



EPPO/IOBC/FAO/NEPPO

Joint International Symposium on management of *Tuta absoluta*
(tomato borer)

Agadir, Morocco, November 16-18, 2011



Spatiotemporal distribution of *Tuta absoluta* Mey. (*Lepidoptera: Gelechiidae*) in tomato greenhouses on the coast of Algiers.

Distribution spatiotemporelle
de *Tuta absoluta* Mey.
(*Lepidoptera: Gelechiidae*)
sous serre de tomate sur le littoral Algérois.

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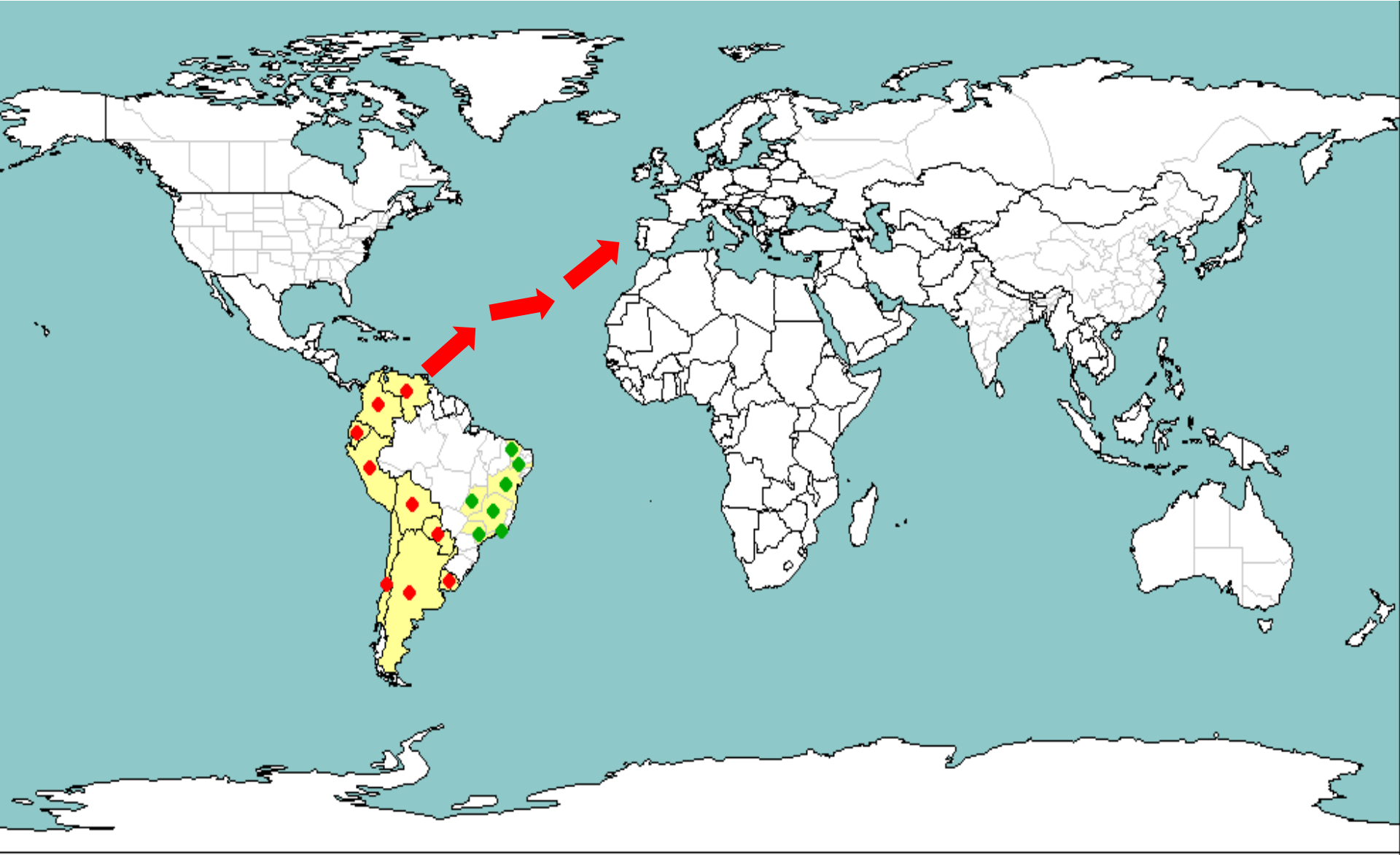


INTRODUCTION



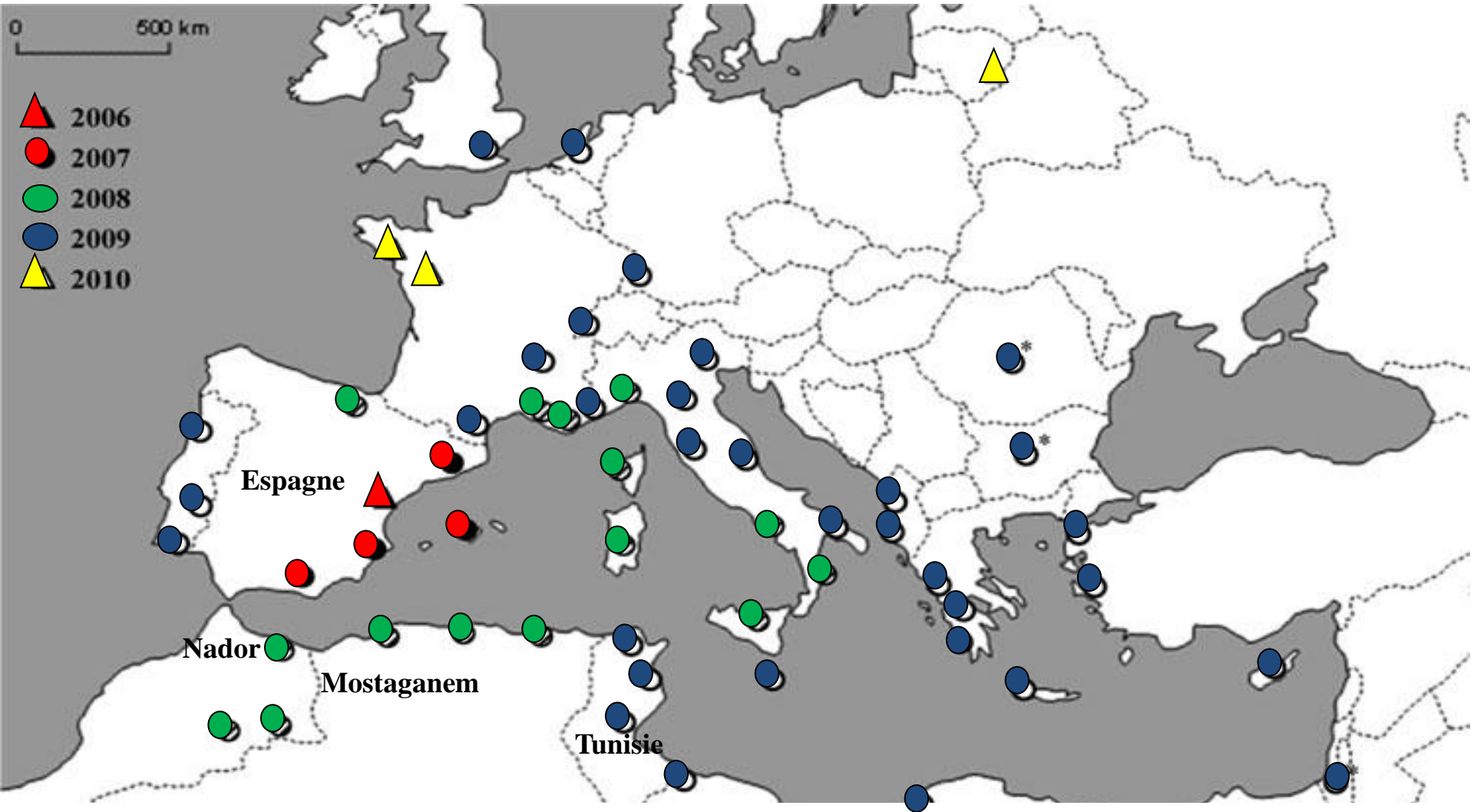


ORIGIN





DISTRIBUTION IN THE MEDITERRANEAN AREA





DAMAGE



Damage to leaves



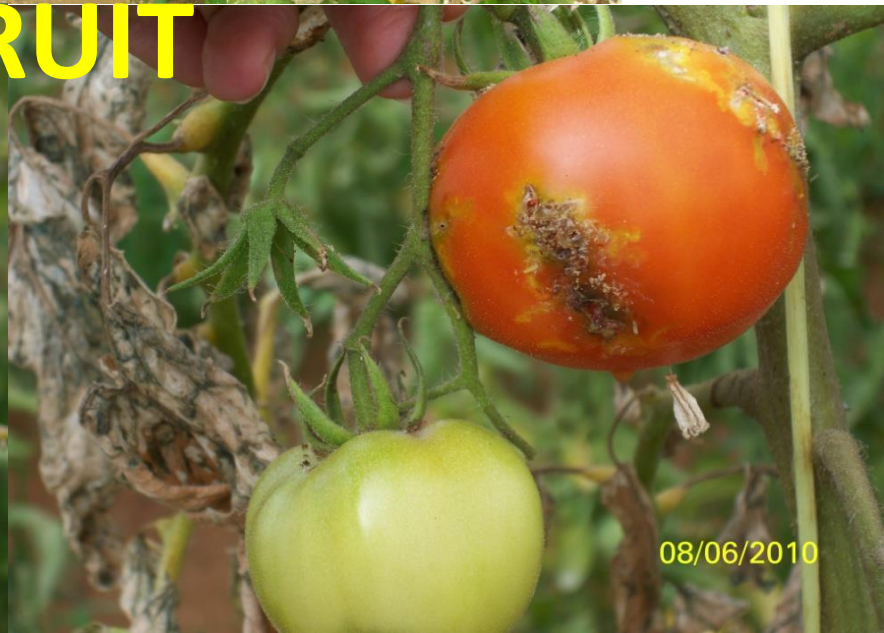
Damage to stem



DAMAGE



FRUIT





HOST PLANTS OF *Tuta absoluta*



Tomato

Lycopersicon esculentum



Symptoms on eggplant



Symptoms on potato



Symptoms of black nightshade



OBJECTIVES





MATERIALS AND METHODS



The experimental greenhouse

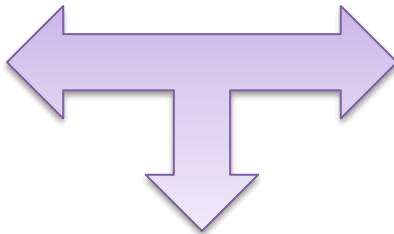
Tomato variety
Agora



Study of population dynamics of *T. absoluta*



adult male



Pheromone trap



plate stuck



Synthetic pheromone



Embryonic and larval population



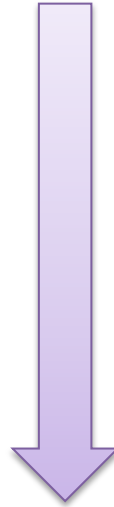
Random sampling of three leaves per plant on 10 plants taken at random on the plot.



The counting of eggs and larvae of different stages was carried out under a binocular microscope.



Statistical analysis



Logiciel ANOVA

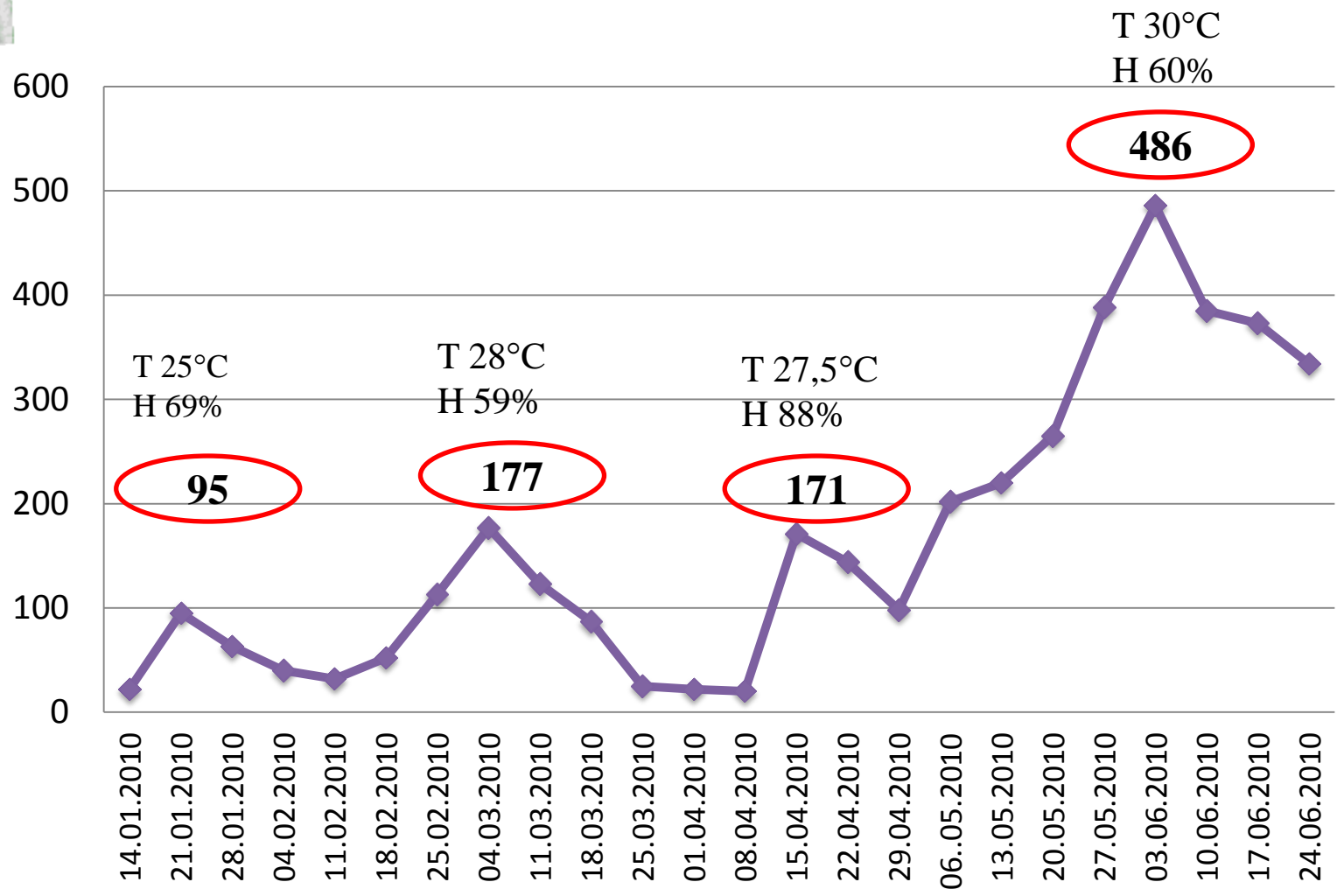


RESULTS





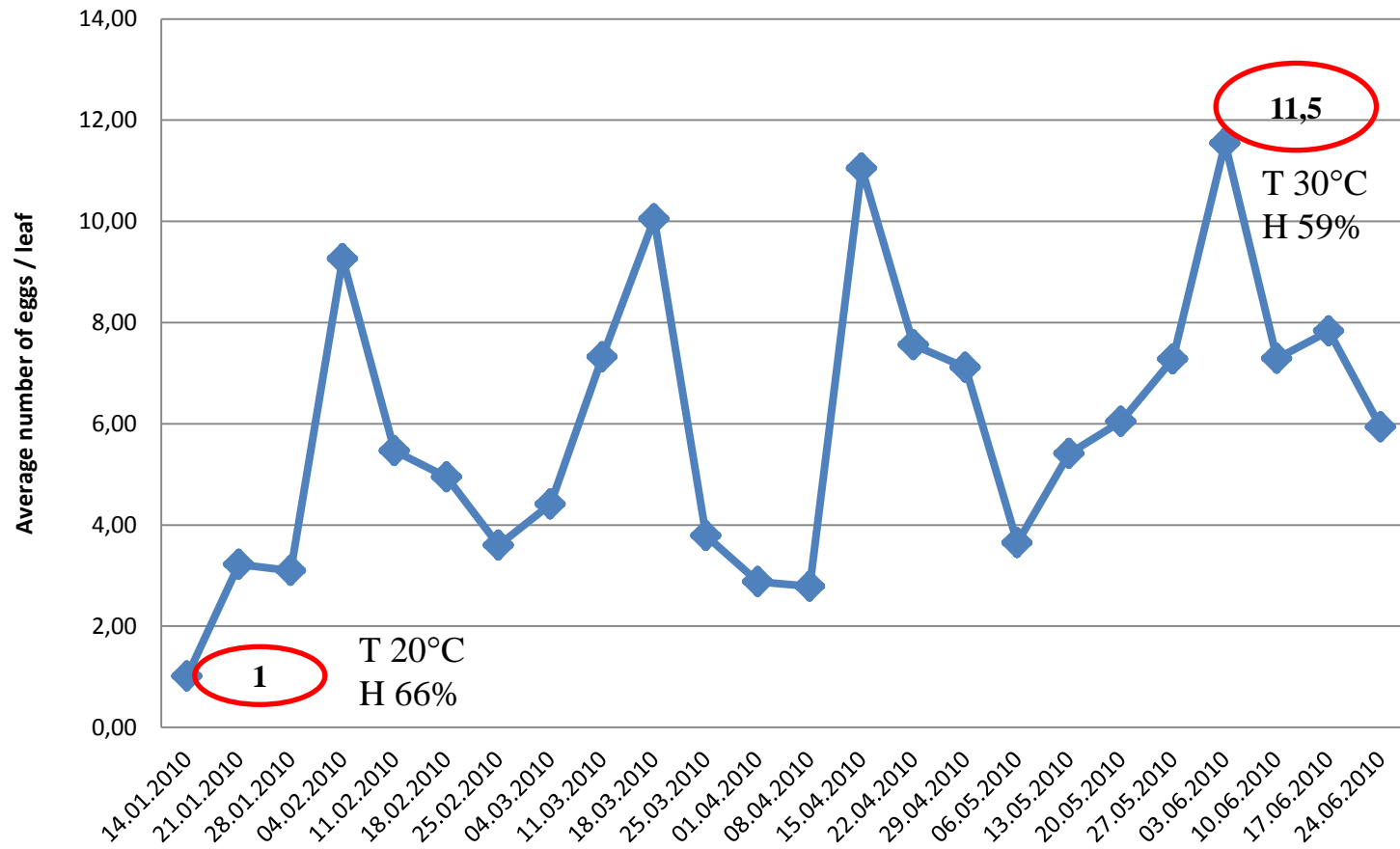
Number of adults captured



Temporal evolution of the male imaginal population



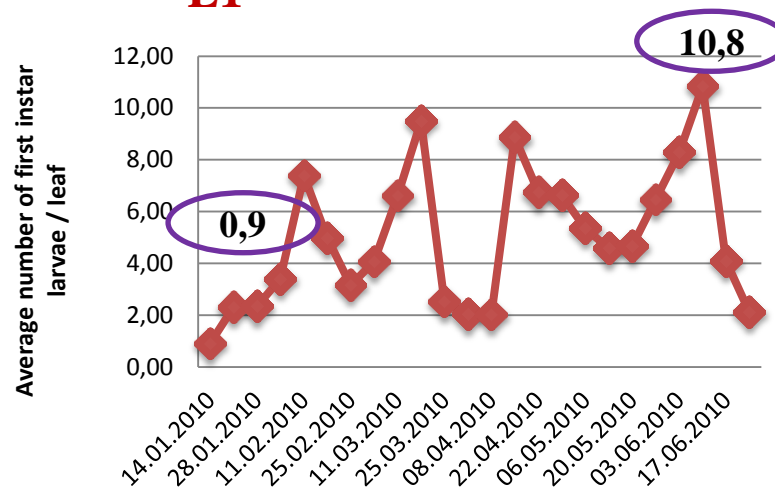
Evolution of the egg populations



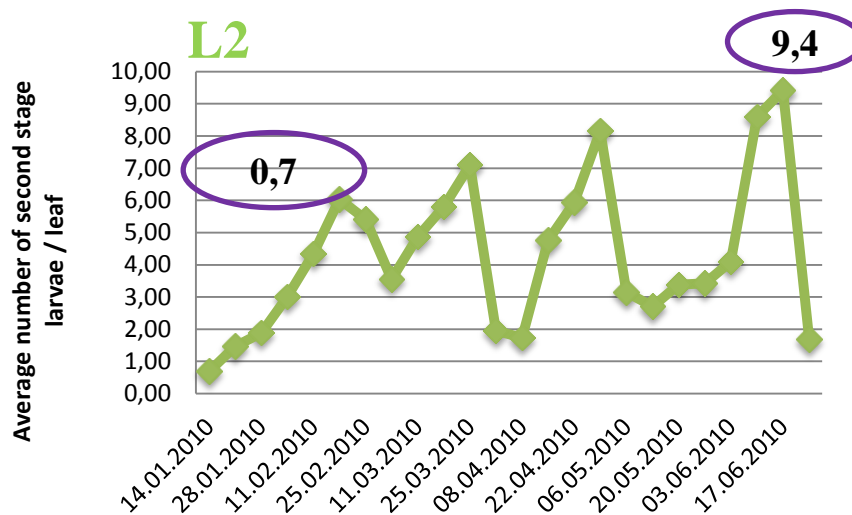


Evolution of larval populations

L1

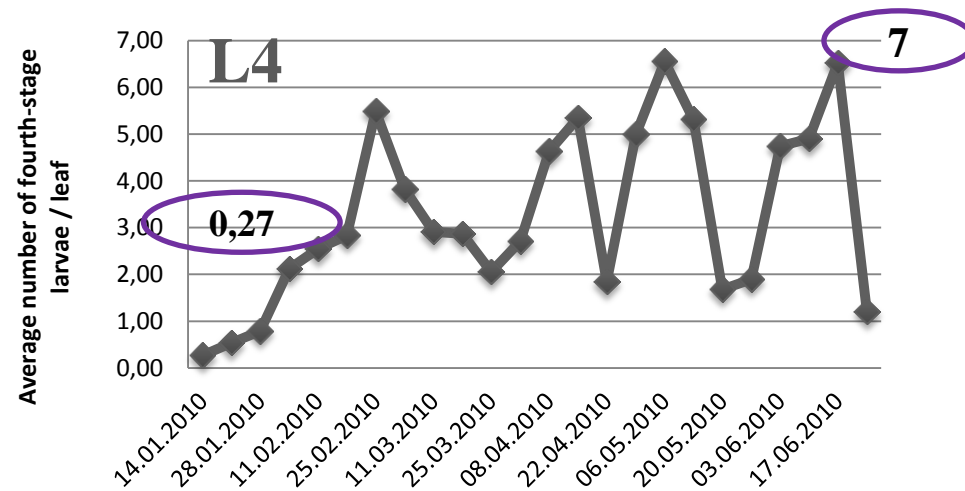
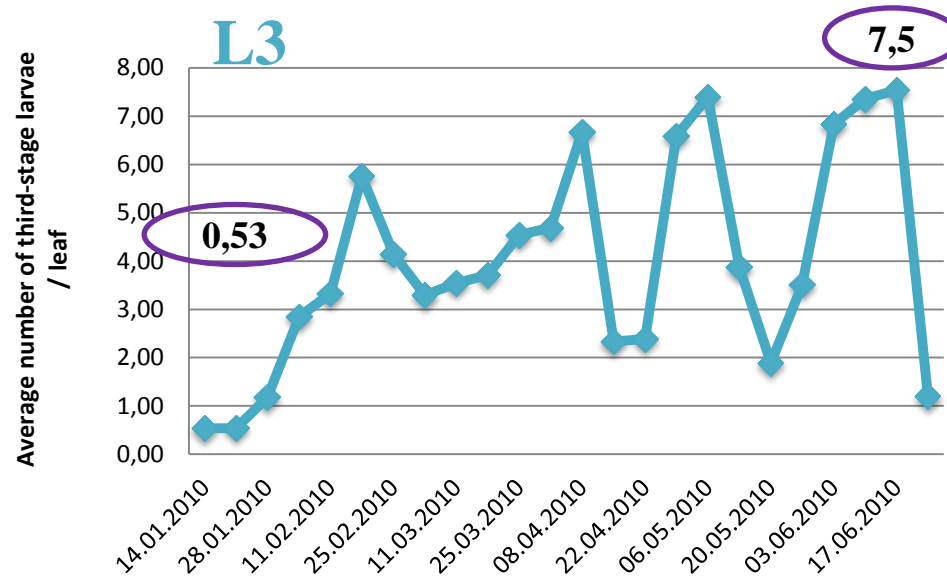


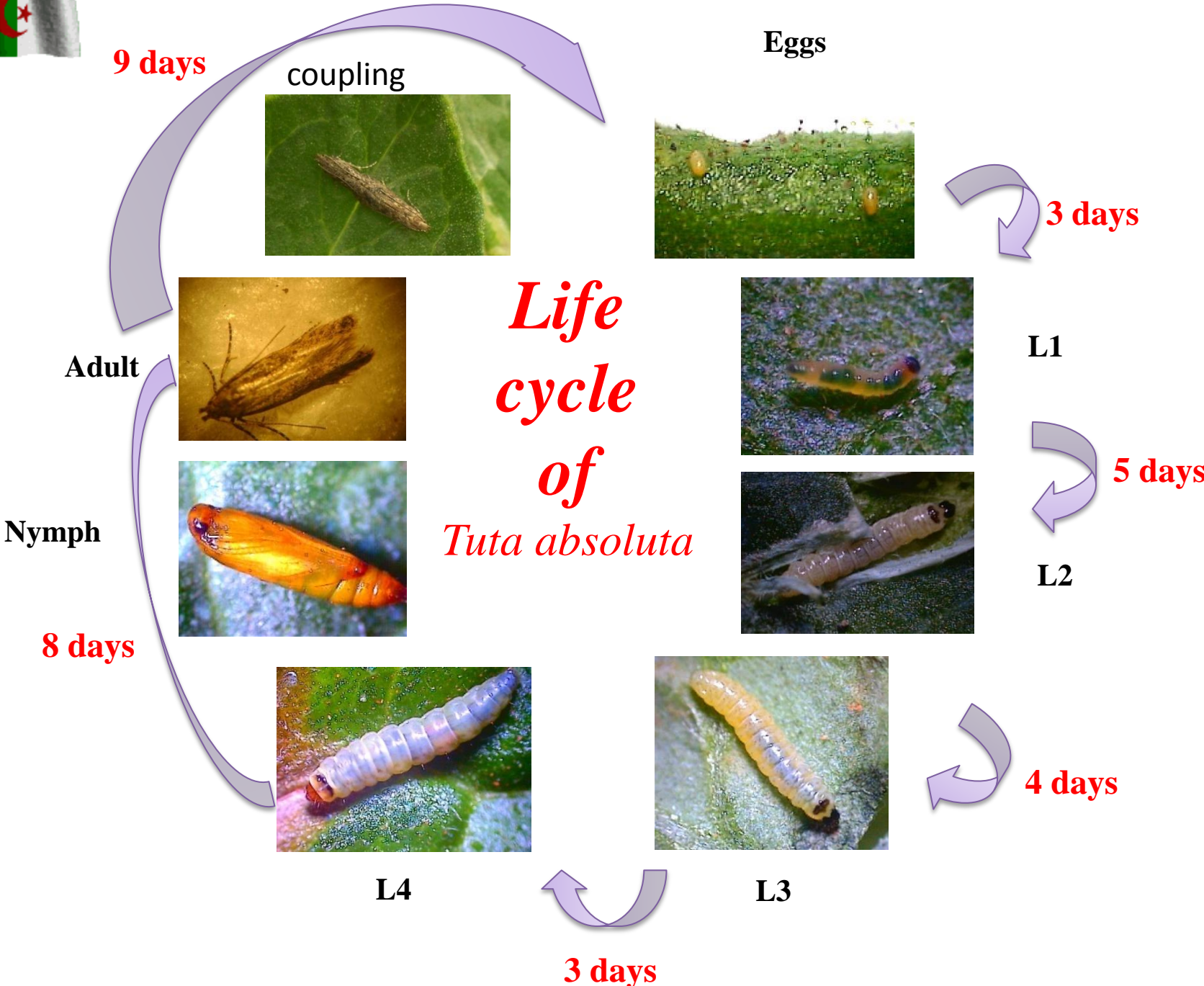
L2





Evolution of larval populations





9 days

coupling



Eggs



3 days

L1



5 days

L2



4 days

Adult



Nymph



8 days

Life cycle of Tuta absoluta



L4



3 days



L3



NATURAL MORTALITY



EGGS



5 à 20%
(T= 20 à 32°C et
H% = 56 à 88%)



LARVAL POPULATION



- 8 à 25% → L1
- 4 à 20% → L2
- 5 à 20% → L3



PREDATORS



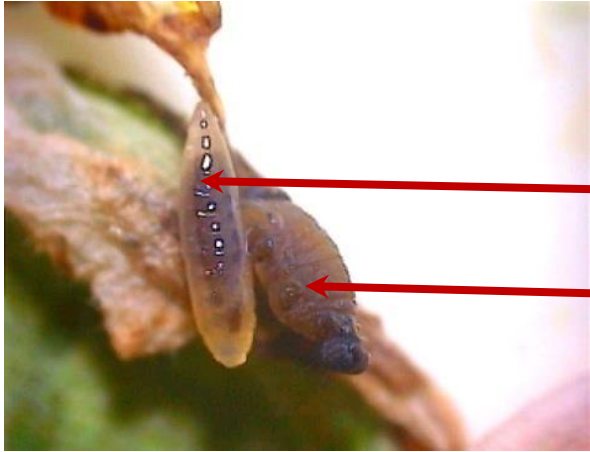
Nesidiocoris tenuis



Macrolophus caliginosus



PARASITOIDS



Larva of parasit

Larva of *Tuta absoluta*

larva



Adult



nymph

Different stages of parasitoid (Hymenoptera : Bethilidae)



CONCLUSION





THANK
YOU