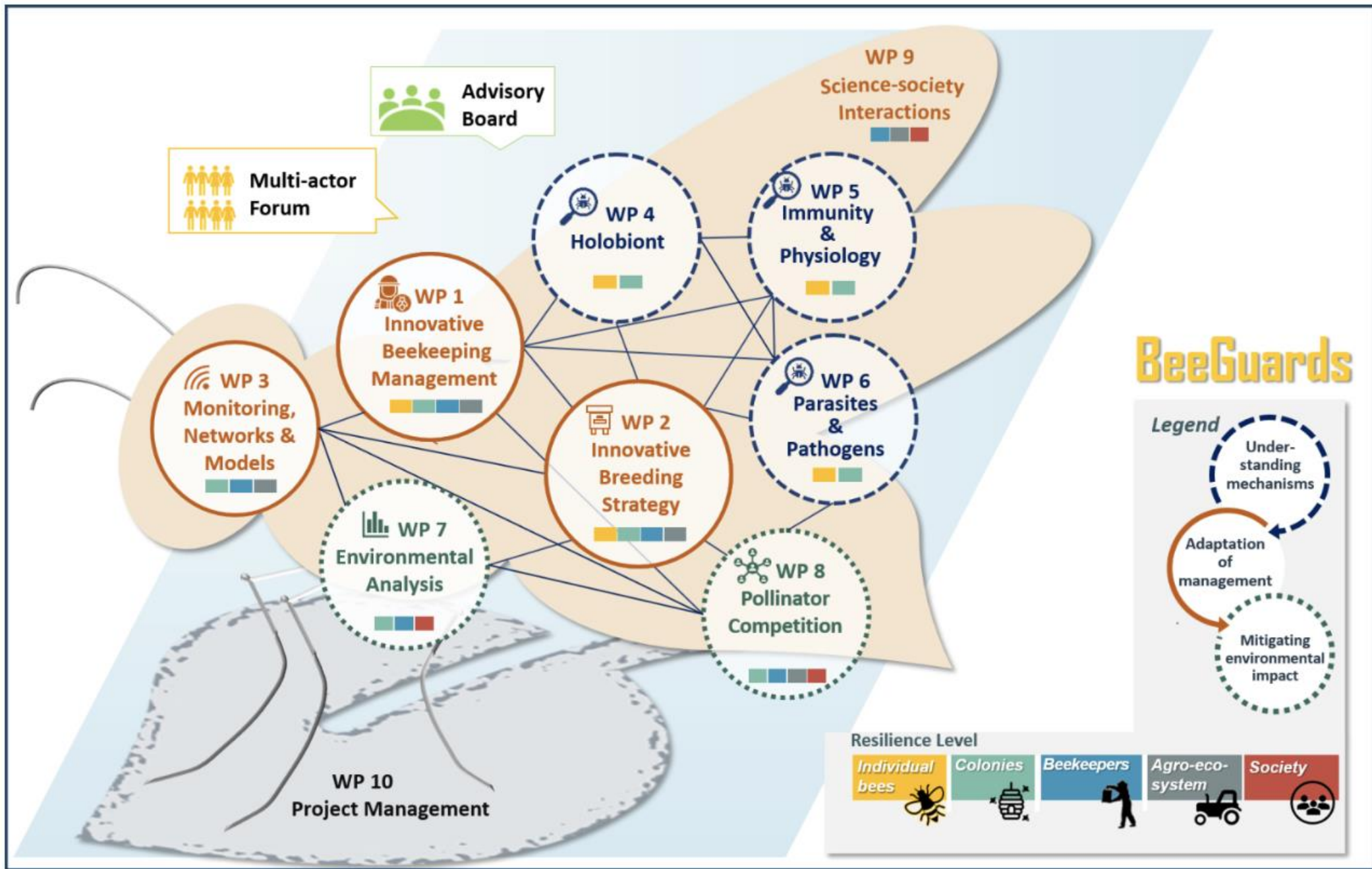
Eftermiddagsmøde slutter ikke senere end 17:30 ifølge oplæg:

”PART1 (Moderated by Raffaele Dall’Olio, BeeGuards) will be structured as a speed-conference, with initial welcomes by our host CREA and three short lectures, each one with a 5 min Q&A session at the end of the presentation.

PART2 (Moderated by Per Kryger, member of BeeGuards Advisory Board) should not include any powerpoint, be more interactive, and structured as a roundtable.  
”

Detaljer følger

Kontakt [per.kryger@agro.au.dk](mailto:per.kryger@agro.au.dk) for tilmelding og deltagelse





Husk at reservere tid  
23. til 27. september  
for verdenskongres  
i Bella Centret !





AARHUS  
UNIVERSITET

[www.biforskning.dk](http://www.biforskning.dk)  
[per.kryger@agro.au.dk](mailto:per.kryger@agro.au.dk)