

Marina Claudia Caillaud

Associate Professor in Genetics

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ACADEMIC RANK:

Associate Professor. Ithaca College, Department of Biology, Ithaca NY, USA

FIELD OF SPECIALIZATION

Before 2009: Quantitative genetics, insect genetics, Insect-plant interactions, insect behavior.
Since 2009: Toxicogenomics using *Caenorhabditis elegans*, Bisphenol A

EDUCATION AND TRAINING

- 1989, BS** (Major: Biology; Minor: Agricultural Engineering), Ecole Nationale Supérieure Feminine d'Agronomie, Rennes, France
- 1991, MSc** (Area: Ecophysiology and Population dynamics of land invertebrates), Université Pierre et Marie Curie, Paris, France
- 1994, PhD** (Area: Genetic Resources and Plant breeding), Université Paris-Sud, Orsay, France
- 1996-1999, PostDoctoral fellow** (Aphid genetics, Sara Via and Dave Hawthorne), Department of Entomology, Cornell University

ACADEMIC APPOINTMENTS:

- since 07/2008....** Associate Professor, Department of Biology, Ithaca College
- 08/2002-06/2008** Assistant Professor, Department of Biology, Ithaca College
- 11/2002-08/2010...** Adjunct Assistant Professor, Department of Entomology, Cornell University
- 2002 (6 months)** Visiting scientist, Centre de Biologie des Populations, Montpellier, France
- 1998-2001** Senior Research Associate, department of Entomology, Cornell University
- 1994-1997** Research Scientist, Institut National de la Recherche Agronomique, France

TEACHING

GENETICS. Ithaca College. Spring course for Biology/Biochemistry Majors. 3 lectures and 2 lab sections every week. 2003-2012

HUMAN GENETICS. Ithaca College. Fall course for non-majors. 3 lectures every week. 2002-2010

PLAYING GOD. Seminar course for non-Majors in the Honors Program at Ithaca College. 2 lectures/week. 2011.

PRINCIPLES OF BIOLOGY. Ithaca College. Fall labs for Bio Majors. 2 labs/wk. 2002, 2008, 2011

LITERATURE IN BIOLOGY. Ithaca College. Fall seminar course for Biology majors. 1 meeting per week. 2003, 2007, 2008

INSECTS and PEOPLE. Ithaca College. Fall course for non-majors. 3 lectures every week. 2007, 2008, 2010

ENTOM 644. Cornell U. Module 2. Genetics in managed ecosystems. 1 month course. 2 lectures and 1 discussion a week. 1999.

ENTOM 470. Cornell U. Ecological Genetics. Spring semester course. 2 lectures and 1 discussion a week. 2001

PUBLICATIONS (bold for undergraduate students,* refers to journals with an impact factor>4)

29. **Huang, M.** and M.C. Caillaud. Experimental evidence for inbreeding avoidance by recognition of close kin in the pea aphid, *Acyrtosiphon pisum*. Journal of Insect Science, *in press*
- *28. Caillaud, M.C. and S. Via. 2011. Quantitative Genetics of feeding behavior in an herbivorous insect. Heredity, **1-8**. (7 September 2011) | doi:10.1038/hdy.2011.24
27. Del Campo, M., **S. Palmer** and M.C. Caillaud, 2011. Characterization of a novel OBP protein in chemoreceptor organs of *Manduca sexta* larvae (Sphingidae). Annals of the Entomological Society of America, **104** (2): 319-325.
26. Caillaud, C.M and J.E. Losey, 2010. Genetics of colour polymorphism in the pea aphid, *Acyrtosiphon pisum* (Harris). Journal of Insect Science, **10**, 82
- *25. The International Aphid Genomics Consortium (including M.C. Caillaud, **Jason Diaz** and **Eric van Fleet**). 2010. Genome Sequence of the Pea Aphid *Acyrtosiphon pisum*. PLOS Biology, **8** (2).
24. Del Campo, M., Miles C., and M.C. Caillaud, 2008. Effects of experience on the physiology of taste discrimination in insects. *in* Insect Taste, Chapter 9. Edited by Philip L. Newland, Matthew Cobb. Taylor and Francis Group.
23. Gray, S, M.C. Caillaud, M. Burrows and D. M. Smith, 2007. Transmission of viruses that cause Barley Yellow Dwarf is controlled by different loci in the aphid, *Schizaphis graminum*. Journal of Insect Science, **7**(article 5): 1536-2442.
- *22. Burrows, M.E, Caillaud M.C. Smith, D. and S. Gray. 2006. Biometrical genetic analysis of virus transmission in the aphid *Schizaphis graminum*. Heredity, **98**:106-113.
21. Burrows, M.E., M.C. Caillaud, D.M. Smith, E.C. Benson, F.E. Gildow and S.M. Gray. 2006. The genetic regulation of luteovirus and polerovirus transmission in the aphid *Schizaphis graminum*. Phytopathology, **96**:828-837
- *20. Braendle, C., M. C. Caillaud and D. L. Stern .2005. Genetic mapping of aphicarus - a sex-linked locus controlling a wing polymorphism in the pea aphid (*Acyrtosiphon pisum*). Heredity, **1-8**
- *19. Braendle, C., I. Friebe, M.C. Caillaud and D.L. Stern. 2005. Genetic variation in an aphid wing polyphenism is genetically linked to a naturally occurring wing polymorphism. Proc R Soc B, **272**: 657-664

18. Caillaud, M.C., G. Mondor-Genson, **S. Levine-Wilkinson**, L. Mieuze, A. Frantz, J.C. Simon and A. Coeur d'Acier, 2004. Microsatellite DNA markers for the pea aphid: *Acyrtosiphon pisum* (Harris, 1776) [Homoptera, Sternorrhynca]. Molecular Ecology Notes, vol. 4, issue. 3, pp. 446-448(3)
17. Del Campo, M., S. Via and M.C. Caillaud, 2003. Recognition of host specific stimulants mediates host specificity and assortative mating in two host races of the pea aphid. Ecological Entomology, 28/4, 405-412
- *16. Caillaud, C.M., M. Boutin, C. Braendle and J.C. Simon, 2002. A sex-linked locus controls wing polymorphism in males of the pea aphid, *Acyrtosiphon pisum* (Harris). Heredity, 89, 346-352
- *15. Dedryver, C-A., M. Hulle, J.F. Le Gallic, M.C. Caillaud and J-C. Simon. 2001. Coexistence in space and time of different life-cycle variants of a cyclical parthenogen: the cereal aphid *Sitobion avenae* in France. Oecologia, 128, 379-388
- *14. Caillaud, C.M. and S. Via. 2000. Specialized feeding behavior influences both ecological specialization and assortative mating in sympatric host races of pea aphids. The American Naturalist, 156 (6), 606-621.
13. Caillaud, C.M. 1999. Behavioral correlates of genetic divergence due to host specialization in *Acyrtosiphon pisum*. Entomologia experimentalis et applicata, 91 (1), 227-232.
12. Caillaud, C.M. & Rahbé, Y. 1999. Aposymbiosis in a cereal aphid : reproductive failure and influence on plant utilisation. Ecological Entomology, 24 (1), 111-114.
11. Di Pietro, J.P., Caillaud, C.M., Pierre, J.S. & Trottet, M. 1998 Sources of resistance to the cereal aphid *Sitobion avenae* in ancient species of *Triticum*. In. pp. 529-534, Aphids in managed and natural ecosystems. Ed by J. Nieto Nafria and A.F.G Dixon.
10. Di Pietro, J.P. & Caillaud, C.M., Chaubet, B., Pierre, J.S. & Trottet, M. 1998. Variation in resistance to *Sitobion avenae* (Sternorrhynca: Aphididae) among diploid wheat genotypes : multivariate analysis of agronomic data. Plant breeding, 117/5, 407-412.
9. Di Pietro, J.P. & Caillaud, C.M., 1998. Response to intracolonial selection for adaptation to the resistant wheat *Triticum monococcum* in the English grain aphid *Sitobion avenae*. Environmental Entomology, 27 (1), 80-85.
8. Gianoli, E., Caillaud, C.M., Chaubet, B., Di Pietro, J.P. & Niemeyer, H.M., 1997. Variability in grain aphid (Homoptera: Aphididae) performance and aphid-induced phytochemicals responses in wheat. Environmental Entomology, 26 (3), 638-641
7. Plantegenest, M., Pierre, J.S., Caillaud, C.M., Simon, J.C., Dedryver, C.A. & Cluzeau, 1997. A model to describe the reproduction rate of the grain aphid, *Sitobion avenae* F. (Homoptera : Aphididae). European Journal of Entomology, 93 (4), 545-553.
- *6. Caillaud, C.M. & Niemeyer, H.N., 1996. Possible involvement of the phloem sealing system in the acceptance of a plant as host by an aphid. Cellular and Molecular Life Sciences, (52), 9, 927-931
5. Caillaud, C.M., Dedryver, C.A., Di Pietro, J.P., Fima, F., Simon, J.C. & Chaubet, B., 1995c. Clonal variability in the response of *Sitobion avenae* (Homoptera : Aphididae) to resistant *Triticum monococcum* wheat lines. Bulletin of Entomological Research, 85, 189-195.
4. Caillaud, C.M., Di Pietro, Chaubet, B., & Pierre, J.S., 1995b. Application of discriminant analysis to Electrical penetration Graphs of the aphid *Sitobion avenae* feeding on resistant and susceptible wheat. Journal of Applied Entomology, 119, 103-106.
3. Caillaud, C.M., Pierre, J.S., Chaubet, B. & Di Pietro, J.P., 1995a. Analysis of wheat resistance to the cereal aphid *Sitobion avenae* using electrical penetration graph and flow charts combined with correspondence analysis. Entomologia experimentalis et applicata, 75, 9-18.

2. Caillaud, C.M., Dedryver, C.A. & Simon, J.C., 1994. Development and reproductive potential of the cereal aphid *Sitobion avenae* on resistant wheat lines (*Triticum monococcum* line). Annals of Applied Biology, 125, 219-232.
1. Pham-Delegue, M.H., Trouiller, J. Caillaud, C.M., Roger, B. & Masson, C., 1993. Effect of queen pheromone on worker bees of different ages: behavioural and electrophysiological responses. Apidologie, 24: 267-281.