

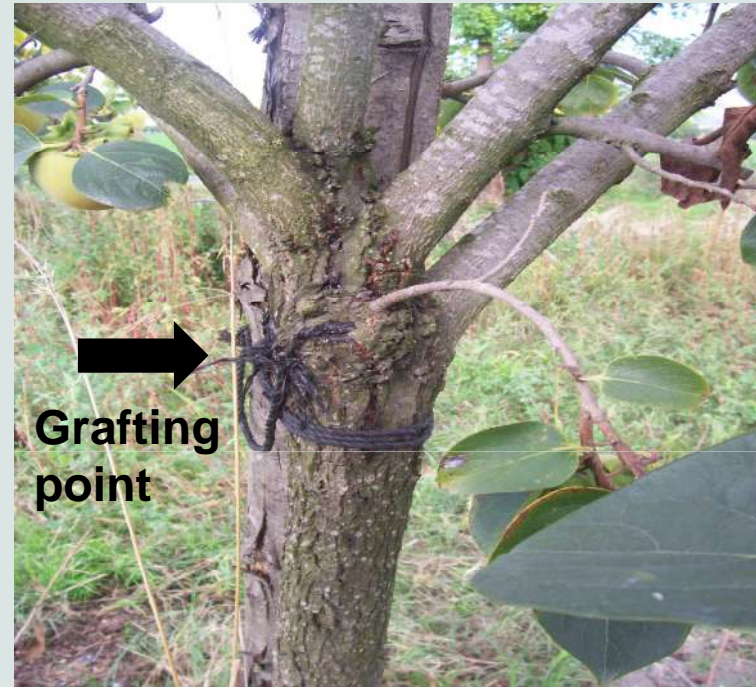
Severe damages by clearwing moths to persimmon orchards in the area of Naples (South Italy)



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Damages by clearwing moths



Clearwing moths attack the grafting point and twigs insertions

Larvae bore tunnels under the bark, damaging the phloem

Plants die after a few years

To devise an effective control strategy, we tried to track the abundance of clearwing moths with pheromone traps

Two species of persimmon clearwing moths have been reported in Italian literature: ***Synanthedon tipuliformis*** and ***Synanthedon spuleri***

Since 2004 we have used pheromones for ***S. tipuliformis*** and ***S. spuleri*** in damaged orchards, but we haven't caught any adult during flight periods

After four years of trials we thought that not these, but other species attacked persimmon

This year we decided to use other pheromones to catch male adults of clearwing moths

In international literature we found another persimmon clearwing comparable with the species occurring in our orchards:

Synanthedon tenuis

But no pheromone specific for these moths is marketed

We obtained from Wageningen Pherobank two pheromones:

1) **SYMY**(Z3Z13-18:Ac + E2Z13-18:Ac), attractive for *S. myopaeformis typhiaeformis* and other species of *Synanthedon*

2) **SYTI** (E3Z13 - 18:Ac + E2Z13 - 18Ac), attractive for *S. tipuliformis* and other species of *Synanthedon*

Flight have been monitored with mass traps and test traps

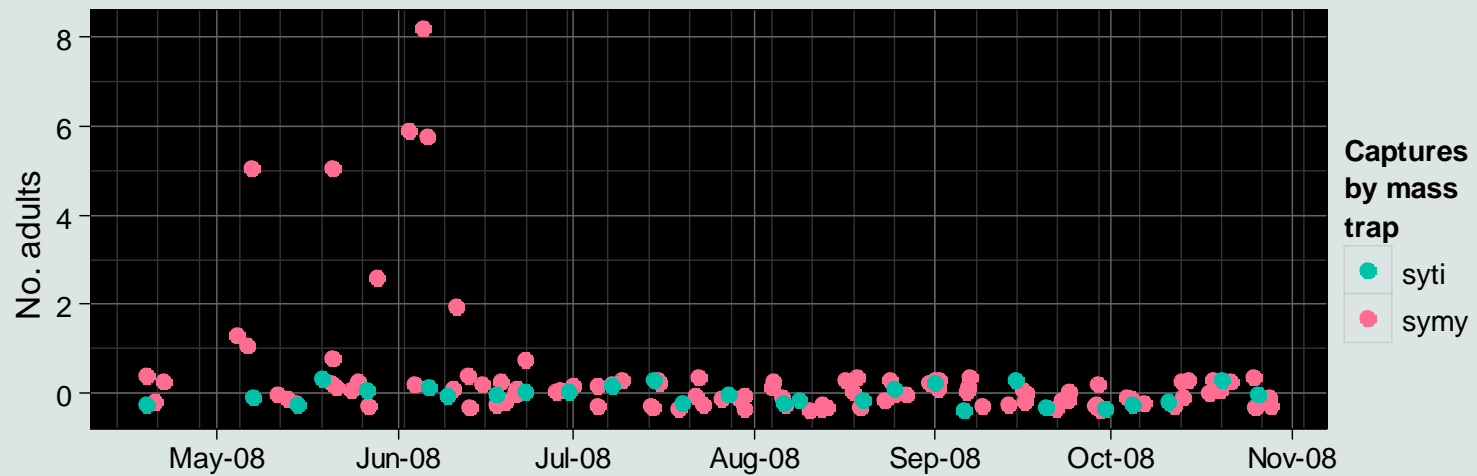
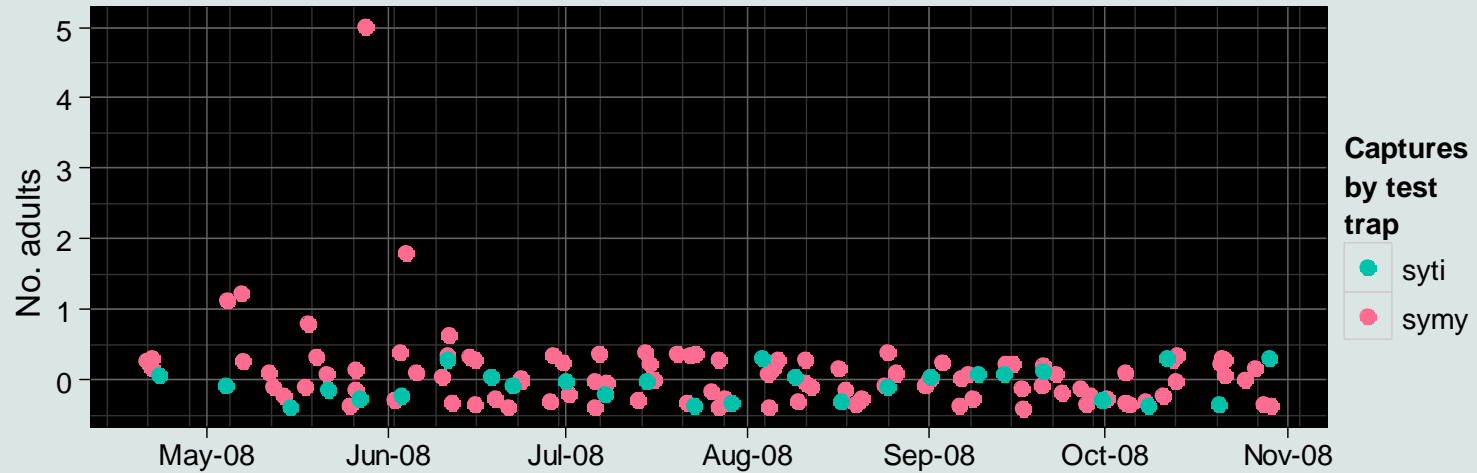
mass trap



test trap



Only the SYMY pheromone caught a number of *Synanthedon tenuis*
(plus a few adults of *Synanthedon myopaeformis typhiaeformis*)



Clearwing moths images

Synanthedon tenuis is very close
to ***Synanthedon tipuliformis***
and to ***Synanthedon spuleri***



S. tenuis



S. spuleri



S. tipuliformis

Clearwing moths photos

- *Synanthedon tenuis* and *Synanthedon myopaeformis typhiaeformis* are quite different.



S. tenuis



S. myopaeformis typhiaeformis

Synanthedon tenuis

Spatenka Atlas: *Sesiidae*



Male

Female

Conclusions

- The clearwing species damaging persimmon orchards near Naples is **Synanthedon tenuis** (Butler 1878), coming from Japan, Korea and China
- Waiting for the specific pheromone, **SYM** lured traps help to find the flight periods of the persimmon clearwing moths
- Even if damage is severe, the parasite population in persimmon orchards is very small, so that mass trapping by **SYM** can reduce it under damaging threshold