

**Open Peer Review on Qeios** 

## Sawflies (Insecta: Hymenoptera).

Carlos Henrique Marchiori<sup>1</sup>

1 Instituto Federal Goiano

Potential competing interests: No potential competing interests to declare.

## Sawflies (Hymenoptera)

Sawflies are so called due to the appearance of the ovipositor, used by females to pierce plants to deposit eggs. Its larvae are herbivorous, developing on a wide variety of plants, being quite specific in the type of plant used as food. Larvae hatch from eggs, which have a voracious appetite. They feed on the inner part of the leaves that remain intact, they only eat the tissue above. The plant weakens due to the loss of leaf area for photosynthesis. [1-5].

The larvae of several species exhibit the behavior of undermining the leaves, curling them, or forming galls. Three families are strictly xylophagous, and one family is parasitic [1-5].

Adults are predators, mainly of other insects, but many also feed on nectar. Large populations can cause economic losses in cultivated areas and forests. Flies severely damage the leaves of the host plant. Large populations can cause economic losses in cultivated areas and forests [1-5].

The turnip sawfly feeds on plants in the Brassicaceae family, which includes turnips, and cabbage, among others. When they are about to become pupae, they burrow into the soil, build a cocoon, and remain there until they become adults [1-5].

Sawfly larvae can appear in clusters, walking in the pasture, a habit that suggests the ability to seek more food and protection against predators but can cause poisoning in animals that happen to devour them, such as cattle, goats, or others. Symptoms of poisoning are weakness, depression, muscle tremors, excitement, aggression, and death [6].

## References

[1] Müller C, Agerbirk N, Olsen CE, Boevé JL, Schaffner U, Brakefield PM. Sequestration of host plant glucosinolates in the defensive hemolymph of the sawfly *Athala rosae*. Journal of Chemical Ecology. 2001] 27(12): 2505–2516.

[2] Müller C, Boevé JL, Brakefield PM. Host plant derived feeding deterrence towards ants in the turnip sawfly Athalia rosae. In: Nielsen J.K., Kjær C., Schoonhoven L.M. (eds) Proceedings of the 11th International Symposium on Insect-Plant Relationships. Series Entomologica, vol 57. Springer, Dordrecht. 2002.

[3] Naito T, Suzuki H. Sex determination in the sawfly, *Athalia rosae ruficornis* (Hymenoptera): occurrence of triploid males. Journal of Heredity. 1991] 82(2): 101–104.



[4] Oishi K, Sawa M, Hatakeyama M, Kageyama Y. Genetics and biology of the sawfly *Athalia rosae* (Hymenoptera). Genetica. 1993; 88(2–3): 119–127.

[5] Brandão FC. Series with larvae of serra or portasierra flies [Internet]. Mountain View: Flickr Inc.; @2009 [cited 2024 Feb 11]. Available from <a href="https://www.flickr.com/photos/flaviocb/3273531933">https://www.flickr.com/photos/flaviocb/3273531933</a>.

[6] Hillermann WW. Family Pergidae and subfamily Perreyiinae [Internet]. Mountain View: Flickr Inc.; @2009 [cited 2024 Feb 11]. Available from https://www.flickr.com/photos/37957896@N03/6610406895.