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Summary

I am an agroecologist with a background in ecology and evolution. I am interested in understanding the importance of biodiversity, agricultural practices and their interaction on agricultural production. My current research area focus on the importance of pollinators and pests control in two mass flowering crops, oilseed rape and sunflower, through measuring pollinators benefits or pest damage to yield (quantity and quality) and economic return to farmers.

Area of interest

Ecosystem services in farmland, Plant-pollinators interaction, Agricultural Sciences, Landscape ecology, Pollinator ecology, Evolutionary ecology

Education

- 2015-2018: PhD in “Population ecology and biology”, University of Bourgogne, France
- Thesis: *“Contribution of pollinators to oilseed rape and sunflower production in the zone atelier “Plaine et Val de Sèvre”* at French National Centre for Scientific Research (CEBC-CNRS) and the National Institute of Agricultural Research (INRA) at Dijon, France under the supervision of Dr. Vincent Bretagnolle and Dr. Sabrina Gaba
- 2012-2014: MSc in “Evolutionary biology and ecology”, University of Montpellier, France
- Thesis: *“Evolution of virulence in plant parasitic nematode”* at INRA Sophia Antipolis under the supervision of Dr. Vincent Calcagno and Dr. Ludovic Mailleret
 - Thesis: *“Evolution of dispersion in fragmented landscapes”* at the center for functional ecology and evolution (CEFE) of Montpellier under the supervision of Dr. François Massol and Dr. Fabien Laroche
- 2009-2012: BSc in “Population ecology”, University of Bourgogne, France

Research Positions

- 2018: Post-doc position: *“Effect of surrounding landscape and farmers practices on pollinators presence in crop fields”* at CEBC-CNRS and INRA under the supervision of Dr. Vincent Bretagnolle and Dr. Sabrina Gaba.

Other work experiences

- 2011-2014 (summer): Reception officer for Dijon Cereales (agricultural cooperative), France
2011-2012 (summer): Technical officer for French waterways (Voie Navigable de France), France

Technical skills:

Applied statistics with R (advanced): *Spatial model, Generalized mixed model, Multivariate analysis (ACP, RDA), Structural equation modelling (PLS-PM), Mathematical modeling (epidemic model)*
Others IT: *QGIS (Intermediate), Windows office (Advanced), C++ (Beginners)*
Field work: *Creation of experimental protocol and data collection*
Language: *French (native), English (Read: fluent, written and oral: intermediate)*
Project management: *Communication and presentation*
Others: *Driving license*

Peer-reviewed articles

Perrot, T., Gaba, S., Roncoroni, M., Gautier, J., Saintilan, A., & Bretagnolle, V. (2019). **Experimental quantification of insect pollination on sunflower yield , reconciling plant and field scale estimates.** *Basic and Applied Ecology*, 34, 75–84.

Perrot, T., Gaba, S., Roncoroni, M., Gautier, J.-L., & Bretagnolle, V. (2018). **Bees increase oilseed rape yield under real field conditions.** *Agriculture, Ecosystems & Environment*, 266, 39–48.

Nilusmas, S., Mercat, M., **Perrot, T.**, Touzeau, S., Calcagno, V., Djian Caporalino, C., Castagnone-Sereno, P. and Mailleret, L. (2017). **A multi-seasonal model of plant-nematode interactions and its use to identify durable plant resistance deployment strategies.** *Acta Hort.* 211-218

Laroche, F., Jarne, P., **Perrot, T.**, & Massol, F. (2016). **The evolution of the competition-dispersal trade-off affects α - and β -diversity in a heterogeneous metacommunity.** *Proceedings of the Royal Society B: Biological Sciences*, 283(1829).

Articles in review or in preparation:

Catarino, R., Bretagnolle, V., **Perrot, T.**, Vialloux, F., & Gaba, S. **A nature-based solution in practice: ecological and economic modelling shows pollinators outperform agrochemicals in oilseed crop production** (in review in *Proceedings of the Royal Society Biology*)

Perrot, T., Bretagnolle, V., Febvret, V., Matejcek, A., Grégoire, S. & Gaba, S. **Honeybees improve oil quality of oilseed rape**

Perrot, T., Gaba, S., Roncoroni, M., Gautier, J.-L., Saintilan A., Vialloux, F. & Bretagnolle, V. **Relative contribution of landscape and land use on biodiversity and crop production**

Reviewer:

Journal of apicultural science

Conference:

Perrot, T., Gaba, S., Roncoroni, M., Gautier, J.-L., Saintilan A., & Bretagnolle, V. (2018). **Pollinators contributions to crop production in two important mass flowering crops: empirical and experimental assessments under realistic field conditions over four years.** SFE 2018: International conference on Ecological Science.

Organiser of Ecology and Agriculture Summit for Young Scientist (2017)

Perrot, T., Gaba, S., Roncoroni, M., Gautier, J.-L., Saintilan A., & Bretagnolle, V. (2016). **Experimental assessment of insect pollination on rape seed yield in real field conditions demonstrates positive effect of wild bees.** SFE 2016: International conference on Ecological Science.

Thesis supervision:

Quentin Van Hecke for MSc Degree (2016), Thesis: “*Impact of pollinators on oilseed rape pollination*”

Alexandra Cotel for MSc Degree (2016), Thesis: “*Contribution of farming practices and pollinators to oilseed rape yield*”

References:

Vincent Bretagnolle, Vincent.bretagnolle@cebc.cnrs.fr

Sabrina Gaba, sabrina.gaba@inra.fr