

## 2016 Curriculum Vitae



**NAME:** Katja Poveda  
**DEPARTMENT/UNIT:** Entomology  
**TITLE:** Assistant Professor  
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<http://blogs.cornell.edu/katjapoveda/>

### BACKGROUND

#### Education

<u>Year</u>	<u>Degree</u>	<u>Institution</u>
2005	Ph.D., Agroecology ( <i>summa cum laude</i> )	Institute of Agroecology, Georg-August University, Göttingen, Germany (Advisor: Teja Tscharntke)
2000	B.A./B.S., Biology	Universidad Nacional de Colombia, Bogotá, Colombia

#### Academic ranks

Assistant Professor: 2012 to present

#### Primary departmental/unit program area

Agroecology of insects, 60% research and 40% teaching

#### Areas of expertise

Agroecology, landscape ecology, tropical ecology, plant-insect interaction, pest control, pollination ecology, multitrophic interactions, plant tolerance to herbivory

### PROFESSIONAL EXPERIENCE

<b>Year</b>	<b>Experience</b>
2012-present	Assistant Professor, Department of Entomology, Cornell University
2011	Research Associate, Entomology Department, Cornell University
2006 – 2010	Postdoctoral research: <b>Diversification of Andean crop systems at local and landscape scales: Enhancing biological control of potato pests.</b> Collaborative project between Georg-August University, Göttingen, Germany, Universidad Nacional de Colombia and Cornell University (mentors: Teja Tscharntke, Carlos Nustez and Ward Tingey)

- 2009 – 2012 Co-PI: **Diversification of *Physalis peruviana* crops to increase production through the control of noctuid pests and enhanced pollination\*** (PI: Augusto Ramirez, Universidad Nacional de Colombia).
- 2005 Postdoctoral research: “**Volatiles mediating interactions between root herbivores and pollinators**” at the Institute of Forest Zoology, Göttingen/Germany (mentor: Stefan Schuetz)
- 2001 – 2005 Ph.D. research: **Multitrophic plant insect interactions in dependence of below ground processes** (Advisor: Teja Tschardtke).
- 1999 – 2000 Undergraduate thesis: **Habitat use of two groups of white footed tamarins (*Saguinus leucopus*) in Mariquita, Colombia.**(Advisor: Pedro Sanchez)
- 08-12/ 2000 Biologist at the Environmental Authority (Corporación Autónoma Regional de Cundinamarca) in Villeta, Colombia.

### **Sabbaticals and study leaves**

None

### **HONORS & AWARDS**

Fellowship from the Studienstiftung des Deutschen Volkes (German National Academic Foundation), 2006

Graduated with honors and merit for my thesis from Biology Studies in the Universidad Nacional de Colombia, Colombia, September 2000

Galante Family Winery Conservation Scholarship (International Primatological Society), July 2001.

### **ACADEMIC RESPONSIBILITIES**

#### **Administrative responsibilities**

None

#### **Research responsibilities**

##### Current Postdoctoral Associates

Dr. Susan Whitehead (February 2014-present)

Dr. Etzel Garrido (March 2014-present)

##### Past Postdoctoral Associates

Dr. Christopher Stieha (June 2012-May 2014)

##### Other Current Research Professionals Supervised

None

##### Other Past Research Professionals Supervised

Sara Cilles, MSc, Technician (December 2013-May 2014)

## Other Relevant Research Activities, Accomplishments, etc.

### Funding

PI's	Total award Supporting agency	Start-end dates	Title of project
Susan Whitehead, (Katja Poveda)	\$150,000 NIFA-USDA Postdoctoral Fellowship	12/15/2015-12/14/2017	Chemical Mechanisms of Insect Resistance in Apple Fruits
Ricardo Perez, Katja Poveda	\$14,993 NE SARE Graduate Student Grant	05/01/2015-04/30/2016	Management of the lepidopteran pest complex in cabbage: augmentative biological control strategies in different landscape context
Katja Poveda	\$ 90,000 USDA-NIFA Federal Formula Funds	10/1/2014-9/31/2017	Augmentative release of spined soldier bugs to reduce pest pressure and increase yield in NYS cabbage
Bryan Danforth, Katja Poveda	\$ 54,686 Apple Research and Development Program (ARDP) 25% investment in writing of proposal and 25% of the work will be performed in my lab	04/01/14 to 03/31/15	Mason bees as pesticide biomonitors in apple orchard habitats
Ricardo Perez, Katja Poveda	\$9,000 Towards Sustainability Fund	03/2014-02/2015	Is augmentative biological control useful in complex landscapes?
Georg Jander Katja Poveda	\$498,312 USDA -AFRI (\$264,572 to my lab)	1/1/14 to 12/31/16	Increasing potato yield through genetic and biochemical analysis of compensatory growth responses during tuber moth infestation
Katja Poveda, William Fry	\$120,000 USDA-NIFA Federal Formula Funds (multistate)	9/1/13 to 8/31/17	Collaborative potato breeding and variety development activities to enhance farm sustainability in the eastern US
Heather Connely, Greg Loeb, Katja Poveda, Bryan Danforth	\$9,000 Towards Sustainability Fund	03/2013-03/2014	Influence of on farm habitat diversity and landscape complexity on biological control and pollination in strawberry
Heather Connely, Greg Loeb, Katja Poveda, Bryan	\$1,561 Griswold	03/2013-02/2014	Influence of landscape complexity on biological control of tarnished plant bug in strawberry

Danforth			
Greg Loeb, Heather Connely, Katja Poveda	\$14,534 SARE	11/2012- 10/2015	Use of native perennial wildflowers and alfalfa trap crops to increase pollination and biological control in strawberry
Jennifer Thaler, Miguel Gomez, Georg Jander, Katja Poveda	\$107,000 Atkinson Center for a Sustainable Future	09/2011- 08/2013	Sustainable pest management and yield increase strategies through ecological, genetic, and economic analysis
Carlos E. Sarmiento, Katja Poveda	\$ 10,000 Banco de la Republica (Colombia)	12/2010- 11/2011	Preference and performance of different noctuid pests in goldenberry crop diversification practices*
Augusto Ramirez, Katja Poveda	\$ 98,000 from Colciencias (Colombia)	01/2009- 08/2011	Diversification of <i>Physalis peruviana</i> crops to increase production through the control of noctuid pests and enhanced pollination*
Katja Poveda	€ 93,148 (\$ 136,450) DFG (German Science Foundation)	08/2008- 12/2010	Diversification of Andean crop systems at local and landscape scales: Enhancing biological control of potato pests (extension from the previous grant)
Katja Poveda	€ 97,389 (\$ 142,670) DFG (German Science Foundation)	05/2006- 04/2008	Diversification of Andean crop systems at local and landscape scales: Enhancing biological control of potato pests

## TEACHING AND ADVISING RESPONSIBILITIES

### Administrative Leadership (positions related to teaching/education/advising)

None

### Courses Taught

BIOEE/BIONB/ENTOM 7640 Plant-Insect Interactions Seminar (Spring 2014), 1 credit

ENTOM 3030 Applied Statistics: Biological Experiments in Practice (Spring 2013, 2015), 3 credits

HORT/ENTOM 4730 Ecology of Agricultural Systems (Fall 2013, 2014, 2015), 3 credits

### Educational Innovations Developed Including; Web-Based Materials; New Courses Developed, etc.

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\* Translated from the original Spanish title

**Educational Innovations Developed Including; Web-Based Materials; New Courses Developed, etc.**

New course developed:

ENTOM 3030 Applied Statistics: Biological Experiments in Practice

**Current Undergraduate Students Mentored in Independent Research**

Rachele Weintraub

**Current Student Organizations for Which You Served as Faculty Advisor**

PorColombia Cornell

**Current Undergraduate Advisees**

Arabelle Osicky

**Current Teaching Assistants (graduate & undergraduate) and Other Teaching Support Professionals Supervised (list names)**

Heather Connelly, Entomology, Spring 2015

Emily Reiss, Horticulture, Fall 2013, 2014, 2015

Mia Park, Entomology, Spring 2013

**Other Relevant Teaching and Advising Activities, Accomplishments, etc.**

Field courses

Invited faculty to the “Undergraduate semester abroad program: tropical biology on a changing planet”. Organization for Tropical Studies and Duke University. (March 2014, La Selva Biological Station, Costa Rica).

Coordinator of the Organization for Tropical Studies Field Course “Plant-Animal Interactions in the Tropics” (January 2010, La Selva Biological Station, Costa Rica).

Co-coordinator of the Organization for Tropical Studies Field Course “Tropical Biology: An Ecological Approach”, OTS, Costa Rica. Spring 2008

Co-coordinator of the Organization for Tropical Studies Field Course “Tropical Biology: An Ecological Approach”, OTS, Costa Rica. Spring 2006

Guest lectures

PLSCS 1900 - Sustainable Agriculture: Food, Farming, and the Future, Fall 2015. 1 lecture: Diversity at local and landscape scales to improve ecosystem services.

HORT/BIOEE 4730, Ecology of Agricultural Systems, Fall 2010 & 2012. 1 lecture and 1 lab: Plant diversity and pest control

ENTOM 4550, Insect Ecology, Fall 2010. 1 lecture: Diversity in Agroecosystems

OTS 07-1, January 2007 “Tropical Biology: An Ecological Approach”. Invited faculty to lecture and lead group and independent projects for 2 weeks. OTS, Costa Rica.

“Biología de Insectos” (Biology of Insects). 1 lecture: Biodiversity in Agroecosystems. Universidad Nacional de Colombia-Sede Bogotá.

**Undergraduate project students**

(\*indicates students were co-authors on published papers)

(†indicates students are performing a senior thesis at Cornell University)

Anthony Polyakov†

Rachel Au  
Alena Hutchinson  
Miles Renault\*  
Rachele Weintraub†  
Alexander Chautá\* (Universidad Nacional de Colombia, July 2010)

### **Graduate field memberships**

Entomology

### **Graduate majors**

Current (names and expected date and field of degree including degree. For example, Ph.D., M.S., MPS, MAT, etc.)

Tim Luttermoser, Entomology, Ph.D., anticipated in 2021  
Manuel Ricardo Perez, Entomology, Ph.D., anticipated in 2018  
Mary Centrella, Entomology, Ph.D., anticipated in 2018

Total Completed (names and dates)

Alexander Chautá. Biology, M.S. Universidad Nacional de Colombia. Physiological and ecological costs of leaf herbivory on pollination. \* November 2014  
Maria Fernanda Diaz. Agronomy (Entomology), M.S. Universidad Nacional de Colombia. Diversification of *Physalis peruviana* crops through flowering plants to increase *Trichogramma* spp. parasitism of noctuid moths.\* May 2011  
Eliana Martinez. Biology, M.S. Universidad Nacional de Colombia. Effect of landscape structure on herbivores and their natural enemies in potato crops in Cundinamarca.\* Merithourius thesis July 2008  
Maria Isabel Gómez Jimenez. Agronomy (Entomology), M.S. Universidad Nacional de Colombia (Bogotá). Synergistic effects of repellents and attractants for potato tuber moth control.\* Merithourius thesis July 2008

\* translated from original Spanish title

### **Graduate minors**

Current (names and expected date and field of degree)

Heather L. Connelly, PhD, 2017, Entomology, Major Advisor: Greg Loeb  
Lauren D. Snyder, PhD, 2017, EEB, Major Advisor: Allison Power  
Emily R. Reiss, PhD, 2017, PLSCS, Major Advisor: Laurie Drinkwater  
Laura Figueroa, PhD, 2020, Entomology, Major Advisor: Scott McArt

Total Completed (names and dates)

Erin M. Kelley, M.S., Agricultural Economics: Applied Economics and Management, Major Advisor: Miguel Gomez, finished June 2013  
Susan B. Claflin, PhD, 2016, Entomology, Major Advisor: Jennifer Thaler

### **Sabbatical visitors**

None

## **OTHER CURRENT PROFESSIONAL ACTIVITIES**

### **Professional societies**

Entomological Society of America (2012-present)

Ecological Society of America (2004-present)

**Professional honoraries**

None

**Editorial boards**

None

**Ad hoc reviewer**

2016: Journal of Applied Ecology (1), Basic and Applied Ecology (1), Chemoecology (1), Agriculture, Ecosystems and Environment (1), Hatch grant proposals.

2015: PNAS (1), Journal of Applied Ecology (2), Oecologia (2), External reviewer for PhD thesis at the Universidad Nacional de Colombia (2), TSF Grant proposal (Cornell University), USDA-NIFA grant proposal, Hatch grant proposals.

2014: Biocontrol Science and Technology (1), Revista Colombiana de Entomologia (1) grant for NSF (1)

2013: Journal of Applied Ecology (2), Frontiers in Plant-Microbe Interaction (1), Basic and Applied Ecology (1), grant for the DFG (German Science Foundation) (1), Ecological Applications (1)

2012: Ecology (1), Journal of Applied Entomology (1), Journal of Animal Ecology (2), Grass and Forage Science (1)

Prior to 2012: grants for NSF and Colciencias (Colombia). Oikos, Ecological Applications, Ecological Entomology, Functional Ecology, Basic and Applied Ecology, Revista Colombiana de Entomologia, Journal of Applied Ecology, New Phytologist

**Committee assignments**

International/National (including federal government agencies):

None

State/Local (including state and local government agencies):

None

Commodity and other Stakeholder:

None

University:

None

College:

TNC Nature Net postdoc application review committee

Department:

2014-present: Seminar series organizer

2013-2014: Seminar series co-organizer

2012 - 2015: Graduate Students Recruitment committee

## OTHER CURRENT PROFESSIONAL CONTRIBUTIONS

### Symposia organized

P-IE Section Symposium: Landscape Simplification: Effects on Arthropod Mediated Ecosystem Services and Agricultural Production. Organized by Katja Poveda and Heather Connelly. Annual meeting of the Entomological Society of America, Minneapolis, MN, USA. November 18th 2015.

### Conferences/workshops

#### Papers presented

Perez, R., Nault, B. & Poveda, K. Effects of landscape composition on crop yield mediated by specialist herbivores. Annual meeting of the Entomological Society of America, Minneapolis, MN, USA. Contributed Presentation. November 16th 2015.

Connelly H., K. Poveda & G. Loeb. Local and landscape scale drivers of ecosystem services: Pollination, biological control and yield. Annual meeting of the Entomological Society of America, Minneapolis, MN, USA. Invited Presentation. November 18th 2015.

Connelly H., N. Amon, B.N. Danforth, K. Poveda & G.M. Loeb. Does landscape mediate wild bee health and phylogenetic diversity? Annual meeting of the Entomological Society of America, Minneapolis, MN, USA. Contributed Presentation. November 16th 2015.

Centrella M., B.N. Danforth, K. Poveda, E. Blitzer & L. Russo. You are what you eat: The effects of pesticides and diet diversity on mason bees in apple. Annual meeting of the Entomological Society of America, Minneapolis, MN, USA. Invited Presentation. November 15th 2015.

Whitehead S.R. & K. Poveda. Plant-herbivore interactions in domesticated crops: does selection for increased fruit size in apples affect chemical defense and herbivore performance? Annual meeting of the Ecological Society of America, Baltimore, MD, USA. Contributed Presentation. August 11, 2015

Whitehead S.R. & K. Poveda. Effects of selection for increased fruit size on insect resistance in apples. Annual Eastern Branch Meeting, Entomology Society of America, Rehoboth Beach, DE. Invited Presentation. March 16th 2015.

Whitehead S. & **K. Poveda**. 2014. Crop yield and insect resistance: Effects of selection for increased fruit size on codling moth resistance in wild and domestic apples. Abstracts ESA (Entomology) meeting, Portland, OR (Oral)

Perez-Alvarez R., B.A. Nault & **K. Poveda**. 2014. Testing the intermediate landscape complexity hypothesis for augmentative biological control. Abstracts ESA (Entomology) meeting, Portland, OR (Oral)

Stieha C., S. Cilles, E. Garrido, W. Fry & **K. Poveda**. 2014. Trade-offs between Colorado potato beetle resistance and late blight resistance in commercial potato varieties Abstracts ESA (Entomology) meeting, Portland, OR (Oral)

Connelly H., E.J. Blitzer, B. N. Danforth, G.M. Loeb & **K. Poveda**. 2014. Spillover of pollinators between crops: Competition or facilitation? Abstracts ESA (Entomology) meeting, Portland, OR (Oral)

Huseth A., J.D. Petersen, **K. Poveda**, Z. Szendrei, B. A. Nault, G. G. Kennedy & R.L. Groves. 2014. Insecticide resistance in a specialist herbivore shows a hidden cost of agricultural intensification. Abstracts ESA (Entomology) meeting, Portland, OR (Invited talk at a Program Symposium.)



- Kessler A., A. Uesugi, **K. Poveda** & R.H. Johnson. 2014. Plant induced responses to herbivory and their effects on insect population dynamics. Abstracts ESA (Entomology) meeting, Portland, OR (Oral)
- Stieha C., K. Abbott & **K. Poveda**. 2013. Effects of plant defenses on herbivore population cycles. M2E2-Current challenges for mathematical modeling of cyclic populations Banff international research station, Canada (Oral)
- Poveda K.**, & M.F. Diaz. 2013. Crop production in dependence of landscape complexity, herbivore density and plant tolerance. Abstracts ESA (Entomology) meeting, Austin, TX (Oral).
- Gómez-Jiménez M., C. Sarmiento, M. Díaz, A. Chautá, A. Peraza, A. Ramírez & **K. Poveda**. 2013. Preference-performance in polyphagous *Copitarsia decolora* and *Peridroma saucia*: are mothers or larvae right? Abstracts ESA meeting, Austin, TX (Poster).
- Díaz Niño M. F., A. Ramírez, **K. Poveda**. 2013. Eficiencia de tres especies parasitoides e incremento en la diversidad floral en el cultivo de uchuva, sobre el control biológico de noctuidos plaga (Lepidoptera). Resúmenes 40° Congreso Socolen, Bogota, Colombia (Oral).
- Gómez Jiménez M. I., M. F. Díaz Niño, A. Chautá, A. Peraza, A. Ramírez-Godoy, C. E. Sarmiento Monroy & **K. Poveda**. 2013. Probando la hipótesis preferencia-desempeño en las especies polífagas *Copitarsia decolora* y *Peridroma saucia* (Lepidoptera: Noctuidae): ¿Tienen las madres o las larvas la razón? Resúmenes 40° Congreso Socolen, Bogota, Colombia (Oral).
- Peraza Arias A. R., M. I. Gómez Jiménez, A. Ramírez-Godoy, **K. Poveda**. 2013. Preferencia de hospedero y parámetros de desarrollo de *Copitarsia decolora* (Lepidoptera: Noctuidae) en plantas cultivadas Resúmenes 40° Congreso Socolen, Bogota, Colombia (Poster).
- K. Poveda** & , M. F. Diaz. 2013. Landscape simplification and plant tolerance responses to herbivory affect the outcome of plant-herbivore interactions. Abstracts ESA (Ecology) meeting, Minneapolis , MN, (Oral).
- Stieha C., K.C. Abbott & **K. Poveda**. 2013. Plant responses to herbivores and their effects on pest outbreaks. Abstracts ESA (Ecology) meeting, Minneapolis, MN, (Oral).
- Connelly H., **K. Poveda** & G.M. Loeb. 2013. Influence of landscape simplification on pollination services to strawberry. Abstracts ESA (Entomology) meeting, Lancaster, PA (Oral).
- Poveda K.** & M.I. Gomez-Jimenez. 2012. Repellents, attractants and compensatory responses to reduce pest pressure and increase yield in Andean Potato Systems. Abstracts ESA (Entomology) meeting, Knoxville, TN (Oral).
- Poveda K.**, M.I. Gomez-Jimenez, R. Halitschke, A. Kessler. 2011. Overcompensating plants: their expression of resistance traits and effects on herbivore preference & performance. Abstracts ESA (Ecology) Meeting. Austin, Texas (Oral).
- Poveda K.**, E. Martinez, M. A. Bonilla & T. Tschardtke. 2010. Landscape simplification and altitudinal variation affect biodiversity, herbivory, and Andean potato yield. Abstracts ESA (Ecology) Meeting, Pittsburg, PE. (Oral).
- Gómez M.I. & **K. Poveda**. 2010. Effect of the integrated use of repellent and attractive stimuli on *Tecia solanivora* in potato fields\*. Resúmenes XXXVII Congreso SOCOLEN in Bogota, Colombia. (Oral).

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\* Translated from the original Spanish title

- Chautá A., A. Bonilla & **K. Poveda** 2010. Influence of different pollinators on the fruit quality of goldenberries (*Physalis peruviana*, Solanaceae)\*. Resúmenes XXXVII Congreso SOCOLEN in Bogota, Colombia. (Poster).
- Díaz M.F., A. Ramírez-Godoy & **K. Poveda**. 2010. Efficacy of three egg parasitoid (Hymenoptera: Trichogrammatidae) for the management of noctuid pests\*. Resúmenes XXXVII Congreso SOCOLEN in Bogota, Colombia. (Oral).
- Martínez E., C. E. Sarmiento & **K. Poveda**. 2010. *Spodoptera frugiperda* adults and larvae host selection\*. Resúmenes XXXVII Congreso SOCOLEN in Bogota, Colombia. (Oral).
- Kessler A., **Poveda K.**, Sapp J., Reid E.M., Whitehead, S. Posto A., Royer A.N. 2009. Chemical mimicry allows parasitism of an ant-Acacia mutualism by a coreid bug (Mozena sp.: Coreidae). Abstracts ESA (Ecology) Meeting. Albuquerque. USA (Oral).
- Poveda K.**, A. Kessler & M.I. Gómez. 2008. A mutualistic herbivore? Increased yield through herbivore specific cues. Abstracts ICE Meeting in Durban, South Africa. (Oral)
- Kessler A. & **K. Poveda**. 2008. The value of changing phenotypes: Herbivore population consequences of induced plant responses. Abstracts ICE Meeting in Durban, South Africa. (Oral)
- Gómez M.I., T. Tschardt & **K. Poveda**. 2008. Repellents and attractants as push-pull strategy for potato moth control. Abstracts ICE Meeting in Durban, South Africa. (Poster)
- Poveda K.**, E. Martínez, M.A. Bonilla, T. Tschardt. 2008. Landscape scale diversification of Andean crop systems: enhancing biological control of potato pests. Gómez M.I., T. Tschardt & K. Poveda. 2008. Abstracts ICE Meeting in Durban, South Africa. (Poster)
- Poveda K.**, Nchimi N., Gomez-Jimenez M.I., Steffan-Dewenter I., S. Scheu & T. Tschardt. 2007. Belowground herbivory influences plant growth and plant-pollinator interactions. Abstracts Volume of the ESA(Ecology) /SER Joint Meeting in San José, California. (Oral)
- Gómez Jiménez M.I., C. Ñustez, E. Torrado, T. Tschardt & **K. Poveda** 2007. Evaluación de una estrategia "push-pull" para el manejo de *Tecia solanivora* (Lepidoptera:Gelechiidae) en cultivos de papa. Resúmenes XXXIV Congreso SOCOLEN in Cartagena, Colombia. (Oral)
- Poveda K.**, I. Steffan-Dewenter, S. Scheu & T. Tschardt. 2007. Relaciones multitróficas entre plantas e insectos en dependencia de procesos ecológicos en el suelo. II Congreso de Botánica, Medellín Colombia. Actualidades biológicas 29(1):69 (Poster)
- Gómez Jiménez M.I., **K. Poveda** & T. Tschardt. 2007. Evaluación del efecto de plantas repelentes sobre la oviposición de la polilla guatemalteca de la papa (*Tecia solanivora*) (Lepidoptera). II Congreso de Botánica, Medellín Colombia. Actualidades biológicas 29(1):303 (Oral)
- Poveda K.** & T. Tschardt. 2006 Diversification of Andean crop systems at local and landscape scales: enhancing biological control of potato pests. Abstracts of PAA/Solanaceae 2006: Genomics meets biodiversity in Madison, Wisconsin, USA (Poster)
- Kessler A. & **K. Poveda**. 2006. SOL-ANDINO: The genome project and its impact. Abstracts of PAA/Solanaceae 2006: Genomics meets biodiversity in Madison, Wisconsin, USA (Poster)

### Workshops/other university service

None

### Working group

Part of the SESYNC working group “Evidence and Decision-Support Tools for Controlling Agricultural Pests with Conservation Interventions” First meeting in Annapolis, MA, Sep30-Oct 2, 2014. Since then we have met 3 more times and the first product of the collaboration was submitted to Ecology letters

### Meetings organized

None

### **Invited presentations**

#### 2016 (invited visits)

Washington State University, March 2<sup>nd</sup> 2016

International/ Latin-American Chemical Ecology Meeting, July 4-8, 2016

Ecology ESA. August 2016

ICE, September 2016

#### 2015

Diversity at a local and landscape scale and its effects on herbivores, plant responses and productivity. Michigan State University Entomology Seminar, Michigan State University. Invited Presentation. April 17th 2015.

Landscape effects on yield mediated through plant induced responses to herbivores. Annual Meeting of the Entomological Society of America, Minneapolis, MN, USA Invited Presentation. November 18th 2015.

Tradeoffs between plant tolerance and resistance to herbivory in different potato varieties. Annual Eastern Branch Meeting, Entomology Society of America, Rehoboth Beach, DE. Invited Presentation. March 16th 2015.

Respuesta de las plantas a insectos para aumentar la productividad de cultivos. Special Seminar. CORPOICA, Mosquera, Colombia. Invited Speaker. June 23rd, 2015

#### 2014

Agricultural intensification and its effect on local management practices. Invited talk at a Program Symposium. ESA (Entomology) meeting, Portland, OR. November, 2014

Biodiversity in tropical agroecosystems and plant responses to herbivory:

**consequences for plant productivity.** University of Massachusetts, Amherst, March 28, 2014

#### 2013

Compensatory plant responses to pest damage: a new path for more sustainable agriculture? ESA (Entomology) Eastern Branch meeting, Lancaster, PA. March 16-19, 2013

Biodiversity in tropical agroecosystems: implications for natural pest control and productivity. University of Vermont. February 1st 2012

Biodiversity in tropical agroecosystems: implications for natural pest control and productivity. Department of Horticulture, Cornell University. February 4th 2012

Plant tolerance in different landscapes: consequences for plant productivity. Chemical Ecology and Coevolution Workshop. Cornell University, Ithaca, NY. September 8-

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## 2012

- Repellents, attractants and compensatory responses to reduce pest pressure and increase yield in Andean Potato Systems in the Symposium: Beyond Borders: Global Research in Pest Management, ESA meeting, Knoxville, TN November 14th 2012
- Biodiversity in tropical agroecosystems: implications for natural pest control and productivity. UNAM, Mexico D.F. Mexico
- Biodiversity in tropical agroecosystems: implications for natural pest control and productivity. Entomology Department, Rutgers University, New Brunswick, NJ. October 26th 2012. "October 19th 2012.
- Chemical ecology in Agroecosystems: The push-pull strategy for pest control as part of the course: Ecología química: curso corto. Universidad Nacional de Colombia. Bogota, Colombia June 25th and 26th 2012. June 25th 2012.

## 2011 and prior

- August 16<sup>th</sup> 2011. Biodiversity in tropical agroecosystems: implications for natural pest control and production Entomology, Cornell University, Ithaca-NY.
- October 4<sup>th</sup> 2010. Biodiversity in tropical agroecosystems: implications for natural pest control and production EEB, Cornell University, Ithaca-NY.
- February 7<sup>th</sup>, 2010. Biodiversity in tropical agroecosystems: implications for natural pest control and production Department of Entomology, Cornell University – Geneva, NY.
- June 30<sup>th</sup>, 2010. Plant responses to herbivory: its application in agricultural systems\* Meeting of the Colombian Entomological Society (SOCOLEN), Universidad Javeriana, Colombia.
- October 30<sup>th</sup>, 2007. A Mutualistic Pest? Herbivory Increases Potato Yield, Agroecology, University of Göttingen, Germany
- October 17<sup>th</sup>, 2007. Plant-herbivore mutualism in potatoes: do we also benefit?, University of Bayreuth, Department of Animal Ecology I, Population Ecology Group, Germany
- October 31<sup>st</sup>- November 1<sup>st</sup> 2007 Workshop: Global Change, biodiversity and food web interactions, testing the insurance hypothesis. Agroecology, University of Göttingen, Germany

## **Research and extension grant review panels**

None

## **Consulting**

None

## **Resource for media (i.e., called upon as an expert for electronic or print media)**

None

## **PUBLICATIONS**

### **Submitted papers**

- Garrido E., M.F. Díaz, H. Bernal, C.E. Núñez, J. Thaler, G. Jander & **K. Poveda**. Costs and tradeoffs of resistance and tolerance to belowground herbivory in potato. Submitted to PlosOne.
- Grab H., E.J. Blitzer, G. Loeb, B. Danforth & **K. Poveda**. Pollinator facilitation between consecutively blooming crops increases productivity. Submitted to PNAS

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\* Translated from the original Spanish title

- Perez-Alvarez, R., B.A. Nault & **K. Poveda**. Effects of landscape composition on crop yield mediated by specialist herbivores. Submitted to Journal of Applied Ecology
- H. Grab, Br. Danforth, **K. Poveda** & G. Loeb. Landscape influences classical biological control and crop yield. Submitted to Journal of Applied Ecology
- Whitehead S.R., M. Turcotte & **K. Poveda**. Domestication impacts on plant-herbivore interactions: a meta-analysis. Submitted to Philosophical Transactions of the Royal Society B.
- Turcotte M., H. Araki, D.S. Karp, **K. Poveda** & S.R. Whitehead S.R. The eco-evolutionary impacts of domestication and agricultural practices on wild species. Submitted to Philosophical Transactions of the Royal Society B.
- Tscharntke T., D. Karp, R. Chaplin-Kramer, P. Batary, F. DeClerk, C. Gratton, A. Ives, M. Jonsson, A. Larsen, E. Martin, A. Martinez-Salinas, T. Meehan, M. O'Rourke, **K. Poveda**, J. Rosenheim, A. Rusch, N. Schelhorn, T. Wagner, S. Wratten, W. Zhang. When natural habitat fails to enhance biological pest control. Submitted to Ecology Letters.
- Poveda K.**, M.F. Díaz, S. Espinosa, D. Obregon, and A. Ramirez. Landscape simplification decreases effectiveness of a local pest-management practice. Submitted to Journal of Applied Ecology.
- De Palma, A., S. Abrahamczyk, M. Aizen, M. Albrecht, Y. Basset, R.J. Blake, C. Boutin, R. Bugter, S. Connop, L. Cruz-Lopez, S.A. Cunningham, B. Darvill, T. Diekoetter, S. Dorn, N. Downing, M.H. Entling, N. Farwig, A. Felicioli, S.J. Fonte, R. Fowler, M. Franzen, D. Goulson, I. Grass, M.E. Hanley, S. Hendrix, F. Herrmann, F. Herzog, A. Holzschuh, B. Jauker, M. Kessler, M.E. Knight, A. Kruess, P. Lavelle, V. Le Feon, P. Lentini, L.A. Malone, J. Marshall, E. Martinez Pachon, Q.S. McFrederick, C. Morales, S. Mudri-Stojnic, G. Nates Parra, S.G. Nilsson, E. Oeckinger, L. Osgathorpe, A. Parra-H, C. Peres, A.S. Persson, T. Petanidou, **K. Poveda**, E.F. Power, M. Quaranta, R. Rader, M. Richards, T. Roulston, L. Rousseau, J.P. Sadler, U. Samnegard, C. Schuepp, O. Schweiger, A.H. Smith-Pardo, I. Steffan-Dewenter, J. Stout, R.K. Tonietto, T. Tscharntke, J.M. Tylianakis, H.A.F. Verboven, C.H. Vergara B., J. Verhulst, C. Westphal, H.J. Yoon, & A. Purvis. Predicting Bee Community Responses to Land-use Changes: Effects of Geographic and Taxonomic Biases. Submitted to Scientific Reports
- Echeverria-Londono S., T. Newbold, L. Hudson, S.Contu, S. Hill, I. Lysenko, E. Arbelaez-Cortes, I. Armbrrecht, T. Boekhout, J. Cabra-Garcia, Y. Dominguez-Haydar, G. Nates-Parra, D. Gutierrez-Lamus, D. Higuera, P. J. Isaacs-Cubides, C. A. Lopez-Quintero, E. Martinez, D. R. Miranda-Esquivel, L. E. Navarro-Iriarte, J. A. Noriega, S. Eduardo Otavo, A. Parra-H, **K. Poveda**, M. P. Ramirez-Pinilla, J. C. Rey-Velasco, L. Rosselli, A. Smith-Pardo, G. Stiles, J.N. Urbina-Cardona & A. Purvis. Modelling and projecting the response of Colombian biodiversity to land-use change. Submitted to Diversity and Distribution.
- A. Chauta, M. Amaya, S. Whitehead & **K. Poveda**. Leaf herbivory imposes fitness costs mediated by hummingbird and insect pollinators. Submitted to Oecologia

### Refereed Papers

27. Kumar P., E. Vargas Ortiz, E. Garrido, **K. Poveda** & G. Jander. In Press. Potato tuber herbivory increases resistance to aboveground lepidopteran herbivores. Oecologia
26. Renauld M., G. Loeb, **K. Poveda**, & H. Connelly. 2016. Landscape simplification constrains adult size in a native ground-nesting bee. Plos One (in press)

25. Stieha C., K. Abbott & **K. Poveda**. 2016. The Effects of Plant Compensatory Regrowth and Induced Resistance on Herbivore Population Dynamics. *The American Naturalist* 187:167-181. DOI: 10.1086/684522
24. Huseeth A. S., J. D. Petersen, **K. Poveda**, Z. Szendrei, B. A. Nault, G. G. Kennedy & R. L. Groves. 2015. Spatial and temporal potato intensification drives insecticide resistance in the specialist herbivore, *Leptinotarsa decemlineata*. *PloS One* 10(6). DOI:10.1371/journal.pone.0127576
23. Connelly H., **K. Poveda** & G. Loeb. 2015. Landscape simplification limits wild bee pollination services to strawberry. *Agriculture, Ecosystems and the Environment* 211:51-56. DOI: 10.1016/j.agee.2015.05.004
22. Raguso R.A., Agrawal A.A., Douglas A.E., Jander G, Kessler A., **Poveda K.** & J. S. Thaler. 2015. The raison d'être of chemical ecology. *Ecology* 96(3):617-630. DOI:10.1890/14-1474.1
21. Christopher Stieha C. & **K. Poveda**. 2015. Tolerance responses to herbivory: implications for future management strategies in potato. *Annals of Applied Biology* 166(2): 208-217. DOI: 10.1111/aab.12174
20. Hudson L., Newbo T. and aprox. 200 other authors (including K. Poveda) (2014) The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts. *Ecology and Evolution* 4 (24): 4701-4735.
19. Gomez Jimenez M.I., Sarmiento C.E., Diaz M.F. Chauta J.A., Peraza A., Ramirez A. & **K. Poveda** (2014) Oviposition, larval preference, and larval performance in two polyphagous species: does the larva know best? *Entomologia Experimental et Applicata*. 153:24-33. DOI: 10.1111/eea.12225
18. Whitehead S.R., Reid E., Sapp J., **Poveda K.**, Royer A.M., Posto A.L. & A. Kessler (2014) A Specialist Herbivore Uses Chemical Camouflage to Overcome the Defenses of an Ant-Plant Mutualism. *PLoS ONE* 9(7): e102604. doi:10.1371/journal.pone.0102604
17. **Poveda K.** & A. Kessler (2012) Plant volatiles as functional cues in intercropping systems. *Journal of Chemical Ecology*. 38:1341.
16. Chautá-Mellizo A., S. Campbell, M.A. Bonilla, J.S. Thaler & **K. Poveda** (2012) Effects of natural and artificial pollination on fruit and offspring quality. *Basic and Applied Ecology*. 13:525-532.
15. **Poveda K.**, M.I. Gómez. R. Halitschke & A. Kessler (2012) Overcompensating plants: their expression of resistance traits and effects on herbivore preference & performance. *Entomologia Experimentalis et Applicata*. 143: 245-253.
14. **Poveda K.\***, E. Martínez\*, M. A. Bonilla & T. Tschardtke (2012) Landscape simplification and altitudinal variation affect biodiversity, herbivory and Andean potato yield (\*equal authorship). *Journal of Applied Ecology*. 49:513-522.
13. Díaz M.F, A. Ramírez & **K. Poveda** (2012) Efficiency of different egg parasitoids and increased floral diversity for the biological control of noctuid pests. *Biological Control* 60:182-191.
12. Kessler A., R. Halitschke & **K. Poveda** (2011) Herbivory-mediated pollinator limitation: Negative impacts of induced volatiles on plant-pollinator interactions. *Ecology* 92: 1769-1780.
11. Whitehead S. & **K. Poveda** (2011) Herbivore-induced changes in fruit-frugivore interactions. *Journal of Ecology* 99:964–969.
10. Rasmann S., T. Bauerle, **K. Poveda** & R. Vannette (2011) Predicting root resistance to herbivores during succession. *Functional Ecology* 25: 368-379.

9. **Poveda K.**, A. Kessler & M.I. Gómez. (2010) The enemy as ally: herbivore-induced increase in crop yield. *Ecological Applications* 20: 1787-1793.
8. Gómez M. I\*. & **K. Poveda\***. (2009). Synergistic effects of repellents and attractants for potato tuber moth control. *Basic and Applied Ecology* 10: 763–769. (\*equal authorship)
7. **Poveda K.**, M.I. Gómez & E. Martinez (2008) Diversification practices: their effect on pest regulation and production. *Revista Colombiana de Entomología* 34: 131-144.
6. **Poveda K.**, I. Steffan-Dewenter, S. Scheu & T. Tscharntke (2006) Belowground effects of farming practice and soil organisms on aboveground plant-herbivore and plant-pathogen interactions. *Agriculture, Ecosystems and Environment* 113: 162–167.

#### **Publications - books and book chapters**

3. Kessler A., **K. Poveda**, E. H. Poelman (2012) Plant-Induced Responses and Herbivore Population Dynamics. In: Barbosa P., Letourneau D. and Agrawal A. *Insect Outbreaks Revisited*, First Edition, pages 91-112. Blackwell Publishing Ltd. *ISBN: 9781107406490*.
2. **Poveda K.**, I. Steffan-Dewenter, S. Scheu & T. Tscharntke (2007) Plant-mediated interactions between below- and aboveground processes: decomposition, herbivory, parasitism and pollination. In: Ohgushi T., T. Craig, P. Price. *Ecological Communities: Plant Mediation in Indirect Interaction webs*. p.147 – 164. Cambridge University Press. *ISBN: 9780521850391*.

### **PROFESSIONAL OVERVIEW AND OBJECTIVES**

My research focuses on the ecology of plant-insect interactions in agricultural systems and their interface with natural systems. I focus on two main themes: 1) The effect of diversity at local and landscape scales on ecosystem (dis)services important for agricultural systems, including pollination, herbivory, biological control and ultimately yield, and 2) the ecological, physiological, and genetic mechanisms of plant tolerance and resistance traits in agricultural crops. We seek to improve our understanding of ecological phenomena in agroecosystems that can potentially inform management strategies important for more sustainable agricultural production. My research approach involves rigorously designed field experiments at farm- or landscape-scales, combined with greenhouse and laboratory experiments that provide insight into the mechanisms driving the field patterns. I feel very passionate about personalized mentoring and teaching students at all levels of education. My research is conducted in agroecosystems in Colombia, Kenya, Costa Rica and the US.