

Aethina tumida (Small Hive Beetle) outbreaks in Calabria region, southern Italy

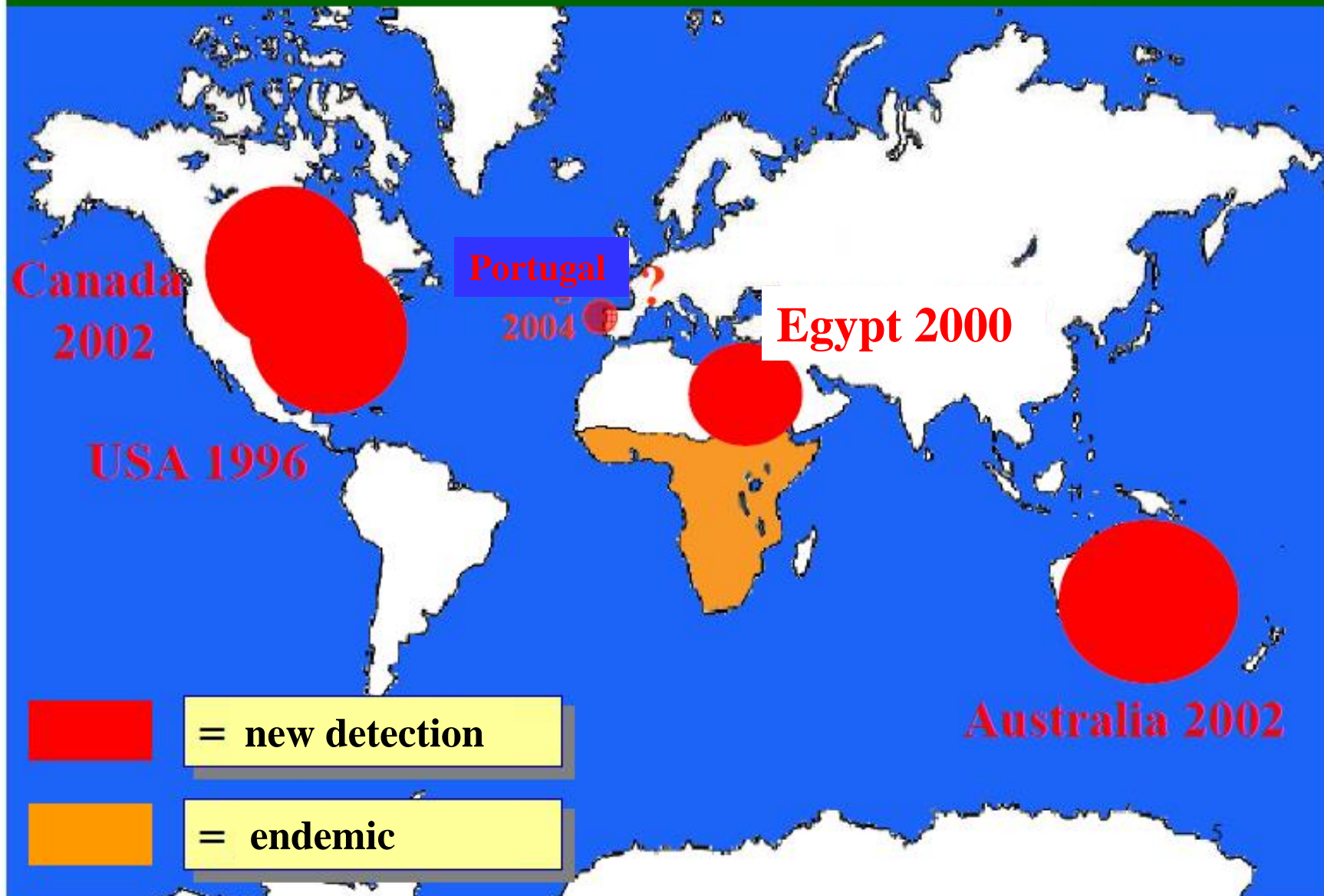
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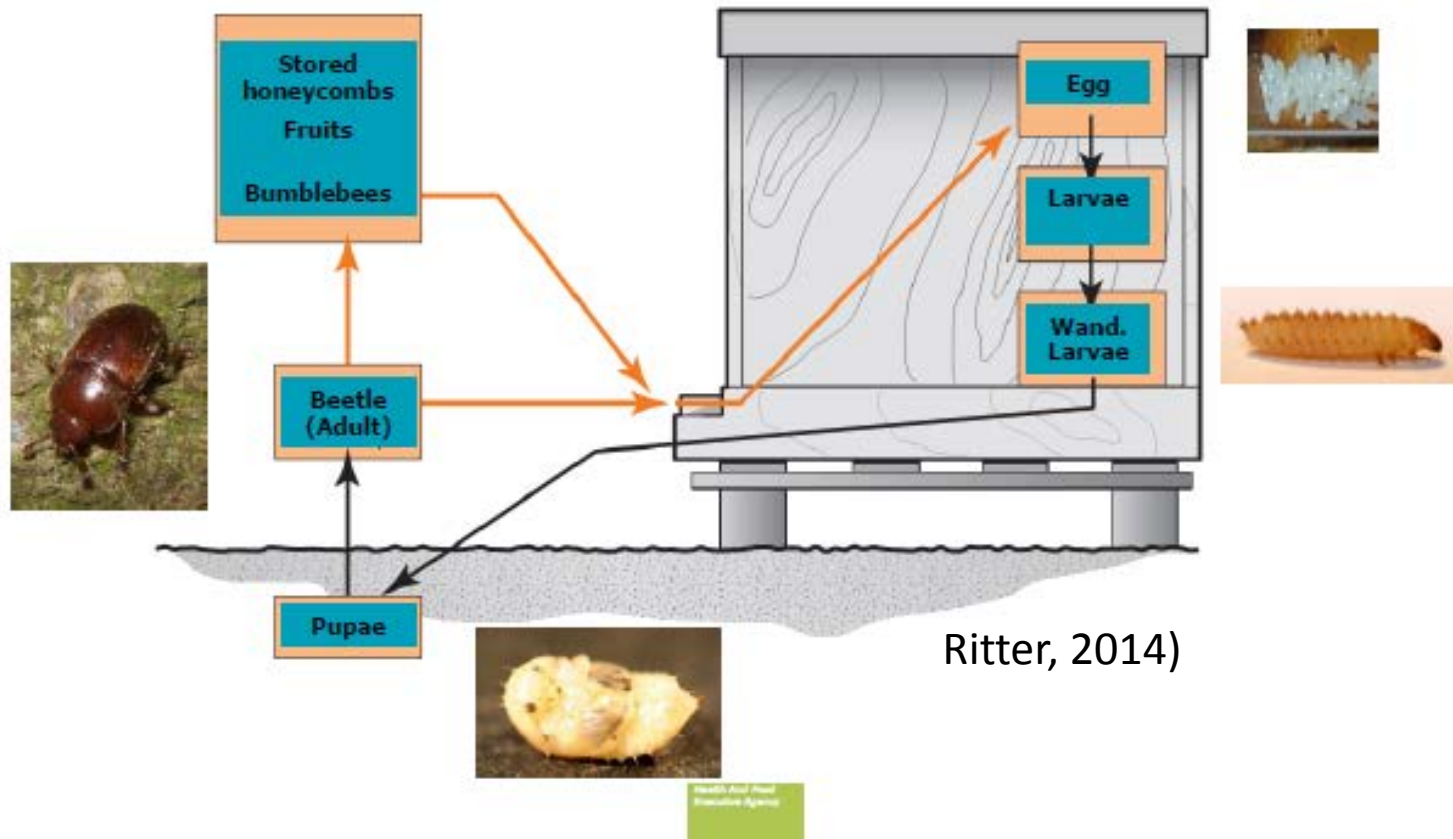
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Aethina tumida



Life cycle: 27-79 days



Aethina tumida - Italy

5/09/2014: first report 3 weak nuclei affected by larvae and adults, no other colonies in the same site

locality Sovereto, Gioia Tauro municipality,
Reggio Calabria province

5.09.2014: nuclei packed, killed with ethil acetate and stored at -80°C

6.09.2014: soil drenched with chlorpyriphos

17.09.2014: soil further investigated, excavated and treated with deltamethrin



Calabria region

First identification of both larvae and adults

Locality: Sovereto

Municipality: Gioia Tauro

Province: Reggio Calabria



2 zones defined:

Protection - 20 km radius

Surveillance - 100 km radius

Aethina tumida - Italy

3 weak nuclei with larvae and adults



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Aethina tumida

Cronology

10.09.2014: samples of larvae and adults sent to NRL

11.09.2014: confirmation by morphological examination

12.09.2014: note of the Ministry of Health for the first actions

16-17.09.2014: confirmation by EURL based on morphological examination and PCR

2 nuclei replaced those three destroyed and kept as sentinel



Aethina tumida

17/09/2014: second outbreak in an apiary of 41 colonies
Only adults were detected (25 as a total)

locality Collina, Rosarno municipality,
Reggio Calabria province

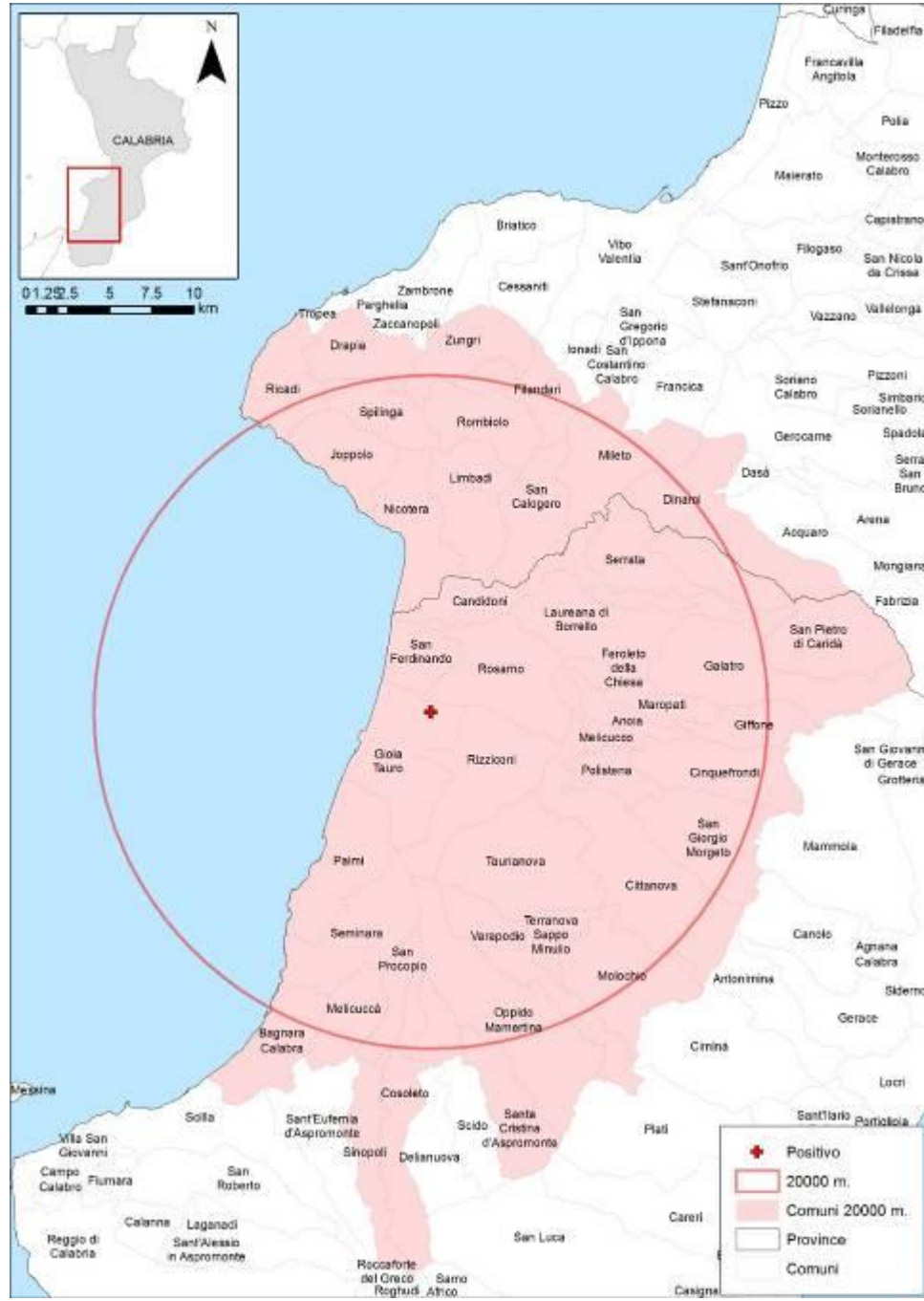
18.09.2014: OIE notification

19.09.2014: Decree of Veterinary Services of Calabria region
signed with measures directed at eradicating outbreaks and
preventing further spreading



12.09.2014

20 km radius



17.09.2014

20 km radius



4 apiaries visited with negative results in a radius of 2 km

Aethina tumida

15-18.09.2014: NRL and EURL in the area of interest

Meeting with representatives of regional and local Veterinary Services (Palmi, RC)

Field inspection of the site of first detection

Field inspection of 5 apiaries in a radius of 2 km

1 of these was positive (2nd case), the remaining 4 were negative

Traps were inserted through hive opening, checked the next day



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Aethina tumida

19/09/2014: third outbreak

Only adults were detected

Gioia Tauro municipality,
Reggio Calabria province



Aethina tumida

29.9-2.10.2014: NRL in the area of interest

Meeting with representatives of regional and local Veterinary Services (Catanzaro, Crotone)

Field inspection

Field inspection in the protection and surveillance zones

Traps application



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Aethina tumida outbreaks as of October 3, 2014

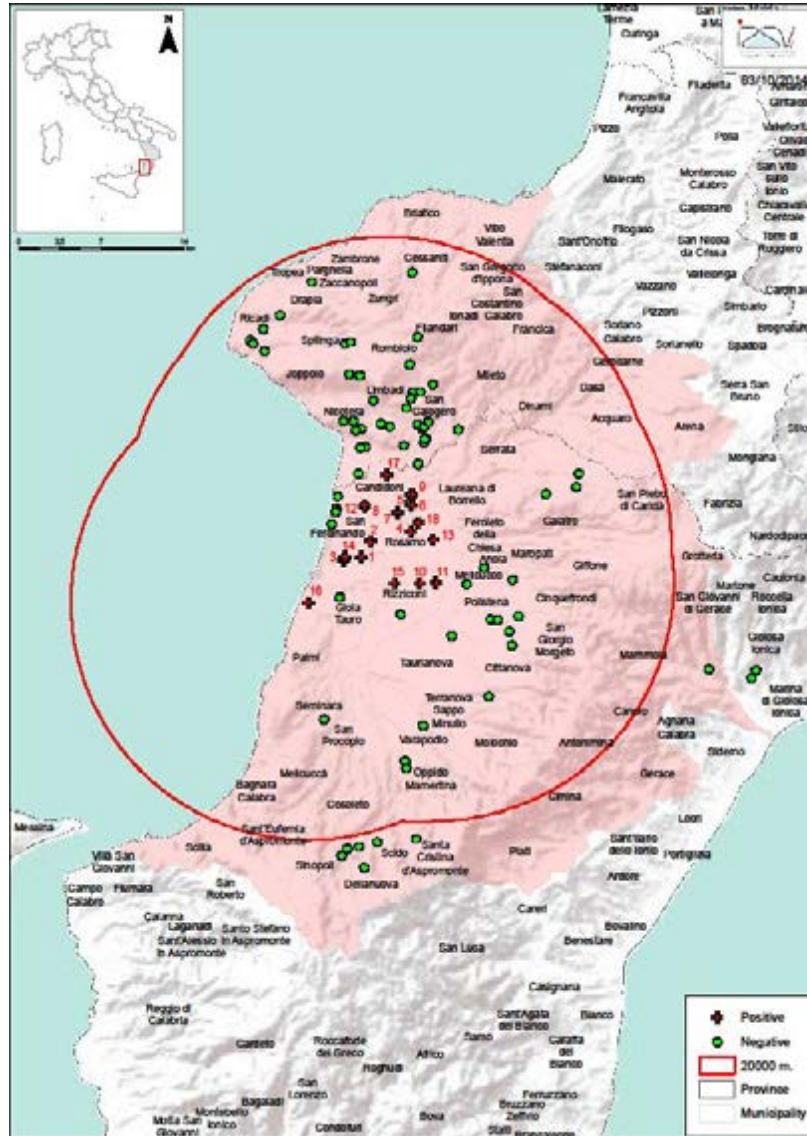


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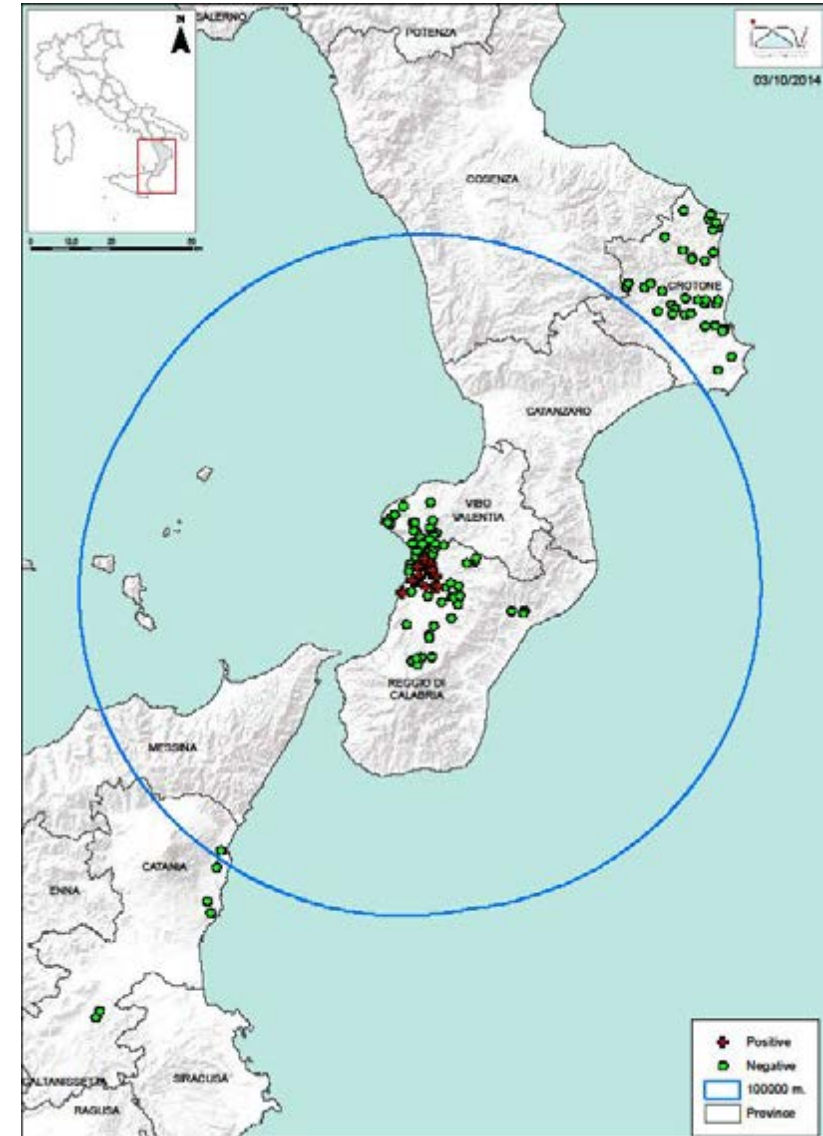
AETHINA TUMIDA CONFIRMED CASES

EPIDEMIOLOGICAL SITUATION AS OF OCTOBER 3rd, 2014								
N.	LOCALITY	MUNICIPALITY	PROVINCE	EGGS	LARVAE	PUPAE	ADULTS	CONFIRMATION DATE
01_2014	SOVERETO	GIOIA TAURO	RC		X		X	September 12, 2014
02_2014	C.DA COLLINA	ROSARNO	RC				X	September 18, 2014
03_2014	GIOIA TAURO	GIOIA TAURO	RC				X	September 25, 2014
04_2014	ROSARNO	ROSARNO	RC				X	September 25, 2014
05_2014	C.DA ALIMASTRO	ROSARNO	RC				X	September 29, 2014
06_2014	C.DA TESTA DELL'ACQUA	ROSARNO	RC				X	September 29, 2014
07_2014	C.DA TESTA DELL'ACQUA	ROSARNO	RC				X	September 29, 2014
08_2014	C.DA LUDICELLO	SAN FERDINANDO	RC				X	September 29, 2014
09_2014	C.DA ALIMASTRO	ROSARNO	RC				X	September 29, 2014
10_2014	C.DA PRAIA	SAN FERDINANDO	RC				X	September 30, 2014
11_2014	C.DA BETTINA	RIZZICONI	RC				X	September 30, 2014
12_2014	C.DA BOSCO SELVAGGIO	RIZZICONI	RC		X		X	September 30, 2014
13_2014	C.DA ACQUE BIANCHE	ROSARNO	RC				X	September 30, 2014
14_2014	C.DA CICERNA	GIOIA TAURO	RC		X		X	October 1, 2014
15_2014	C.DA MAROTTA	RIZZICONI	RC				X	October 1, 2014
16_2014	C.DA PADRIPODI	GIOIA TAURO	RC				X	October 1, 2014
17_2014	C.DA SOVERETO	CANDIDONI	RC				X	October 3, 2014
18_2014	VIA MONGIARI	ROSARNO	RC				X	October 3, 2014

Aethina tumida outbreaks as of October 3, 2014



Protection zone 20 km



Surveillance zone 100 km

Aethina tumida

In Italy *Aethina tumida* is a notifiable disease
(Order of the Ministry of Health 20.04.2004, prophylaxis
of *Aethina tumida* and *Tropilaelaps* spp.)

Aethina tumida – Ministry of Health orders adopted

0018842-P-12/09/2014: first detection

0019258-19/09/2014-DGSAF-COD_UO-P: second outbreak, EU RL confirmation

0020069-01/10/2014-DGSAF-COD_UO-P: surveillance in not infested regions

0020298-03/10/2014-DGSAF-COD_UO-P: update on outbreaks

Information available at:

http://www.izsvenezie.it/index.php?option=com_content&view=article&id=1731&Itemid=893

Measures adopted by the competent Authorities

- Immediate notification of *Aethina tumida*
- Restriction of any movement related to honey bee colonies (IN and OUT)
- Census of apiaries and colonies
- 20 km radius protection zone:
- census of apiaries
- visit of all apiaries
- visit of the colonies on the basis of a 5% expected prevalence
- destruction of the infested apiaries
- if negative, traps should be applied
- traceability of commercial and migratory movement in and out of the zone



Measures adopted by the competent Authorities

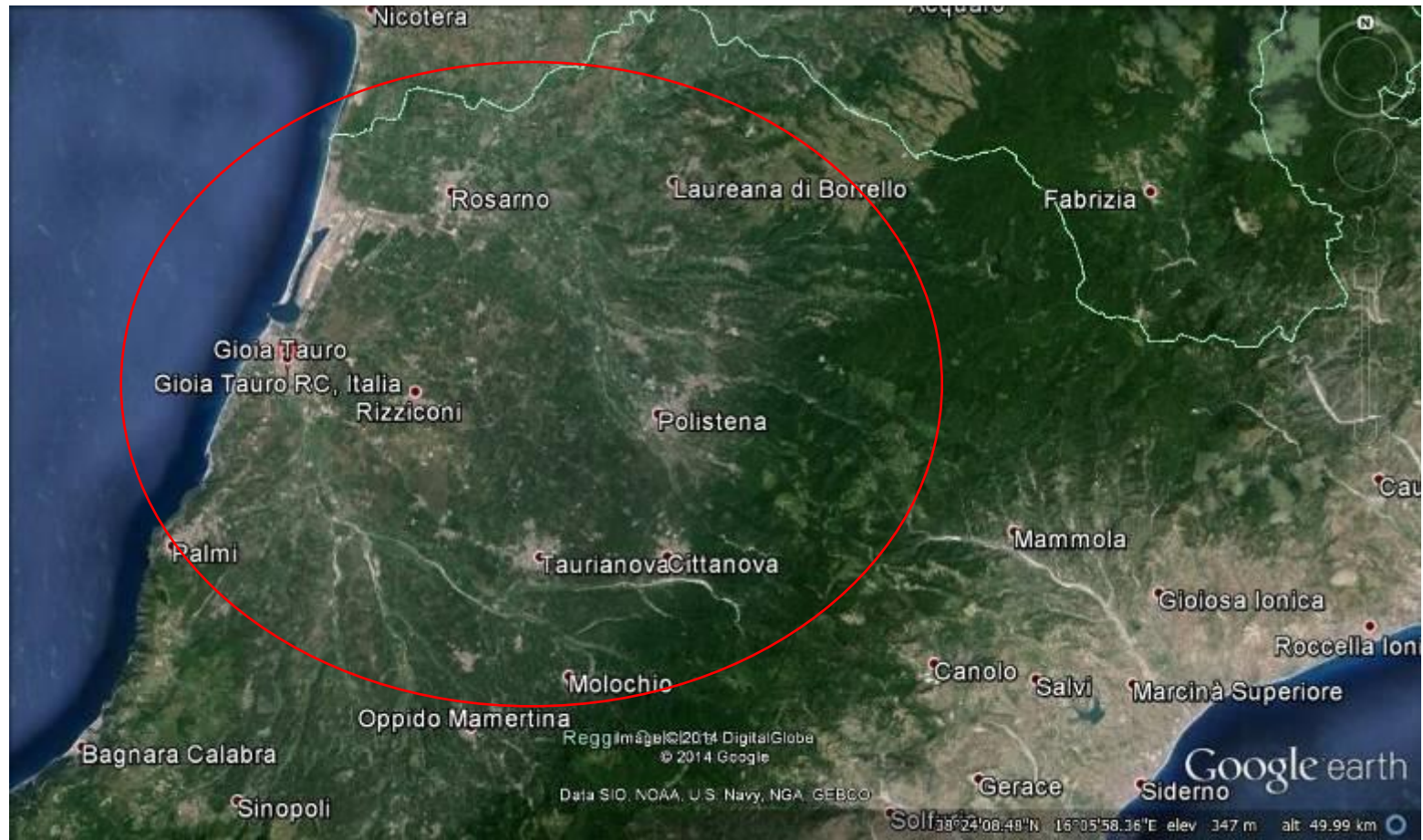
- Since the outbreaks are very close to the Gioia Tauro port, an investigation is in progress to trace movements of commodities from at risk areas (South Africa, USA, Australia);
- The BIP is not authorized for live animals
- Inspection carried out at the waste treatment plant in Gioia Tauro (RC), same area as above
- Waste is selected to obtain Refuse Derived Fuel (RDF) that is incinerated for electricity generation
- What can not be selected as RDF (organic fraction is present @20-30%) is anaerobically stabilized in tunnels and sent to waste dump as not recyclable waste

Aethina tumida

Source of infestation:

- Soil
- Fruits
- Wood

- Honey bees
- Beekeeping materials

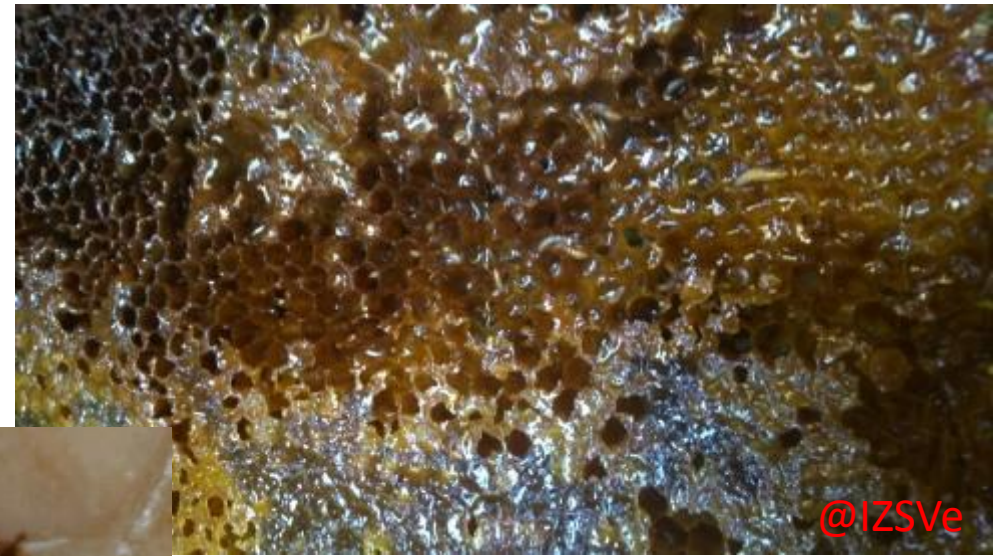


Measures adopted by the competent Authorities

- 100 km surveillance zone:
- census of apiaries
- visit of apiaries selected on the basis of risk analysis (migration in infested areas, honeybees or materials exchanges) or random
- visit of the colonies on the basis of a 2% expected prevalence
- destruction of infested apiaries
- if negative, traps should be applied
- traceability of commercial and migratory movement in and out of the zone



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Thank you for your attention