CURRICULUM VITAE 2018

Micaela Buteler

Tenured Researcher INIBIOMA – National Research Council Argentina

ACADEMIC DEGREES

2001. Bachelor of Biological Sciences in the Faculty of Exact and Natural Sciences, University of Buenos Aires.
2008. Ph.D. Natural Resources and Environmental Sciences, with orientation in Entomology, Montana State University, United States.

RESEARCH INTERESTS

Chemical ecology, plant-insect interactions, integrated pest management, toxicology and ecotoxicology, sustainable agriculture.

RECENT PUBLICATIONS

- Lopez Garcia G.P, **Buteler M**. Stadler T. Effects of dietary intake of volcanic ash from Puyehue Cordon Caulle on *Tenebrio molitor* (Coleoptera: Tenebrionidae) larvae under laboratory conditions. Florida Entomologist 101(1): 97-101.
- **M Buteler**, P. Fernandez, T. Stadler, D.K. Weaver, B. Yossen, M. Lozada. 2018. Heptyl butyrate, a putative pheromone involved in social communication of *Vespula germanica* wasps. Insect. Soc. 65:95–101.
- Stadler T., Lopez Garcia G., Gitto J.G., Buteler M. 2017. Nanostructured alumina: Biocidal properties and mechanism of action of a novel insecticide powder. Bulletin of Insectology 70: 17-25.
- **M. Buteler,** Lopez Garcia, G., Stadler, T. 2017. Potential of nanostructured alumina for leaf-cutting ants *Acromyrmex lobicornis* (Hymenoptera: Formicidae) management. 2017. Austral Entomology, Early view. UR - http://dx.doi.org/10.1111/aen.12277 DO - 10.1111/aen.12277
- Perri D., Gorosito N. Fernandez PC., **Buteler M**. 2017. Plant based compounds with potential as Push - Pull stimuli to manage behaviour of leaf cutting ants. Entomologia Experimentalis et Apliccatta 163:150-159.
- Varella A., Talbert L, Holfland M, **Buteler M**, Weaver D. Sherman J. Blake N. et al. 2016. Alleles at a quantitative trait locus for stem solidness in wheat affect temporal patterns of pith expression and level of resistance to the wheat stem sawfly. Plant breeding. 135: 546-551.
- M. Lozada, P. D' Adamo, **M. Buteler**, M.N. Kuperman. 2016. Social Learning in *Vespula Germanica* Wasps: Do They Use Collective Foraging Strategies? PLOS ONE11(3). Published: March 18, 2016 http://dx.doi.org/10.1371/journal.pone.0152080
- **M. Buteler**, M. Lozada, P. D'Adamo, R.A. Luz Melo, T. Stadler. 2016. Behavioural responses of *Vespula germanica* (Hymenoptera: Vespidae) wasps exposed to essential oils. Austral entomology, 55: 308-315.

- **M. Buteler**, R. K. D. Peterson, M. L. Hofland, D. K. Weaver. 2015. A Multiple Decrement Life Table Reveals That Host Plant Resistance and Parasitism Are Major Causes of Mortality for the Wheat Stem Sawfly. Environmental Entomology, 44: 1093-1099.
- **Buteler M.**, S.W. Sofie, D.K. Weaver, D. Driscoll, J. Muretta and T. Stadler. 2015. Development of nanoalumina dust as insecticide against Sitophilus oryzae and Rhyzopertha dominica.. International Journal of Pest Management 61: 80-89.
- **M. Buteler**, G.P. Lopez Garcia, AA. Pochettino, N., Stefanazzi, A.A. Ferrero, T. Stadler. 2014. Insecticidal activity of volcanic ash against Sitophilus oryzae L. (Coleoptera: Curculionidae) under laboratory conditions. Ecología Austral 24:17-22.
- V. Fernández-Arhex, **M. Buteler**, M.E. Amadio, A. Enriquez, A.L. Pietrantuono, T. Stadler, G. Becker, O. Bruzzone. 2013. The effects of Volcanic ash from Puyehue-Caulle Range eruption on the Survival of Dichroplus vittigerum (ORTHOPTERA: ACRIDIDAE). Florida Entomologist 96(1)- 286-288.
- **Buteler, M.**, D. K. Weaver. 2012. Host selection by the wheat stem sawfly in winter wheat and the potential role of semiochemicals mediating oviposition preference . Entomologia Experimentalis et Applicatta. 143: 138-147.
- Stadler, T., **M. Buteler**, D. K. Weaver, S. Sofie. 2011. Comparative toxicity of nanostructured alumina and a commercial inert dust for *Sitophilus oryzae* (L.) and *Rhyzopertha dominica* (F.) at varying ambient humidity levels. Journal of Stored Product Research. 48: 81-90.
- **Buteler, M.**, T. Stadler, G.P. Lopez García, M.S. Lassa, D. Trombotto, G. Liaudat, P. D'Adamo, V. Fernandez-Arhex. 2011. Propiedades insecticidas de la ceniza del complejo volcánico Puyehue-Cordón Caulle y su posible impacto ambiental Rev. Soc. Entomol. Argent. 70 (3-4): 149-156, ISSN 0373-5680 (impresa), ISSN 1851-7471 (en línea).
- **Buteler, M.** , Stadler, T. 2011. Current use and insecticidal mode of action of petroleum distilled mineral oils, chapter 7, En: Pesticides in the modern world, M. Stoytcheva (ed.). InTech Publishing, ISBN 978-953-307-459-7.
- Peterson, R. K. D., **M. Buteler**, D. K. Weaver, T. B. Macedo, Z. Sun , O. G. Perez , G. R. Pallipparambil. 2011. Parasitism and the Demography of Wheat Stem Sawfly Larvae, *Cephus cinctus*. Biocontrol. 56: 831-839.
- Stadler, T. **M. Buteler,** D. K. Weaver. 2010. Novel use of Nanostructured Alumina as an insecticide. Pest Management Science. 66: 577-579.
- **Buteler, M.**, D. K. Weaver, P. L. Bruckner., G. R. Carlson., J. E. Berg, P. Lamb. 2010 Identification of winter wheat cultivars suitable as trap crops for the wheat stem sawfly based on agronomic traits and semiochemical production. Canadian Entomologist. 142: 222-233.
- Stadler, T., **M. Buteler** and D. K. Weaver. 2010. FORO: Nanoinsecticidas: Nuevas perspectivas para el control de plagas (FORUM: Nanoinsecticides: New perspectives on insect pest control). Revista de la Sociedad Entomológica Argentina 69: 149-156
- Sherman, J. D., D. K. Weaver, M. L. Hofland, **M. Buteler**, S. P. Lanning, Y. Naruoka,N. K. Blake, J. M. Martin, P. Lamb, G. R.Carlson, and L. E. Talbert. 2010. Quantitative Trait Loci Associated with Host Plant Attractiveness to Female Wheat Stem Sawfly. Crop Science. Crop Science. 50: 73–86.

- Stadler, T., **Buteler, M.** 2009. Modes of entry of petroleum distilled oils into insects: a review. Bulletin of Insectology. 62(2): 162-167.
- Weaver, D. K., **M. Buteler**, M. L. Hofland, J. B. Runyon, C. Nansen, L. E. Talbert, and G. R. Carlson. 2009. Cultivar preferences of ovipositing wheat stem sawflies as influenced by the amount of volatile attractant. Journal of Economic Entomology. 102(3): 1009-1017.
- **Buteler, M.**, D. K. Weaver, and R. K. D. Peterson. 2009. Exploring the oviposition behavior of the wheat stem sawfly when encountering plants infested with cryptic conspecifics. Environmental Entomology. 38(6): 17007-1715.
- **Buteler, M.** , D. K. Weaver, and P. R. Miller. 2008. Wheat stem sawfly infested plants benefit from parasitism of the herbivorous larvae. Agricultural and Forest Entomology. 10: 347–354.
- Piesik, D., D. K. Weaver, J. B. Runyon, **M. Buteler**, G. E. Peck , and W. L. Morrill. 2008. Behavioural responses of wheat stem sawflies to wheat volatiles. Agricultural and Forest Entomology. 10: 245–253.
- Stadler, T. and **M. Buteler**. 2007. Migration and dispersal of *Anthonomus grandis* (Coleoptera: Curculionidae) in South America. Revista de la Sociedad Entomológica Argentina. 66 (3-4): 205-217. ISSN 0373-5680.
- Stadler, T., **M. Buteler** and A. Ferrero. 2006. Susceptibilidad a endosulfan y monitoreo de resistencia en poblaciones de *Piezodorus guildinii* (Insecta, Heteroptera: Pentatomidae), en cultivos de soja de Argentina. Rev. Soc. Entomol. Argent. 65 (3-4): 109-119. ISSN 0373-5680.
- Stadler, T., A. Fornes and **M. Buteler**. 2005. Interfacial forces and permeation of the codling moth cocoon silk. Bulletin of Insectology. Vol. LVIII-1 pp. 57-64.

TEACHING

2012. (10-14 April). Professor and organizer of the post-graduate course endorsed by the National University of Comahue. "Introduction to chemical ecology and its use for insect pest management". Duration: 40 hours

2011. Invited lecturer at the biannual Integrated Pest Management course at the Department of Natural Resources and Environmental Sciences at Montana State University. Given by David K. Weaver.

2009-2010. Guest lecturer at the subject of Insect Physiology in the Department of Natural Resources and Environmental Sciences at the Montana State University. Given by David K. Weaver.

2008. Teaching Assistant in the Land Resources and environemental sciences Dept., Montana State University for the biannual subject: Integrated Pest Management. Given by Robert K. Peterson and David K. Weaver.

2006. Teaching Assistant of Entomology, Montana State University, for the semester subject: Insect Physiology.
2006. Participation in the "Montana Apprenticeship Program" project at Montana State University. The duration of the program is 6 weeks, during which

high school students take classes at the University, and participate in a research project, under the tutelage of an investigator.

2002. Teaching Assistant of the class “Bioecology”, from the degree in Environmental Sanitation of the National University of Comahue.

SCIENTIFIC MEETINGS

Attendance and presentations at more than 20 congresses and scientific conferences. Also participated in several extension talks to growers and general public.

DIRECTION OF THESIS AND DOCTORAL DEGREES

Licenciatura (equivalent to Ms degree):
Codirection of thesis, National Comahue University. Luciana Sepulveda. Desde 2013. Title: Aceites vegetales: ¿Posibles fagoestimulantes kairomonales en tucuras (Orthopthera: acrídidos)?

Codirection of thesis, national Comahue University. Romina Luz Melo. Title: Study of the repellent effect of the oil of cat mint and rose hip on *Vespula germanica* wasps. Qualification obtained: 10 outstanding.

Doctoral Thesis:
Codirection of thesis and doctoral grant (CONICET). Belen Yossen. Since April 2016. Thesis topic: use of repellents based on essential oils for the management of *Vespula germanica.*

Researchers:
Codirection of postoctoral fellow Deborah Dirancescantonio. Scholar at CONICET.

AWARDS

INNOVA 2014 AWARD. Insecticides: new technology for the control of pests with low impact for health and environmentally friendly work on nanostructured alumina. IDITS Mendoza granting institution.

FINANCING OBTAINED (RECENT)

-"Insecticidal activity and effects on the health of a new Nanoinsecticide based on nanostructured alumina". PIP 2014-2016. R $ 30,950.00.
- "Strategies of sustainable management to reduce the use of agrochemicals in the production of Salicaceae". 2015-2017. AR $ 499450.00
- "Evaluation of the activity and mechanism of action of a new insecticide based on nanostructured alumina, for the control of stored grain pests" PIP 2011-2013.
- Proevo-2011-40-B-185. "Effect of volcanic ash from the eruption of the Puyehue-cord Caulle complex, on the development and survival of insect pests". $ 17850.
-SAFO 108. 2012-2015. "Main pest insects associated with Salicaceae: Tools of ecology applied to management." Component Sustainable Forest Plantations MSRN Project BIRF LN 7520 AR. US $ 130,000.00.

-Evaluation of the use of repellent and attractant semiochemicals for the integrated management of *Vespula germanica* and *V. vulgaris*, in apiaries of Patagonia Argentina. PICT 2016 -0293 $ 353,000.

OTHER ACTIVITIES

- Organizing Committee of the VIII Argentine Congress of Entomology April 10 -17, 2012 Bariloche, Argentina.
- Reviewer for Journals: Bulletin of Insectology, Entomologia Experimental et applicatta, PLOS ONE, International Journal of Pest Management, Insect Science.
- External reviewer for the Agency of Scientific Promotion, Argentina.
- Member of the Committee to evaluate scholarship applicants at CONICET.
- Member of the Argentine Entomological Society.
- Member of the Latin American Chemical Ecology Society (ALAEQ).