

Wildlife Parasitoids of Citrus Pest (Orange and Lemon Trees) in Mostaganem

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Introduction:

Parasitoid characterize insects that develop as larvae on the tissues of other arthropods (typically insects) and then kill them [1]. Adult female parasitoids aggressively search for hosts and lay their eggs in, on, or near them. The larvae begin feeding on host tissues as soon as they hatch and finish their development either within the host (endoparasitoids) or on the host (ectoparasitoids). Solitary parasitoids grow in or on their hosts alone, whereas gregarious species grow in groups from eggs produced during one or more ovipositions. Insect parasitoids account for at least 14% of the world's one million or so insect species [3]. The adult female parasitoid usually locates and oviposits into the host. Most parasitic species are limited to a single life stage (egg, larva, pupa, adult) and a small number of species. Shared ecology, host taxonomy, and whether the parasitoid develops internally or externally in its host are all factors that determine host range [4,6]. Because of their diversity and the high levels of parasitism they frequently impose on host populations, parasitoids have become popular subjects for ecological research. From the practical standpoint, they have proven to be extremely effective biological control agents against agricultural pests. This research considering be sufficient for an effective first step in learning about auxiliary insects in order to establish proper breeding methods and then carry out a biological control.

Material and Method

1- Presentation of the sites:

The current project was carried out on three Citrus orchards in the Mazagran region, totaling 30 trees : Mostaganem Algeria .

2- Sampling method:

For lemon and orange trees, the process entails collecting three leaves from each of the tree's four cardinal points : well as the center. The samples are analyzed in the laboratory using a binocular magnifying glass.

All adult parasitoid was placed in alcohol 70 % for identification.

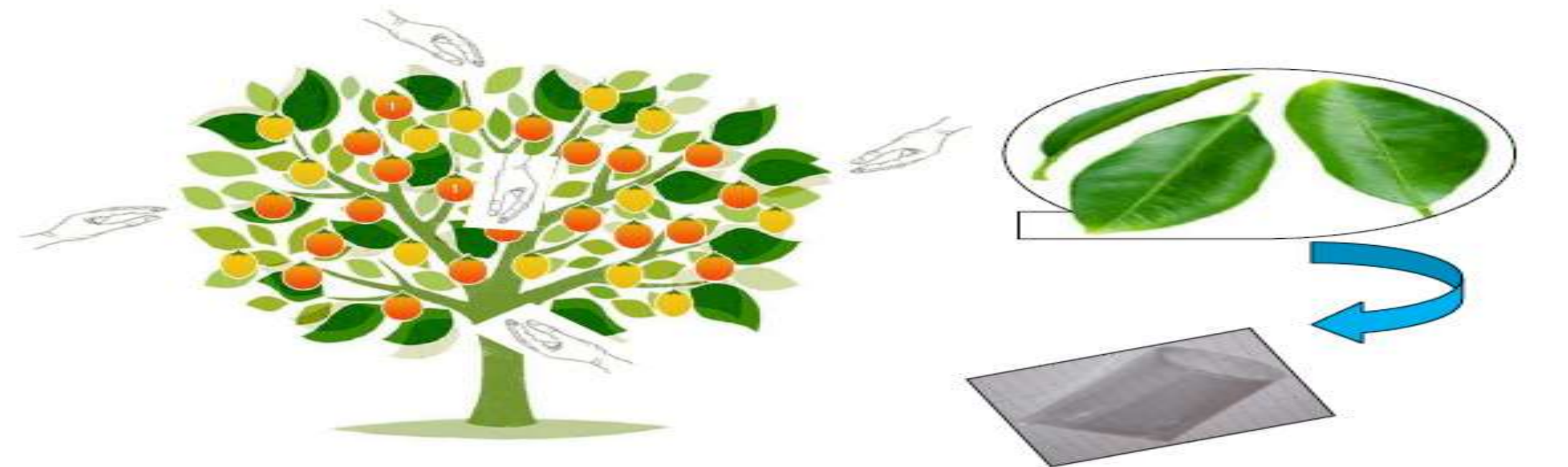


Fig1: Representative diagram of sampling method

Lifestyle of parasitoids



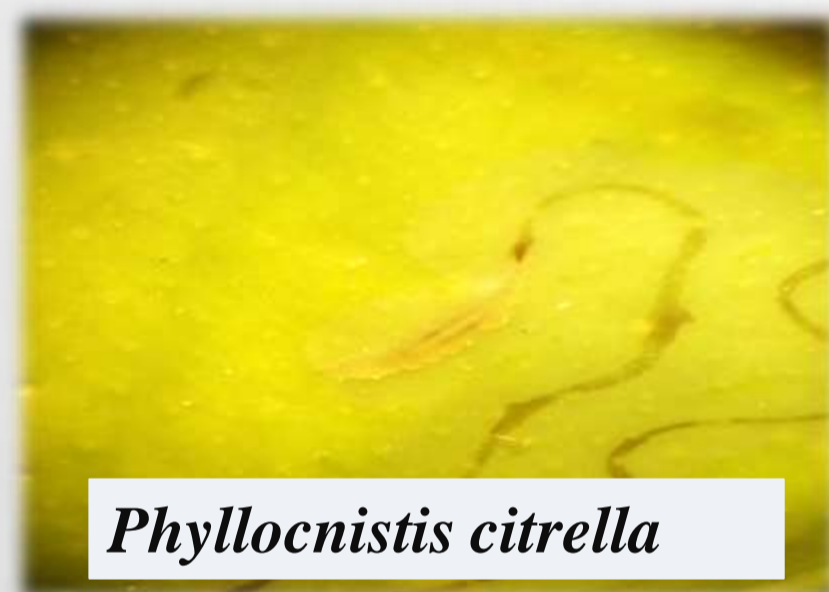
Fig 2: Gregarious parasitoid



Fig 3: Solitary parasitoid

Some species of parasitoids with their host

1: Leaf miner host



Phyllocnistis citrella



Ectoparasitoid pupa



Ectoparasitoid adult

2: Cochineal host



Parlatoria ziziphi



Pupa *Encarsia* sp.



Adult *Encarsia* sp.



parlatoria pergandi



Pupa *Aphytis* sp.



Adult *Aphytis* sp.

3: Aphid host



Aphis spiraeicola



Mummy of aphid



Endoparasitoid



Aphis gossypii



Endoparasitoid

Results:

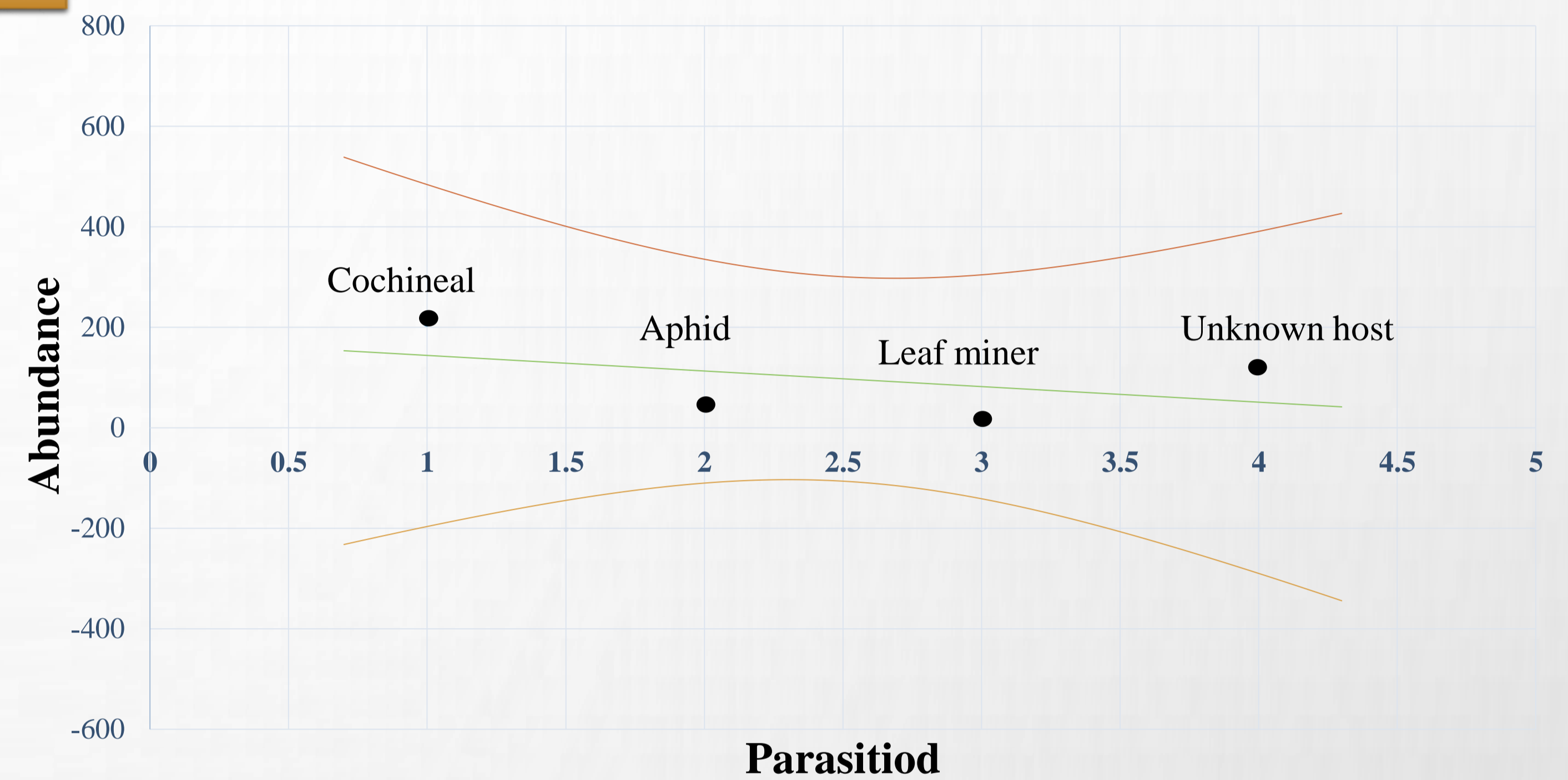


Fig 4: Parasitoid abundance per host

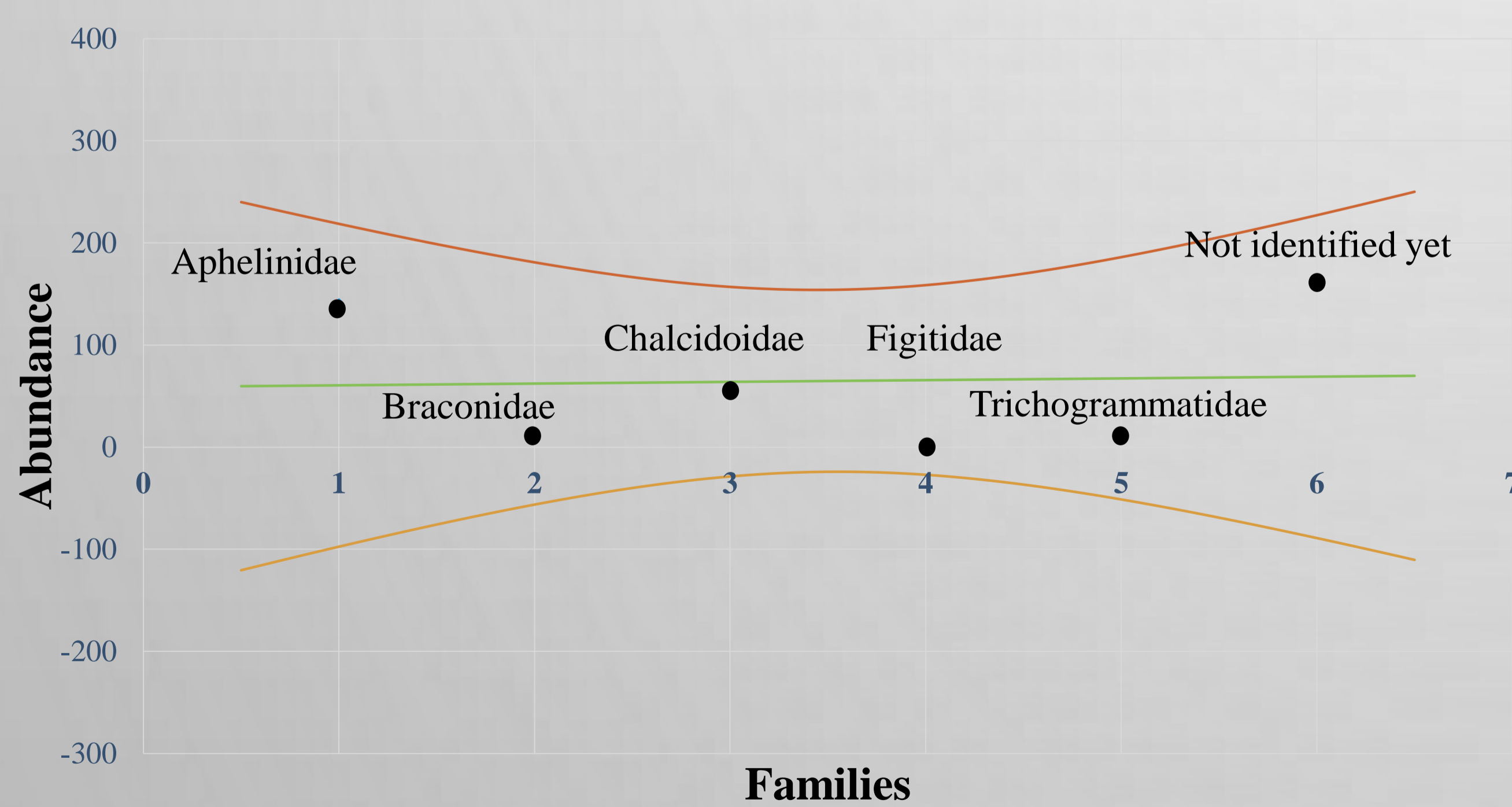


Fig 5: Parasitoid abundance per families

Our findings are similar to those of Elekçolu, 2007 in genus *Aphytis*, while are different in *Trichogrammatidae*, *Braconidae*, *Chalcidoidea*, *Figitidae* families. Despite sharing the same braconidae family as Vayssières 's, the genera discovered in this study are distinct. In the genus he discovered with ours, Molina-Ochoa 's is radically different.

Conclusion

Citrus orchards of the study location have an unusual auxiliary fauna that plays an essential role in the control of dangerous insect outbreaks. Citrus pest biological control in the Mazagran region, possibly using auxiliaries developed through suitable breeding and release tactics. On the other hand, we must rationalize the chemical applications in our orchards to protect these auxiliaries based on the temperature, duration of release, and number of persons of each auxiliary. These findings could be enough to achieve successful biocontrol.

Acknowledgment

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