

The Hidden Pollinators of Inner Hardanger

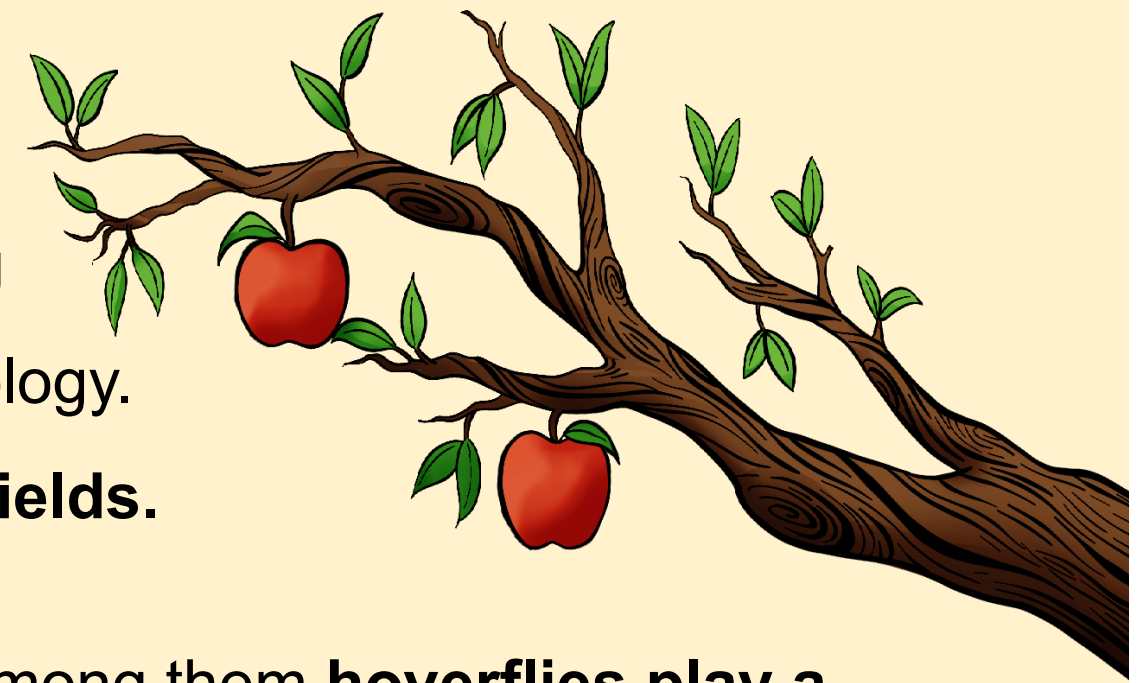
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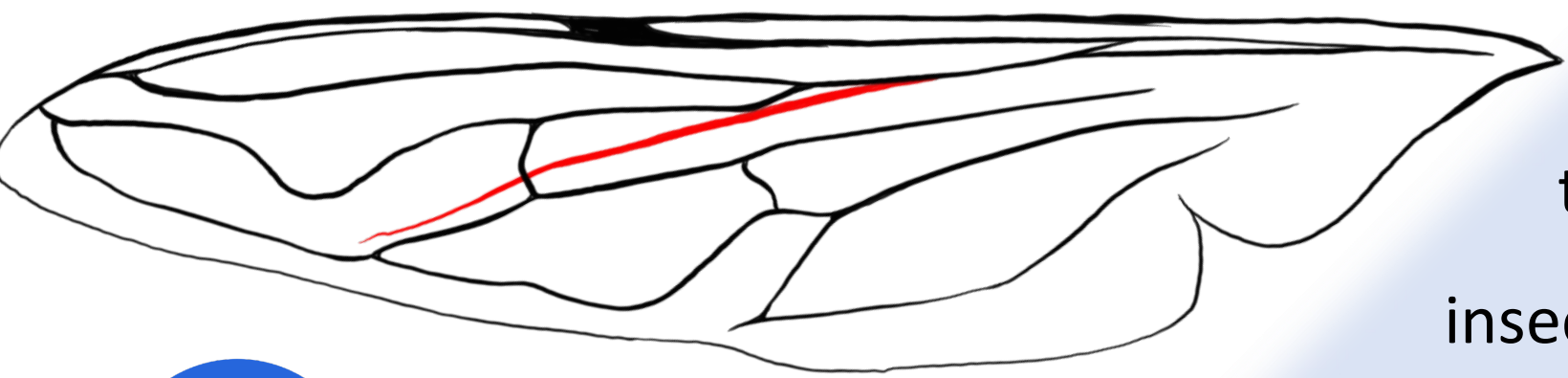
The importance of Pollinators

The investigation of plant-pollinator interactions is essential for our **understanding of the importance of pollinator diversity** and how it ties into the surrounding ecology. Farmers have often kept **Honey bees *Apis mellifera*** as a way to improve fruit yields.



The *Syrphidae* family contributes to a range of ecological services in agriculture, among them **hoverflies play a large role in the pollination of flowers** and have close ties to the Hymenoptera order in the form of Mimicry. One of the project aims of APPLECore is understanding **how the diversity of pollinators in Apple -and Pear Orchards affect fruit yield in the autumn**. The main focus of the project has been on the pollinators of the Hymenoptera order.

The Hoverfly Family: The Sidelined Pollinators



Hoverflies are a group of flies that are known for their **mimicry** on the insect order Hymenoptera. Mimicry is the adaptation of an organism to look like something it's not.



Fig. 1: **False wing vein** from the Tapered Drone Fly (*Eristalis pertinax*)



Did you know?

All hoverflies have a **false wing vein** called **Vena Spuria**

Hoverflies also pollinate, but little research has been focused on them.

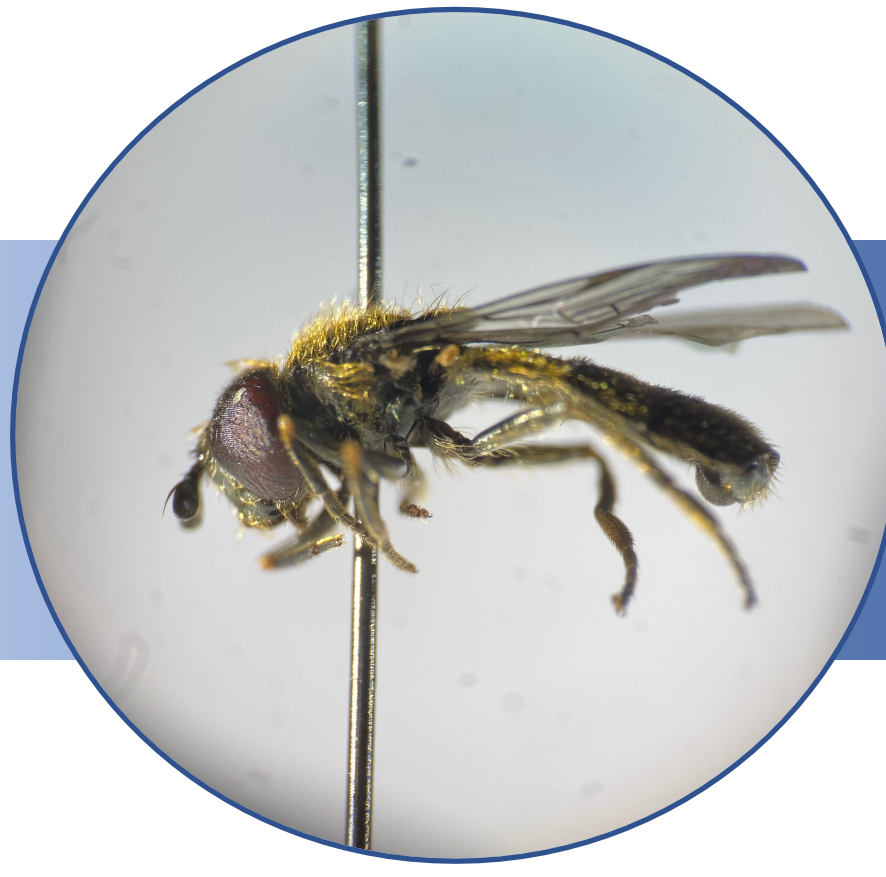
Hymenoptera with their mimics

Common furrow bee



Lassioglossum calceatum

Common furrow bee mimic



Pipizella vinduata

Stinging wasp



Vasupula vulgaris,
photo: Olger Krischer

Large Wasp Hoverfly



Chrysotoxum fasciolatum

What is the diversity and abundance of Hoverflies in Apple Orchards in the spring?

- 1 Some research suggests a connection between hoverfly –and hymenoptera diversity and abundance.
- 2 **Pantraps** were placed in strategic locations in Apple orchards in Hardanger and used to collect Pollinators throughout the spring.
- 3 Species **identified** and **pinned** in the lab. Species identification double checked.
- 4 **Data analysed to answer these questions:**
 - **Where** hoverflies are the most diverse and abundant?
 - **When** they are the most active?

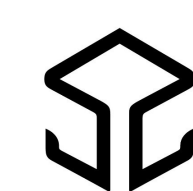


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References:
Doyle, T. et al. (2020) 'Pollination by hoverflies in the Anthropocene'.
Krischan, O. (2021) *Common wasp (Vespa vulgaris)*, Kerfdir.
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