

DR. NICOLAS DESNEUX

INRAE – National Research Institute for Agriculture, Food and Environment

Education

H.D.R. 2016. Life Sciences, University Nice, France.

Ph.D. 2003. Behavioral Biology and Ecotoxicology, University of Paris XI, France (1st class).

M.S. 1999. Biology of populations, Genetic and Eco-ethology. University of Tours, France.

B.S. 1997. Biology of organisms, University of Tours, France.

Research and Professional experience

2017-present: Research Director, INRA (French National Institute for Agricultural Research), Sophia-Antipolis, France.

2008-2016: Research Scientist, INRA (French National Institute for Agricultural Research), Sophia-Antipolis, France.

2006-2008: Research Associate, Department of Entomology, University of Minnesota, Saint Paul, MN, USA.

2004-2006: Postdoctoral Research Scholar, Department of Entomology, Purdue University, West Lafayette, IN, USA.

2003-2004: Teaching Assistant (ATER), CNRS – IRD Gif-sur-Yvette, France.

1999-2003: Ph.D. Research Assistant, INRA Versailles / Bures-sur-Yvette, France.

Main scientific expertise

Ecosystem services, Ecotoxicology, Community ecology, Biological control, Integrated Pest Management, Transgenic crops, Invasive species, Risk assessment, Sublethal effects, Chemical and Botanical pesticides.

Teaching

Ecology & Evolution, Integrated Pest Management, Agricultural Sciences, Entomology, Ethology & Behavioral neurosciences, Animal biology, Computer use & visual basic

Publications key records:

- 259 Scientific articles published, including *Nature* (2), *Annual Review of Entomology* (5+1), *Biological Reviews* (1), *PNAS* (1), *Ecology Letters* (1), *Plant Biotechnology Journal* (1), *Environment International* (2), *Science of Total Environment* (1), *Molecular Ecology* (1), *Chemosphere* (8), *Journal of Applied Ecology* (1), *Journal of Ecology* (1), *Journal of Pest Science* (53), *Agronomy for Sustainable Development* (3), *Pest Management Science* (11), *Current Opinion in Insect Science* (3), *Evolutionary Applications* (1).
- Total citations ISI-WoS: 11000, (Google Scholar: 17500)
- H-index ISI-WoS: 54 (Google Scholar: 62)

Selected Key publications (with IF) on 259 published (+40 in press or in rev).

Zang LS, Wang S, Zhang F, Desneux N. (2021). Biological control with *Trichogramma* in China: history, present status and perspectives. *Annual Review of Entomology*. Vol 66, doi: 10.1146/annurev-ento-060120-091620. IF: 13.796.

Ricupero M, Abbes K, Haddi K, Kurtulus A, Desneux N., Russo A, Siscaro G, Biondi A, Zappala L. (2020). Combined thermal and insecticidal stresses on the generalist predator *Macrolophus pygmaeus*. *Science of the Total Environment* 729:138922. IF: 6.551.

Han P, Becker C, Le Bot J, Larbat R, Lavoit AV, Desneux N. (2020). Plant nutrient supply alters the magnitude of indirect interactions between insect herbivores: from foliar chemistry to community dynamics. *Journal of Ecology* 108, 1497-1510. IF: 5.762.

- Li W, Lu YH, Jaworski CC, Wang L, Jiang Y, Yang F, Liu B, Jiang YY, Wu KM, Desneux N. (2020). The outbreaks of non-target mirid bugs promote arthropod pest suppression in Bt cotton agroecosystems. *Plant Biotechnology Journal*. 18:322-324. IF: 8.154.
- Jactel H, Verheggen F, Thiéry D, Escobar-Gutierrez AJ, Thybaud E, Gachet E, Desneux N. (2019). Alternatives to neonicotinoids. *Environment International* 129:423-429. IF: 7.577.
- Jaworski CC, Xiao D, Xu QX, Ramirez-Romero R, Guo XJ, Wang S, Desneux N. (2019). Varying the spatial arrangement of synthetic herbivore-induced plant volatiles and companion plants to improve conservation biological control. *Journal of Applied Ecology* 56:1176-1188. IF: 5.84.
- Monticelli LS, Nguyen LTH, Amiens-Desneux E, Luo C, Lavoit AV, Gatti JL, Desneux N. (2019). The preference-performance relationship as a means of classifying parasitoids according to their specialization degree. *Evolutionary Applications* 12:1626-1640. IF: 4.013.
- McNitt J, Chungbaek YY, Mortveit H, Marathe M, Campos MR, Desneux N., Brévault T, Adiga A. Assessing the multi-pathway threat from an invasive agricultural pest: *Tuta absoluta* in Asia. *Proceedings of the Royal Society B: Biological Sciences* 286, 20191159. IF: 4.637.
- Karp DS, Chaplin-Kramer R, Meehan TD, ..., Desneux N., et al. (2018). Crop pests and predators exhibit inconsistent responses to surrounding landscape composition. *Proceedings of the National Academy of Sciences of the United States of America*. doi: www.pnas.org/cgi/doi/10.1073/pnas.1800042115. IF: 9.412.
- Biondi A, Guedes RNC, Wan FH, Desneux N. (2018). Ecology, worldwide spread and management of the invasive South American tomato pinworm, *Tuta absoluta*: past, present and future. *Annual Review of Entomology* 63:239-258. IF: 13.796.
- Perović DJ, Gámez-Virués S, Landis DA, Wäckers F, Gurr GM, Wratten SD, You MS, Desneux N. (2018). Managing biological control services through multi-trophic trait interactions: review and guidelines for implementation at the local and landscape scales. *Biological Reviews* 93:306-321. IF: 10.701.
- Campos MR, Adiga A, Guedes RNC, Biondi A, Desneux N. (2017). From the Western Palearctic region to beyond: *Tuta absoluta* ten years after its Europe invasion. *Journal of Pest Science* 90:787-796. IF: 4.578.
- Sánchez-Bayo F, Goulson D, Pennacchio F, Nazzi F, Goka K, Desneux N. (2016). Are bee diseases linked to pesticides? – A brief review. *Environment International* 89-90:7-11. IF: 7.577.
- Guedes RNC, Smagghe G, Stark JD, Desneux N. (2016). Pesticide-induced stress in arthropod pests for optimized integrated pest management programs. *Annual Review of Entomology*. 61:43-62. IF: 13.796.
- Asplen MK, Anfora G, Biondi A, ..., Desneux N. (2015). Invasion biology of spotted-wing *Drosophila* (*Drosophila suzukii*): a global perspective and future priorities. *Journal of Pest Science* 88:469-494. IF: 4.578.
- Decourtye A, Henry M, Desneux N. (2013). Overhaul pesticide testing on bees. *Nature* 497:188. IF: 42.778.
- Wratten SD, Gillespie M, Decourtye A, Mader E, Desneux N. (2012). Pollinator habitat enhancement: benefits to other ecosystem services. *Agriculture, Ecosystems & Environment* 159:112-122. IF: 4.241.
- Lu YH, Wu KM, Jiang YY, Guo YY, Desneux N. (2012). Widespread adoption of Bt cotton and insecticide decrease promotes biocontrol services. *Nature* 487:362-365. IF: 42.778.
- Desneux N., Blahnik R, Delebecque CJ, Heimpel GE. (2012). Host phylogeny and host specialization in parasitoids. *Ecology Letters* 15:453-460. IF: 8.665.

- Biondi A, Desneux N, Siscaro G, Zappalà L. (2012). Using organic-certified rather than synthetic pesticides may not be safer for biological control agents: selectivity and side effects of 14 pesticides on the predator *Orius laevigatus*. *Chemosphere* 87:803-812. IF: 5.778.
- Ragsdale DW, Landis DA, Brodeur J, Heimpel GE, Desneux N. (2011). Ecology and management of the soybean aphid in North America. *Annual Review of Entomology* 56:375-399. IF: 13.796.
- Desneux N, Wajnberg E, Wyckhuys KAG, et al. (2010). Biological invasion of European tomato crops by *Tuta absoluta*: Ecology, history of invasion and prospects for biological control. *Journal of Pest Science* 83:197-215. IF: 4.578.
- Desneux N, Decourtye A, Delpuech JM (2007). The sublethal effects of pesticides on beneficial arthropods. *Annual Review of Entomology* 52:81-106. IF: 13.796.