

## CHRISTOPHE DUPLAIS

Division of Science, American Museum of Natural History  
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Born: Caen, France; French and U.S. Citizen

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### Research Interest

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Natural Product Chemistry; Analytical Chemistry; Metabolomics; Chemical Ecology; Chemical Evolution; Organismal Chemistry

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### Positions and Scientific Appointments

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| 2026 – Present | <b>Director of Science Research Support</b> , Division of Science, American Museum of Natural History, New York, NY                                                                                                         |
| 2025 – 2026    | <b>Associate Professor (with tenure in 2026)</b> , Department of Entomology, Cornell AgriTech, Cornell University, Geneva, NY                                                                                               |
| 2021 – 2025    | <b>Associate Research Professor</b> , Department of Entomology, Cornell AgriTech, Cornell University, Geneva, NY                                                                                                            |
| 2019 – Present | <b>Courtesy Associate Professor</b> , Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY                                                                                                          |
| 2012 – 2021    | <b>Group Leader in Chemistry (equivalent to Assistant and then Associate Professor in 2016)</b> , The French National Center of Scientific Research (CNRS), Research Unit Ecology of French Guiana Forests, Cayenne, France |
| 2016 – 2018    | <b>Scientific affiliate</b> , Field Museum, Chicago, IL                                                                                                                                                                     |
| 2010 – 2011    | <b>Postdoctoral Fellow</b> , Department of Chemistry, Sorbonne Paris Nord, France                                                                                                                                           |
| 2008 – 2010    | <b>Postdoctoral Fellow</b> , Department of Chemistry and Biochemistry, University of California, Santa Barbara, CA                                                                                                          |

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### Education

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Ph.D. Organic Chemistry, University of Cergy-Paris, France (2008)  
M.S. Organic Chemistry, University of Cergy-Paris, France (2004)  
B.S. and M.S. Organic and Inorganic Chemistry, Chemical Engineering School, France (2004)

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### Awards and Honors

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EPA Presidential Green Chemistry Award (2011) – Awarded to Prof. Bruce Lipshutz (UC Santa Barbara) for ‘*Towards Ending Our Dependence on Organic Solvents*’. Duplais co-awarded as contributor.

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### Invited Talks and Conferences since 2023

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International Society of Chemical Ecology (oral presentation), Ithaca NY, 2026.  
Binghamton University (invited speaker), Binghamton NY, 2025.  
Hitchcock Center for Chemical Ecology Symposium (invited speaker), Lake Tahoe NV, 2025  
Plant Path Geneva Seminars (invited speaker), Cornell University NY, 2024.  
International Short Course in Chemical Ecology (invited speaker), State College PA, 2024.  
Entomological Society of America (oral presentation), National Harbor MD, 2023.  
Gordon Conference on Plant-insect interaction (invited speaker), Ventura CA, 2023.

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### Advisory Boards

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2024-2026: Co-organizer of the International Society of Chemical Ecology conference in Ithaca, NY (2026)  
2017-2021: Member of the French Chemical Ecology consortium (GDR MediatEC)  
2015-2020: Member of the Scientific Council of the Center for the study of Amazonian Biodiversity (2011-2026), funded by the French National Research Agency (ANR) and involved 12 labs in France.  
2015-2018: Elected member of the Board of Directors at the University of French Guiana  
2012-2016: Board of Group Leaders of the Pasteur Institute of French Guiana

## Editor for Journal

2024-current: *Journal of Chemical Ecology* (Editor)

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## Publications

Total publications = 60; Citations = 4147; h-index = 28; ORCID author ID: 0000-0003-0926-9885

^identifies postdoctoral researcher, #identifies graduate student, and \*identifies staff co-authors

### Selected peer-reviewed articles since 2020

- 1) Rubiano-Buitrago P.^, Hastings, A. P., Uematsu, M., Baskin, J. M., Agrawal, A. A., **Duplais, C.** (2026) Structural innovation in the evolution of plant chemical defense. *PNAS* 123 (11), e2535853123.
- 2) Seybert, L.\*, **Duplais, C.** (2025) Understanding your biases in collecting organismal VOCs. *Journal of Chemical Ecology*, 51, 40.
- 3) Rubiano-Buitrago P.^, White, R. A., Hastings, A. P., Schroeder, F. C., Agrawal, A. A., **Duplais, C.** (2025) Cardenolides in *Asclepias syriaca* seeds: exploring the legacy of Tadeus Reichstein. *Journal of Natural Products* 88(1), 49-57.
- 4) Huseth, A., **Duplais, C.**, Panta S., Jakhmola, K. \*, Seybert, L. \*, Nault, B. (2025) Temporal efficacy of commercially available pheromone lures for monitoring *Helicoverpa zea* (Lepidoptera: Noctuidae). *Journal of Economic Entomology*, 118 (6), 3224-3231.
- 5) Ziemke, T.#, Wang, P., **Duplais, C.** (2024) The fate of a *Solanum* steroidal alkaloid toxin in the cabbage looper (*Trichoplusia ni*). *Insect Biochemistry and Molecular Biology* 175, 104205.
- 6) Agrawal, A. A., Hastings, A. P., **Duplais C.** (2024) Testing the selective sequestration hypothesis: Monarch butterflies preferentially sequester plant defences that are less toxic to themselves while maintaining potency to others. *Ecology Letters* 27(1), e14340.
- 7) Agrawal, A. A., Espinosa del Alba, L., López-Goldar, X., Hastings, A. P., White, R. A., Halitschke, R., Dobler, S., Petschenka, G., **Duplais C.** (2022). Functional evidence supports adaptive plant chemical defense along a geographical cline. *PNAS* 119(25), e2205073119.
- 8) Agrawal, A. A., Böröczky, K., Haribal, M., Hastings, A. P., White, R. A., Jiang, R.-W., **Duplais C.** (2021). Cardenolides, toxicity, and the costs of sequestration in the coevolutionary interaction between monarchs and milkweeds. *PNAS* 118(16), e2024463118.
- 9) **Duplais, C.**, Sarou-Kanian, V., Massiot, D., Hassan, A., Perrone, B., Estevez, Y., Wertz, J. T., Martineau, E., Farjon, J., Giraudeau, P., Moreau C. S. (2021). Gut bacteria are essential for normal cuticle development of herbivorous turtle ants. *Nature Communications* 12, 676.
- 10) Chanson, A.#, Moreau, C. S., **Duplais C.** (2021). Assessing biosynthetic gene cluster diversity of specialized metabolites in the conserved gut symbionts of herbivorous turtle ants. *Frontiers in Microbiology* 12, 678100.
- 11) Touchard, A., Mendel, H. C., Boulogne, I.^, Herzig, V., King, G. F., Trinquigneaux, M., Jacquillard, L., Bérout, R., de Waard, M., Delalande, O., Dejean, A., Muttenthaler, M., **Duplais C.** (2020). Heterodimeric insecticidal peptide provides new insights into the molecular and functional diversity of ant venoms. *ACS Pharmacology and Transnational Science* 3, 1211-1224.