

C. LAVIGNE

LIST OF SCIENTIFIC PUBLICATIONS (June 2022)

o Conservation biological control and spatial ecology of biodiversity (including pests) in agro-ecosystems

2022

Bailey, L.D., van de Pol, M., Adriaensen, F. .. Lavigne, C. et al. (40 authors) (2022) Bird populations most exposed to climate change are less sensitive to climatic variation. *Nature Communications* 13, 2112. <https://doi.org/10.1038/s41467-022-29635-4>

Bouvier JC, Boivin T, Lavigne C. (2022) Single-row exclusion nets: an alternative pest control method with no detectable impact on breeding bird assemblages in orchards bordered by hedgerows. *Agronomy for Sustainable Development* 42, 23. <https://doi.org/10.1007/s13593-021-00743>

Collard B., Tixier Ph, Carval D, Lavigne C., Delattre T. (2022) Assessing the effect of complex ground types on ground-dwelling arthropod movements with video monitoring: dealing with concealed movements under a layer of plant residues, *Ecology and Evolution*, 12:e9072
<http://dx.doi.org/10.1002/ece3.9072>

Etienne L, Franck P, Lavigne C, Papaïx J, Tolle P, Ostandie N, Rusch A (2022) Pesticide use in vineyards is affected by semi-natural habitats and organic farming share in the landscape, *Agriculture, Ecosystems & Environment*, 333, 107967, <https://doi.org/10.1016/j.agee.2022.107967>.

2021

Jeanneret Ph, Aviron S., Alignier A. , Lavigne C., Helfenstein J., Herzog F. , Kay S. , Petit S. (2021) Agroecology landscapes. *Landscape ecology* 36, 2235–2257. <https://doi.org/10.1007/s10980-021-01248-0>

2020

Dib H., Siegwart M., Delattre T., Perrin M., Lavigne, C. (2020) Does combining *Forficula auricularia* L. (Dermaptera: Forficulidae) with *Harmonia axyridis* Pallas (Coleoptera: Coccinellidae) enhance predation of rosy apple aphid, *Dysaphis plantaginea* Passerini (Hemiptera: Aphididae)? *Biological control* 151, 104394.

Petit S., Muneret L., Carbonne B., Hannachi M., Ricci B., Rusch A., Lavigne C. (2020) Landscape-scale expansion of agroecology to enhance natural pest control: a systematic review. *Advances in ecological research*. *Advances in Ecological Research*, 63, 1-48.

Imbert C., Papaïx J. Husson L., Warlop F., Lavigne C. (2020) Estimating population dynamics parameters of cabbage pests in temperate mixed apple tree-cabbage plots compared to control vegetable plots, *Crop Protection*, 129, 105037.

Bouvier, J-C., Boivin, T., Lavigne, C. (2020) Conservation value of pome fruit orchards for overwintering birds in southeastern France. *Biodivers Conserv.* 29, 3169-3189.

Imbert C., Papaïx J. Husson L., Warlop F., Lavigne C. (2020) Pests, but not predators, increase in mixed fruit tree–vegetable plots compared to control vegetable plots in a Mediterranean climate. *Agroforestry Systems*. 94: 627 - 638.

2019:

Dainese, M., et al. (2019). A global synthesis reveals biodiversity-mediated benefits for crop production. *Science Advances*: eaax0121.

Ricci B., Lavigne C., Alignier A., Aviron S., Biju-Duval L., Bouvier J.C., Choisis J.P., Franck P., Joannon A., Ladet S., Mezerette F., Plantegenest M., Savary G., Thomas C., Vialatte A., Petit S. (2019) Local pesticide use intensity conditions landscape effects on biological pest control. Proc. R. Soc. B 286: 20182898.

Delattre T., Collard B., Lavigne C. (2019) Keep your enemies closer: enhancing biological control through individual movement rules to retain natural enemies inside the field. Web Ecology, 19: 15-26.

Araujo E., Monteiro L.B., Monteiro R.S., Nishimura G., Franck P., Lavigne C. (2019) Impact of native forest remnants and wild host plants on the abundance of the South American fruit fly, *Anastrepha fraterculus* in Brazilian apple orchards, Agriculture, Ecosystems & Environment, 275, 93-99.

Silva-Araujo E., Ribeiro-Paiva L., Geraldo-Alves S., Bevacqua D., Edson-Nava D., Lavigne C., Mello-Garcia F. R. (2019). Phenological asynchrony between the fruit fly *Anastrepha fraterculus* and early maturing peach cultivars could contribute to pesticide use reduction. Spanish Journal of Agricultural Research, 17: e1001. <https://doi.org/10.5424/sjar/2019171-13294>

Monteiro L.B., Tomba J.A.S., Nishimura G., Monteiro R.S., Foelkel E., Lavigne C. (2019) Faunistic analyses of fruit fly species (Diptera: Tephritidae) in orchards surrounded by Atlantic Forest fragments in the metropolitan region of Curitiba, Paraná state, Brazil. Brazilian Journal of Biology, 79 : 395-403.

2018

Collard B., Tixier P., Carval D., Lavigne C., Delattre T. (2018) Spatial organisation of habitats in agricultural plots affects per-capita predator effect on conservation biological control: An individual based modelling study. Ecological Modelling, 388: 124–135.

Karp D.S.,...Franck P.,...Lavigne C.,...[153 authors] (2018) Crop pests and predators exhibit inconsistent responses to surrounding landscape composition. Proc. Nat. Acad. Science, 115 : E7863–E7870.

Poggi S., Papaix J., Lavigne C., Angevin F., Le Ber F., Parisey N., Ricci B., Vinatier F., Wohlfahrt J. (2018) Issues and challenges in landscape models for agriculture: from the representation of agroecosystems to the design of management strategies. Landscape Ecology, 33: 1679-1690.

Odorizzi Santos L.A., Botelho Costa M., Lavigne C., Aparecido Fernandes O., Bischoff A, Franck P. (2018) Influence of the margin vegetation on the conservation of aphid biological control in apple orchards. Journal of Insect Conservation, 22:1-10.

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Begg G.S., Cook S.M., Dye R., Ferrante M., Franck P., Lavigne C., Lövei G.L., Mansion-Vaquie A., Pell J.K., Petit S., Quesada N., Ricci B., Birch A.N.E. (2017) A functional overview of conservation biological control. Crop protection, 97 : 145-158.

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Lefebvre M. Papaix J., Mollot G., Deschodt P., Lavigne C., Ricard J.-M., Mandrin J.-F., Franck P. (2017) Bayesian inferences of arthropod movements between hedgerows and orchards. Basic and Applied Ecology, 21:76-84.

Lefebvre M., Franck P., Olivares J., Ricard J.-M., Mandrin J.-F., Lavigne C. (2017) Spider predation on rosy apple aphid in conventional, organic and insecticide-free orchards and its impact on aphid populations. Biological Control, 104: 57-65.

Miguet P., Fahrig L., Lavigne C. (2017) How to quantify a distance-dependent landscape effect on a biological response. *Methods in Ecology and Evolution*, 1-8.

Pissonnier S., Lavigne C., Le Gal P.Y. (2017) A simulation tool to support the design of reduced pesticide strategies in fruit tree farms. *Computers and Electronics in Agriculture* (accepté).

Siegwart M., Thibord J.-B., Olivares J., Elias J., Hirn C., Maugin C., Lavigne C. (2017) Biochemical and molecular mechanisms associated with the resistance of the European corn borer (*Ostrinia nubilalis*) to lambda-cyhalothrin and first monitoring tool. *Journal of economic entomology*, 1-9. doi: 10.1093/jee/tow267

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2015

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Siegwart M., Bouvier F., Maugin S., Lecomte A., Lavigne C. (2015) Differentiating oriental fruit moth and codling moth larvae using near-infrared spectroscopy. *Journal of economic entomology*. 108: 219-227.

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Ricci B., Franck P., Valantin-Morison M., Boha, D. A. and Lavigne, C. (2013) Do species population parameters and landscape characteristics affect the relationship between local population abundance and surrounding habitat amount? *Ecological Complexity* 15: 62-70.

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Veres A, Tóth F, Kiss J, Fetykó K, Orosz S, Lavigne C, Otto S, Bohan D (2012) Spatio-temporal dynamics of *Orius* spp. (Heteroptera: Anthocoridae) abundance in the agricultural landscape *Agriculture, Ecosystems & Environment* 162, 45–51.

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o Pollen dispersal in crop species and cultivation of GM crops

Chifflet R., E.K. Klein, C. Lavigne, V. Le Féon, A.E. Riccroch, J. Lecomte and B.E. Vaissière (2011) Spatial scale of oilseed rape pollen dispersal by insects in an openfield landscape. *Journal of Applied Ecology*. 48: 689-696.

Colbach N., Monod H., Lavigne C. (2009) A simulation study of the medium-term effects of field patterns on cross-pollination rates in oilseed rape (*Brassica napus* L.). *Ecological Modelling*. 220 : 662–672

Viaud V., Monod H., Lavigne C., Angevin F., Adamczyk K. (2008) Spatial sensitivity of maize gene flow to landscape pattern: a simulation approach. *Landscape Ecology*. 23:1067–1079.

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o Management of crop genetic diversity

- Porcher E., Giraud T., Lavigne C. (2006) Genetic differentiation of neutral markers and quantitative traits in predominantly selfing metapopulations: confronting theory and experiments. *Genetical Research* 87:1-12.
- Porcher E., Gouyon P.H., Lavigne C. (2004a) Dynamic management of genetic resources: maintenance of outcrossing in experimental metapopulations of a predominantly inbreeding species. *Conservation Genetics* 5: 259-269.
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o Others

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