

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

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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, escavated 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

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 the three destroyed and kept as sentinel until 10 October when were positive to adults and were destroyed + soil treatment



Aethina tumida

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



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

Traps were inserted through hive opening, checked the next day



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29.9-2.10.2014: NRL in the area of interest

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

Field inspection

Field inspection in the protection and surveillance zones

Traps application



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13.10-16.10.2014: NRL in the area of interest

Meeting with representatives of regional and local Veterinary Services

Field inspection in the protection and surveillance zones

Traps application



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22/09/2014, Catanzaro: Regional Veterinary Task Force meeting with Ministry of health, veterinary services, beekeepers and beekeepers associations

29/10/2014, Catanzaro: Regional Veterinary Task Force meeting with Ministry of health, NRL, veterinary services, beekeepers and beekeepers associations

7/10/2014, Rome: meeting of the Central Crisis Unit of the Ministry of health

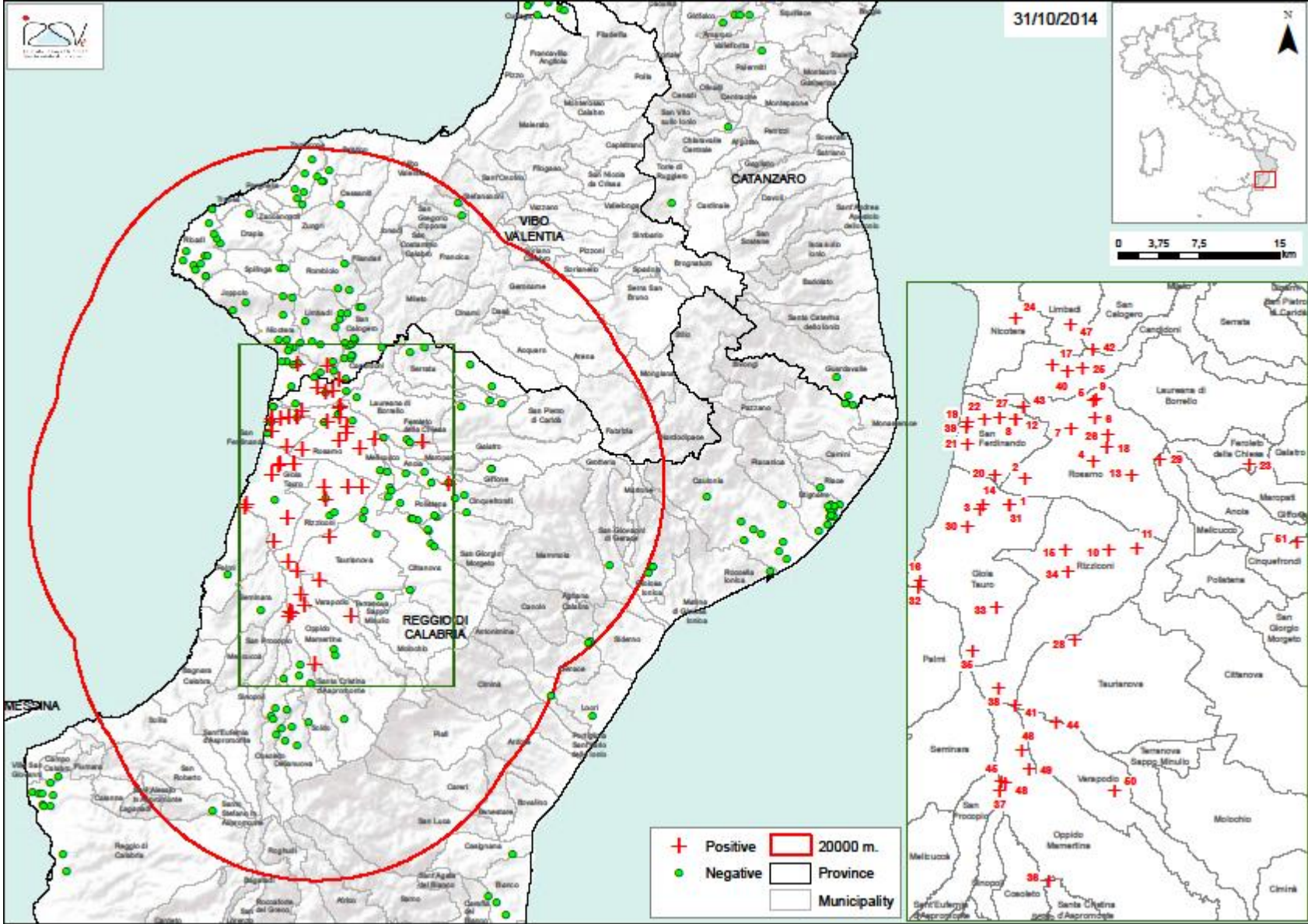
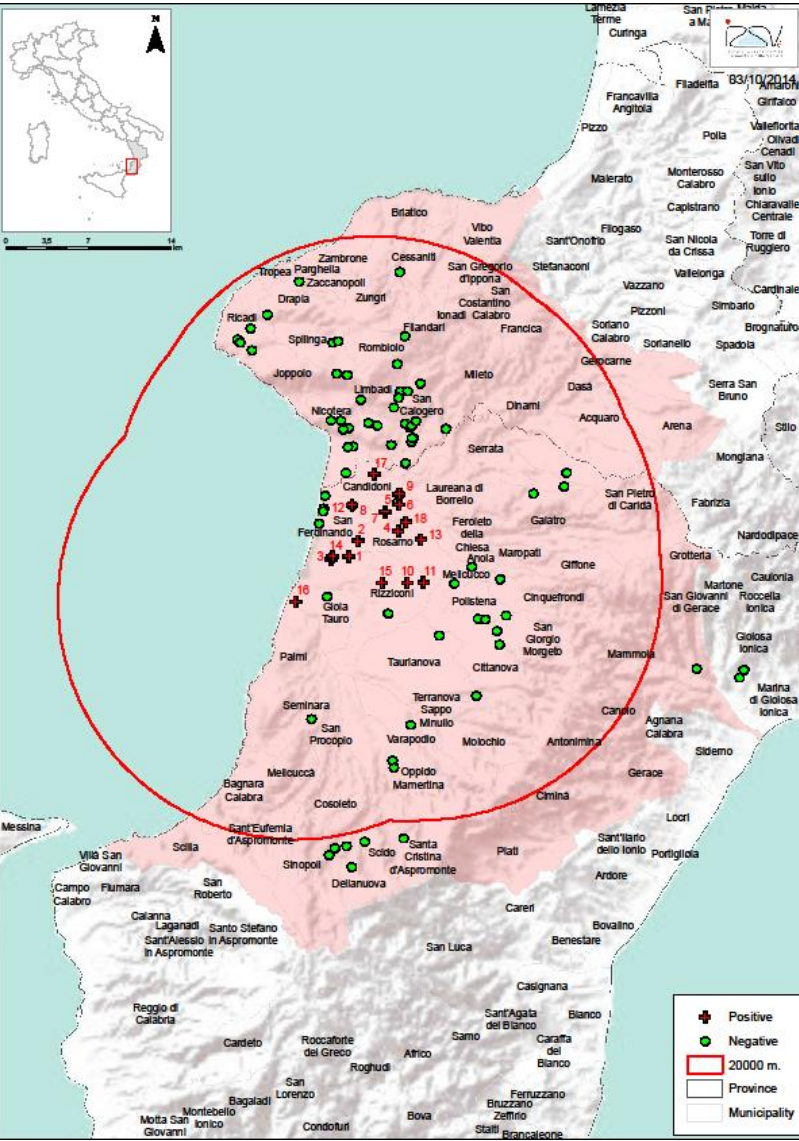
Aethina tumida outbreaks as of 31 October 2014

N.	LOCALITY	MUNICIPALITY	PROVINCE	EGGS	LARVAE	PUPAE	ADULTS	Note	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	C.DA CICERNA	GIOIA TAURO	RC				X		September 25, 2014
04_2014	C.DA ALIMASTRO	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	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
19_2014	C.DA PRAIA - CORSO GARIBALDI	SAN FERDINANDO	RC				X		October 10, 2014
20_2014	C.DA BOSCO DOMITINI	SAN FERDINANDO	RC				X		October 10, 2014
21_2014	C.DA PRAIA	SAN FERDINANDO	RC				X		October 10, 2014
22_2014	C.DA SCEBBA	SAN FERDINANDO	RC				X		October 10, 2014
23_2014	C.DA SAN BASILE	FEROLETO DELLA CHIESA	RC				X		October 10, 2014
24_2014	SERSALE	NICOTERA	VV				X		October 10, 2014
25_2014	C.DA SOVERETO	CANDIDONI	RC				X		October 13, 2014
26_2014	C.DA PIAN DELLE VIGNE	ROSARNO	RC				X		October 13, 2014
27_2014	C.DA BADIA	SAN FERDINANDO	RC				X		October 13, 2014
28_2014	C.DA CAFILIS	TAURIANOVA	RC				X		October 13, 2014

Aethina tumida outbreaks as of 31 October 2014

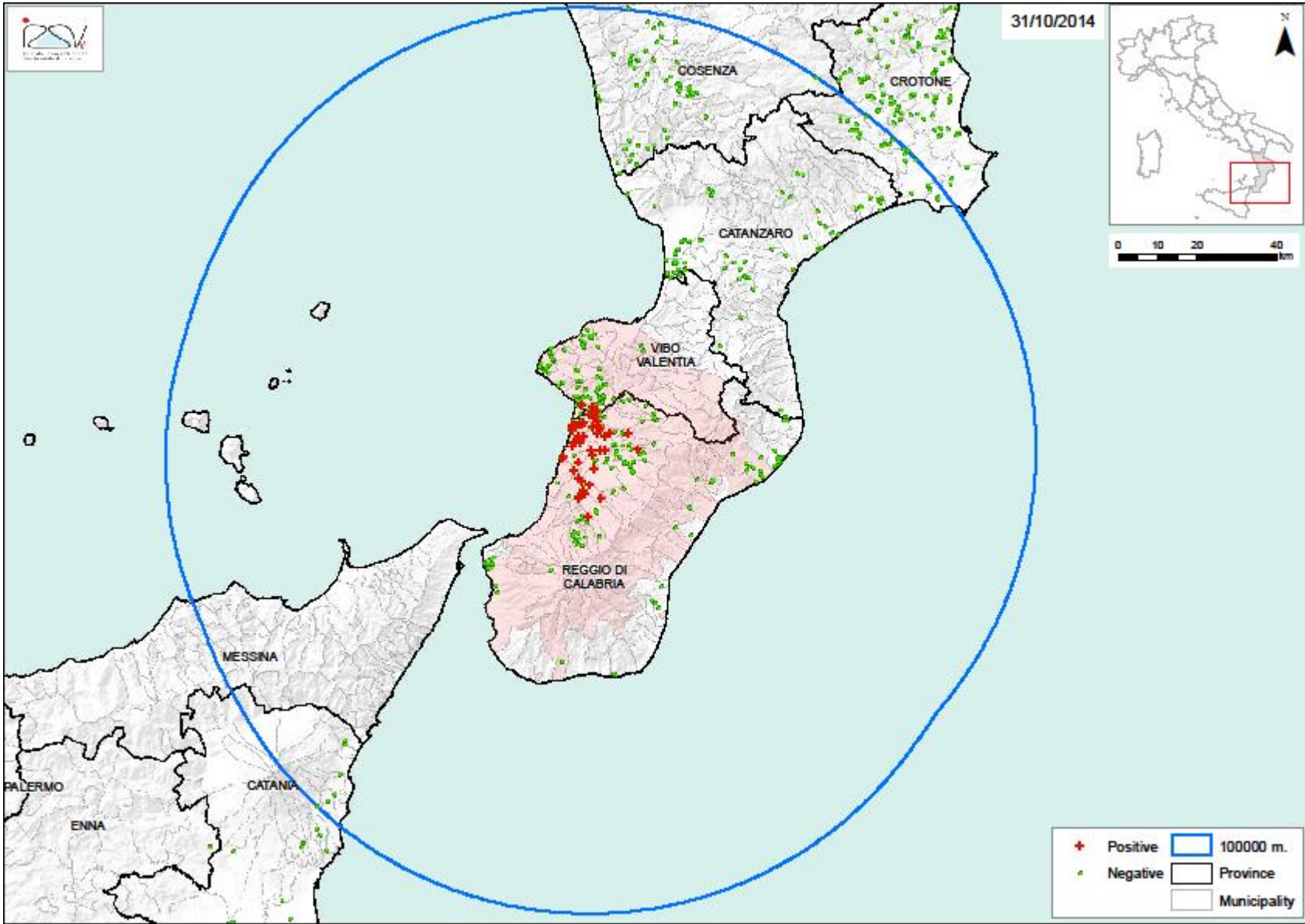
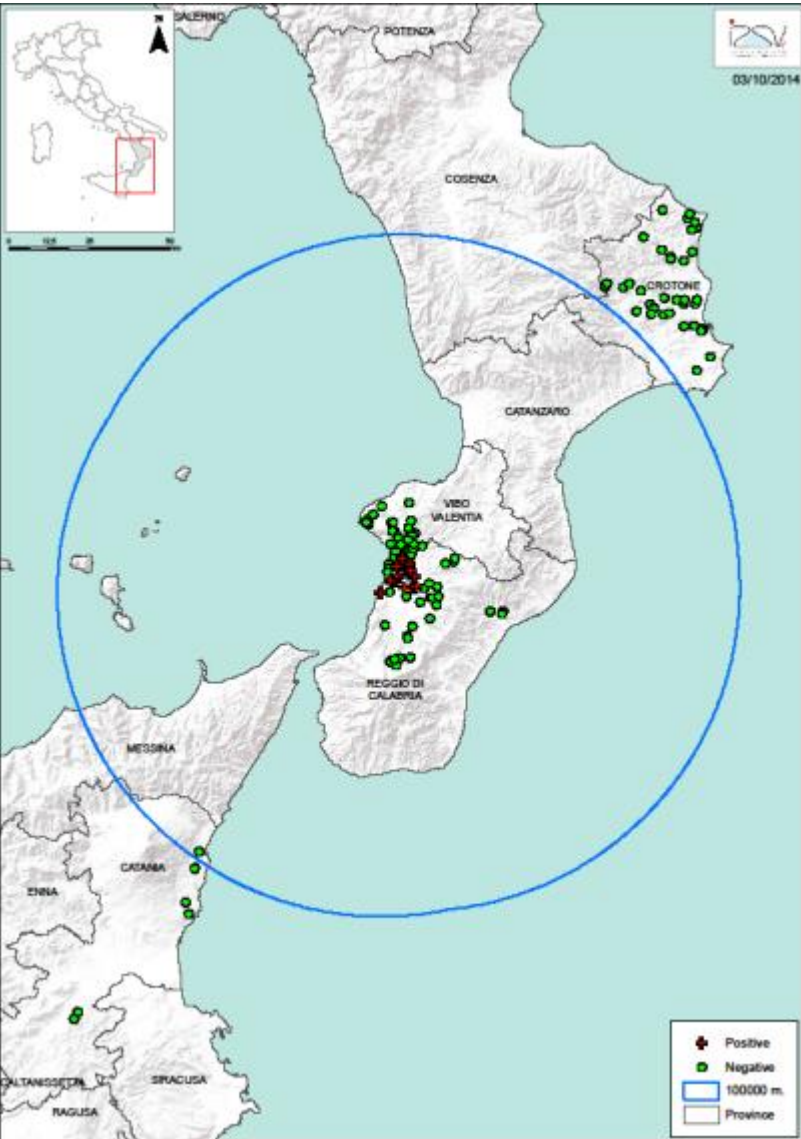
N.	LOCALITY	MUNICIPALITY	PROVINCE	EGGS	LARVAE	PUPAE	ADULTS	Note	CONFIRMATION DATE
29_2014	C.DA POLLA	MELICUCCO	RC				X		October 13, 2014
30_2014	C.DA GUARDIOLA	GIOIA TAURO	RC				X	(natural swarm)	October 13, 2014
31_2014	SOVERETO	GIOIA TAURO	RC				X		October 13, 2014
32_2014	C.DA GIAMBRA	GIOIA TAURO	RC				X		October 14, 2014
33_2014	C.DA CORDOPATRI	GIOIA TAURO	RC				X		October 14, 2014
34_2014	C.DA SPINA	RIZZICONI	RC				X		October 14, 2014
35_2014	C.DA PONTE VECCHIO	GIOIA TAURO	RC				X		October 14, 2014
36_2014	CARUSO	SANTA CRISTINA D'ASPROMONTE	RC				X		October 15, 2014
37_2014	C.DA FERRARO	OPPIDO MAMERTINA	RC				X		October 15, 2014
38_2014	C.DA FORESTA	RIZZICONI	RC				X		October 15, 2014
39_2014	C.DA GARIBALDI	SAN FERDINANDO	RC				X		October 15, 2014
40_2014	C.DA BARONIA	CANDIDONI	RC		X		X		October 16, 2014
41_2014	PONTE QUARANTANA	RIZZICONI	RC				X		October 16, 2014
42_2014	C.DA BARONIA MANNELLA	SAN CALOGERO	VV				X		October 17, 2014
43_2014	C .DA CARAO	ROSARNO	RC				X		October 20, 2014
44_2014	C.DA PETROSA	TAURIANOVA	RC				X		October 20, 2014
45_2014	C.DA BUFALO	OPPIDO MAMERTINA	RC				X		October 20, 2014
46_2014	C.DA PATINANSERI	OPPIDO MAMERTINA	RC				X		October 20, 2014
47_2014	FEUDO	LIMBADI	VV				X		October 20, 2014
48_2014	C.DA CAVALIERE	OPPIDO MAMERTINA	RC				X		October 22, 2014
49_2014	C.DA FERRANDINA	OPPIDO MAMERTINA	RC				X		October 24, 2014
50_2014	C.DA PAPAZZO	VAROPODIO	RC				X		October 31, 2014
51_2014	C.DA BUSALE	CINQUEFRONDI	RC				X		October 31, 2014

Aethina tumida outbreaks as of October 3, and October 31, 2014



Protection zone 20 km

Aethina tumida outbreaks as of October 3, and October 31, 2014



Surveillance zone 100 km

Aethina tumida

Several other apiaries have been visited, without reporting the presence of any beetle:

135 apiaries within the protection zone (20 km from the infested sites),

155 apiaries within the surveillance zone (100 km)

147 apiaries outside the two zones (Calabria and Sicily)

Inspected apiaries as of 31/10/2014

	Negative	Positive
<i>Calabria region</i>		
Crotone	133	
Vibo Valentia	62	3
Cosenza	77	
Catanzaro	45	
Reggio Calabria	106	48
Total	423	51
<i>Sicily region</i>		
Catania	14	0
Grand total	437	51
Buffer 20 km: 135 negative apiaries		
Buffer 100 km: 155 negative apiaries		
Outside 100 km: 147 negative apiaries		

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

Measured adopted by the Authority (Regional Order)

- Immediate notification of *Aethina tumida*
- Restriction of any movement related to honey bee colonies (IN and OUT)
- Census of apiaries and colonies
- 20 km protection zone:
- census of apiaries
- visit of all apiaries
- visit of the colonies according to 5% expected prevalence
- destruction of the infested apiaries (@2,300 hives)
- if negative, traps should be applied
- traceability of commercial and migratory movement in and out of the zone



Measured adopted by the Authority (Regional Order)

- 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 @30%) is anaerobically stabilized in tunnels and sent to waste dump as not recyclable waste

Measured adopted by the Authority

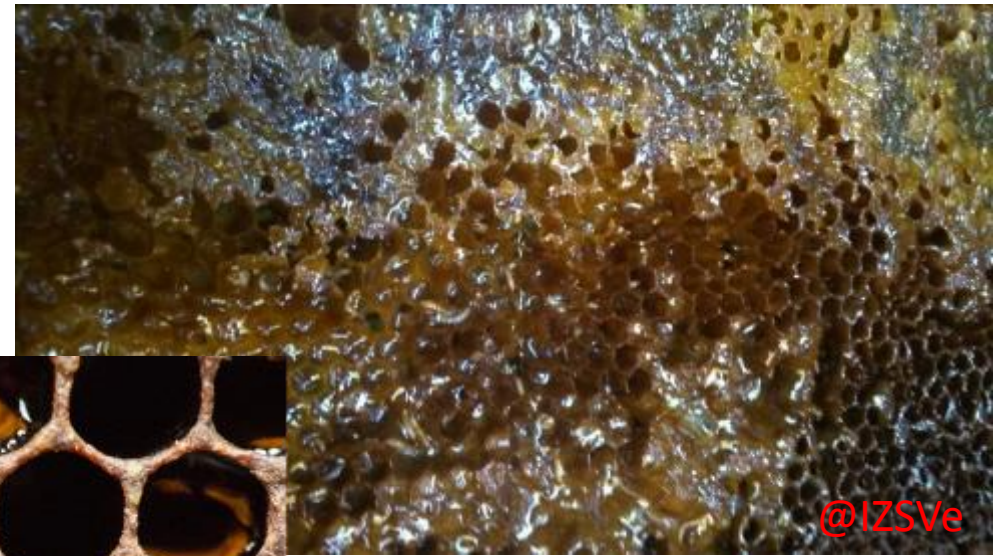
- 100 km surveillance zone:
- census of apiaries
- visit of apiaries selected on the basis of risk analysis (migration in infested areas, honeybees or materials exchanges) or random
- visit of the colonies according to 2% expected prevalence
- destruction of infested apiaries
- if negative, traps should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

Measured in preparation by the Authority

- A Decree is in preparation to define a national surveillance programme for *Aethina tumida*:
- visit of apiaries selected on the basis of risk analysis (migration in infested areas, honeybees or materials exchanges) or random
- visit of the colonies according to 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
- compensation for destroyed apiaries



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Thank you for your attention