

Dr. ADRIANA PUENTES

<https://www.slu.se/en/ew-cv/adriana-puentes/>

ACADEMIC DEGREES

Docent (Associate Professor) in Biology Swedish University of Agricultural Sciences	Uppsala, Sweden 2020
Doctor of Philosophy (Ph.D.), Plant Ecology and Evolution Uppsala University	Uppsala, Sweden 2012
Masters of Science (M.Sc.), Biology York University	Toronto, Canada 2006
Honours Bachelor of Science (Hon. B.Sc.), Evolutionary Biology University of Toronto	Toronto, Canada 2004

PROFESSIONAL HISTORY

Senior Lecturer (Forest protection against insect pests) Swedish University of Agricultural Sciences (SLU), Dept. of Ecology	Uppsala, Sweden March 2018 - onward
Researcher (Pine weevil research group) SLU, Dept. of Ecology	Uppsala, Sweden March 2017 - Feb. 2018
Post-doctoral position SLU, Dept. of Ecology	Uppsala, Sweden May 2014 - Feb. 2017
Post-doctoral position University of Toronto, Dept. of Biology	Toronto, Canada June 2013 - April 2014

CURRENT RESEARCH GRANTS AND FUNDS

Swedish Research Council (VR) Starting Grant (2019 - 2023). Utilizing basic plant defences as a tool in plant protection: combining tolerance and resistance of conifer seedlings to pine weevil damage.

Nils and Dorthi Troëdsson's research foundation (2020 - 2023). Exploiting a novel finding in plant protection: utilizing somatic embryogenesis to enhance intrinsic plant resistance to pests.

Nordic Forest Research (2022-2024). PROTECT: Effects of defense priming on Norway spruce needle microbiome and pest resistance. Co-application with NIBIO, Norway.

PHD PROJECT SUPERVISION

PhD student Yayuan Chen. Project: Utilizing plant defense induction for sustainable conifer seedling plant protection against the pine weevil (*Hylobius abietis*). Co-supervisor. Dept. of Ecology, SLU, Uppsala, 2017-2021. Defense date: November 18, 2021.

PhD student Kristina Berggren. Project: Ecological effects of novel plant protection methods against insect pests. Co-supervisor. Dept. of Ecology, SLU, Uppsala, 2019-2023.

PhD student Amelia Tudoran. Project: Associational effects of European beech (*Fagus sylvatica*) on Norway spruce (*Picea abies*), and effects of biopesticides to control *Hylobius abietis* populations. Co-supervised PhD student with the University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca, Romania (Dr. Ion Oltean). ERASMUS program. 2018-2022.

POSTDOCTORAL MENTORSHIP

Dr. Xiaoning (Nina) Zhang. Co-advised with Prof. C. Björkman. SLU, Dept. of Ecology, Uppsala, 2022-2026. FORMAS-funded project conferred to N. Zhang.

CURRENT TEACHING

Ecology (BI1252), SLU. Population ecology section, main teacher. Spring 2020 - onward.

Diversity of organisms (BI1251), SLU. Botany section, main teacher. Winter 2018 - onward.

Forest Ecology (SG0220), SLU. Lecture on forest health. Winter 2018 - onward.

Ecology (BI1349), SLU. Course leader and Population ecology section. Fall 2017 - onward.

ASSIGNMENTS AS OPPONENT OR COMMITTEE MEMBER

PhD thesis examining committee member. Thesis title: The forgotten forest: On thinning, retention, and biodiversity in the boreal forest. PhD candidate: Julian Klein. SLU, Dept. of Ecology, Uppsala, Sweden. October 16, 2020.

External PhD thesis opponent and evaluator. Thesis title: Response to multiple stressors in Iberian pine trees: tradeoffs between drought stress and resistance to herbivory. PhD candidate: Estefanía Suárez Vidal. Vigo University, Galicia, Spain. October 8, 2019.

External PhD thesis opponent and evaluator. Thesis title: Geographic structure, plasticity, genetic variation and covariation of chemical defences in maritime pine (*Pinus pinaster* Ait.). PhD candidate: Xosé López Goldar. Vigo University, Galicia, Spain. January 17, 2019.

RECENT INVITATIONS TO WORKSHOPS, SEMINARS ETC.

Invited speaker. Workshop on conifer vegetative propagation, multiplied conifer seed – prospects of somatic embryogenesis. May 26-27, 2021. Hosted (virtually) by LUKE, Finland.

Invited speaker. Conference and workshop: Thinking Higher: towards biosecurity of forest trees. Conference and workshop. The Birmingham Institute of Forest Research, July 10-12, 2019, UK.

Invited speaker. Seminar on application of wax to protect forest seedlings from pine weevils. April 26, 2018. Biri plant nursery, Norway. Organized by the EU project WeevilSTOP.

PUBLICATIONS

21. Santangelo et al. (2022) (289 authors in alphabetical order, international project). Global urban environmental change drives adaptation in white clover. *Science* 375: 1275-1281.

<https://www.science.org/doi/10.1126/science.abk0989>

20. Chen Y, **Puentes A**, Björkman C, Brosset A, Bylund H (2021) Comparing exogenous methods to induce plant-resistance against a bark-feeding insect. *Frontiers in Plant Science* 12: 1504.

<https://doi.org/10.3389/fpls.2021.695867>

19. Zhang XN, Stephan JG, Björkman C, **Puentes A** (2021) Global change calls for novel plant protection: reviewing the potential of omnivorous plant-inhabiting arthropods as predators and plant defence inducers. *Current Opinion in Insect Science* 47: 103-110.

<https://doi.org/10.1016/j.cois.2021.06.001>

18. **Puentes A**, Zhao T, Lundborg L, Björklund N, Borg-Karlson AK (2021) Variation in methyl jasmonate-induced defense among Norway spruce clones and trade-offs in resistance against a fungal and an insect pest. *Frontiers in Plant Science* 12: 962.

<https://doi.org/10.3389/fpls.2021.678959>

17. Tudoran A, Bylund H, Nordlander G, Oltean I, **Puentes A** (2021) Using associational effects of European beech on Norway spruce to mitigate damage by a forest regeneration pest, the pine weevil *Hylobius abietis*. *Forest Ecology and Management* 486: 118980.

<https://doi.org/10.1016/j.foreco.2021.118980>

16. Tudoran A, Nordlander G, Karlberg A, **Puentes A** (2020) A major forest insect pest, the pine weevil *Hylobius abietis*, is more susceptible to Diptera- than Coleoptera-targeted *Bacillus thuringiensis* strains. *Pest Management Science* 77: 1303-1315. <https://doi.org/10.1002/ps.6144>
15. Chen Y, Bylund H, Björkman C, Fedderwitz F, **Puentes A** (2020) Seasonal timing and recurrence of methyl jasmonate treatment influence pine weevil damage to Norway spruce seedlings. *New Forests* 52: 431-448. <https://doi.org/10.1007/s11056-020-09803-4>
14. Abdala-Roberts L and **Puentes A***, Finke DL, Marquis RJ, Montserrat M, Poelman EH, Rasmann S, Sentis A, van Dam NM, Wimp G, Mooney K, Björkman C (2019) Tri-trophic interactions: bridging species, communities and ecosystems. *Ecology Letters* 22: 2151-2167. <https://doi.org/10.1111/ele.13392> *Shared first-authorship
13. Vicari M, **Puentes A**, Granath G, Georgeff J, Strathdee F, Bazely DR (2018) Unpacking multi-trophic herbivore-grass-endophyte interactions: feedbacks across different scales in vegetation responses to Soay sheep herbivory. *The Science of Nature* 105: 66. <https://doi.org/10.1007/s00114-018-1590-9>
12. **Puentes A**, Stephan JG, Björkman C (2018) A systematic review on the effects of plant-feeding by omnivorous arthropods: time to catch-up with the mirid-tomato bias? *Frontiers in Ecology and Evolution* 6: 218. <https://doi.org/10.3389/fevo.2018.00218>
11. **Puentes A**, Högberg KA, Björklund N, Nordlander G (2018) Novel avenues for plant protection: Plant propagation by somatic embryogenesis enhances resistance to insect feeding. *Frontiers in Plant Science* 9: 1553. <https://doi.org/10.3389/fpls.2018.01553>
10. **Puentes A**, Björkman C (2017) Costs and benefits of enemy-mediated plant protection: Omnivorous 'bodyguard' of willows (*Salix* spp.) more detrimental than expected. *Oecologia*: 184: 485-496. <https://doi.org/10.1007/s00442-017-3878-4>
9. **Puentes A**, Granath G, Ågren J (2016) Similarity in G matrix structure among natural populations of *Arabidopsis lyrata*. *Evolution* 70: 2370-2386. <https://doi.org/10.1111/evo.13034>
8. **Puentes A**, Johnson MTJ (2016) Tolerance to deer herbivory and resistance to insect herbivores in the common evening primrose (*Oenothera biennis*). *Journal of Evolutionary Biology* 29: 86-97. <https://doi.org/10.1111/jeb.12764>
7. **Puentes A**, Torp M, Weih M, Björkman C (2015) Direct effects of elevated temperature on a *Salix*-leaf beetle-predatory bug system. *Arthropod-Plant Interactions* 9: 567-575. <https://doi.org/10.1007/s11829-015-9401-0>
6. **Puentes A**, Ågren J (2014) No trade-off between trichome production and tolerance to leaf and inflorescence damage in a natural population of *Arabidopsis lyrata*. *Journal of Plant Ecology* 7: 373-383. <https://doi.org/10.1093/jpe/rtt051>
5. **Puentes A**, Ågren J (2013) Trichome production and variation in young plant resistance to the specialist insect herbivore *Plutella xylostella* among natural populations of *Arabidopsis lyrata*. *Entomologia Experimentalis et Applicata* 149: 166-176. <https://doi.org/10.1111/eea.12120>
4. **Puentes A**, Cole WW, Barrett SCH (2013) Trimorphic incompatibility in *Pontederia subovata* (Pontederiaceae): an aquatic macrophyte from lowland South America. *International Journal of Plant Sciences* 174: 47-56. <https://www.journals.uchicago.edu/doi/abs/10.1086/668229>
3. **Puentes A**, Ågren J (2012) Additive and non-additive effects of simulated leaf and inflorescence damage on survival, growth and reproduction of the perennial herb *Arabidopsis lyrata*. *Oecologia* 169: 1033-1042. <https://doi.org/10.1007/s00442-012-2276-1>
2. **Puentes A**, Bazely DR, Huss-Danell K (2007) Endophytic fungi in *Festuca pratensis* grown in Swedish agricultural grasslands with different managements. *Symbiosis* 44: 121-126. (PDF available through A Puentes' ResearchGate profile: <https://www.researchgate.net/profile/Adriana-Puentes>)
1. Granath G, Vicari M, Bazely DR, Ball JP, **Puentes A**, Rakocevic T (2007) Variation in the abundance of fungal endophytes in fescue grasses along altitudinal and grazing gradients. *Ecography* 30: 422-430. <https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.0906-7590.2007.05027.x>