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ATTESTATION DE PARTICIPATION

Nous, soussignés, président du séminaire et directeur du laboratoire LBBDD, attestons que :

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A présenté une **communication affichée** intitulée : **Biodiversity of fruit flies in some agroecosystems in Algeria**

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Biodiversity of fruit flies in some agroecosystems in Algeria

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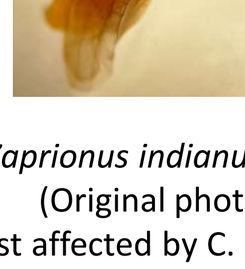

Introduction

The importance we attach to fruit flies in this work is determined by their great ecological, agronomic and economic interest. A number of works have been carried out all over the world. These include the work of Deguine and *al* (2015) and of El Harym & Belqat,(2017) also of De Meyer M & White I.M., (2013). In Algeria, on the other hand, little work has been done in this area, and we cite the work of Khaldi and *al* (2021) and of Rahat et al (2021). This is why we are particularly interested in studying Biodiversity of fruit flies in some agroecosystems in Algeria. The objective of this work is:

*Prepare a list of fruit flies and assess their attacks in a number of orchards in our study region.

1. Presentation of the study area:

Fig.1–Geographical situation of study area (Ain touilla) Source: Google earth pro.

The Ain touilla (Khenchela) region It is bounded by :
To the north : Oued Nini.
To the East : Dhelaa (Om Elbouagi).
To the South :Bedjen (Tebassa).
To the Oust :Khenchela city.

Materials & Methods

1. - Description of the Study station:

We selected two olive orchards:

Fig.2: General view of the orchards (Orchard 01:Left, Orchard 02:right) Source: Google earth pro.

2. – Trapping methods:

We prepared with six holes (diameter 3mm) and were then hung in the canopy of the host tree. The traps were randomly distributed on the borders and in the center of the orchard. Trapped fruit flies were collected and counted 20 days after setting the trap.

Fig.3: Trap used in both orchards (Original photo).

This method is used to get a more or less clear idea of the flies in the environments sampled (Fig. 3)

Results and discussion

The results of the flies captured indicated the presence of Two families Drosophilidae and Tephritidae which is represented with the well-known Mediterranean fruit fly, *Ceratitis capitata* ((Wiedemann). The total number of individuals is 108. As for the second familly we found only one species *Zaprionus indianus* (Gupta, 1970) with a total number of 1696 individuals.

Fig.4: *Ceratitis capitata* (weid.1824) (Original photo)

Fig.5: *Zaprionus indianus* (Gupta, 1970) (Original photo)

Orchard number one seems to be the most affected by C. capitata than the other orchard (100 vs.8 individuals). Chergui et al (2020) mention that C. capitata has nine generations in northern of Algeria (Mitidja plain) in relation to the maturity of each species of fruit trees in the orchards. on the other hand orchard number two is the most affected by *Z. indianus* than the orchard number one(1348 vs.348 individuals). In northern Africa Z. indianus has been reported from many localities in Egypt (Yassin & AbouYoussef 2004).

Conclusion

Our study with a view to determine the biodiversity of fruit flies present in olive trees in eastern Algeria revealed a low diversity of Tephritidae. The prospect of knowing even more about the range of insect pests, especially fruit flies because they can occasionally cause serious damage to different types of fruit.

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