

Dr. Harmen P. Hendriksma

Curriculum Vitae

Harmen P. Hendriksma
Iowa State University – Amy Toth lab
Ecology, Evolution & Organismal Biology
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Born March 30th 1978, male, Dutch nationality.

US Visa, J2 - exp. date: July 16th, 2020. Permit to work I-766 exp. date Nov 11th 2019.

EDUCATION & WORK

- 2017 – current Postdoctoral Research Associate, Toth Lab (Prof. Amy Toth), Dept. of Ecology, Evolution & Organismal Biology and Entomology, Iowa State University.
- 2015 – 2017 Staff Research Associate, The Nieh Lab (Prof. James C. Nieh), Section of Ecology, Behavior & Evolution, Division of Biological Sciences, UC San Diego.
- 2012 – 2015 Postdoctoral fellow, B. Triwaks Bee Research Center (Prof. Sharoni Shafir), Hebrew University of Jerusalem, Rehovot, Israel.
- 2008 – 2012 PhD student Natural Sciences, Department of Animal Ecology and Tropical Biology (Prof. Dr. Ingolf Steffan-Dewenter), University of Würzburg, Germany.
- 2004 – 2008 Pollination beekeeper & Honey producer for medical applications, Bfactory BV, Rhenen, The Netherlands.
- 1997 – 2004 B.Sc & M.Sc., Biology, Dept. of Entomology (Prof. Marcel Dicke), Wageningen University and Research Center, The Netherlands.

HONORS

PhD awarded with highest honors, *summa cum laude*, on March 13th 2012 in Würzburg.

AWARDS

1st price Poster competition, BayCEER workshop, April 2nd 2009, Bayreuth, Germany.
Multiple insect resistant Bt maize pollen consumption in honeybee workers under semi-field conditions.

FUNDING & FELLOWSHIPS

USDA - National Institute of Food and Agriculture (NIFA) award no. 2017-6800426326
California State Beekeepers Association (CSBA) award no. 20170983
Amos Fisher research donation, March 2017
Golden Coast Mead research donation, February 2017
North American Pollinator Protection Campaign - Pollinator Partnership grant no. 20162891
Orion Foundation
Benjamin Triwaks Fellowship
Insect Pollinators Initiative (IPI) grant no. BB/I000968/1
German Federal Ministry for Education and Research (BMBF) grant no. 0315215E

SKILLS & QUALIFICATIONS

Languages Dutch, English, German
Computer Microsoft office, R statistical software, JMP statistical software, GIS basics

Certificates **Driver's license:** US (CA) class C, and EU (NLD) class AM & B.
Beekeeping course and certified as **Professional Pollination Apiarist** (18 evenings): by Gerard Hollander, September till December 2007 in Wehl.
Media and Communication-training (1 day): Writing press releases, giving interviews, countering critique. October 2008 in Darmstadt.
R-course (70-hours): "Applied Multivariate Biostatistics" by Heiko Rödel, October 2009 to April 2010 in Bayreuth.
GIS-workshop (3 days): Data Analysis and Spatial Analysis in ArcMap, Georeferencing and Digitizing, by Amy Zhang, April 2012 in Würzburg.

PUBLICATIONS (Link: [Google Scholar](#))

Zarchin S, Dag A, Salomon M, Hendriksma HP, Shafir S (2017) Honey bees dance faster for pollen that complements essential fatty acid deficiency. *Behavioral Ecology and Sociobiology* 71:172-183.

Hendriksma HP, Shafir S (2016) Honey bee foragers balance colony nutritional deficiencies. *Behavioral Ecology and Sociobiology* 70: 509-517.

Hendriksma HP, Oxman KL, Shafir S. (2014) Amino acid and carbohydrate tradeoffs by honey bee nectar foragers and their implications for plant-pollinator interactions. *Journal of Insect Physiology* 69: 56-64.

Avni D, Hendriksma HP, Dag A, Uni Z, Shafir S. (2014) Nutritional aspects of honey bee-collected pollen and constraints on colony development in the eastern Mediterranean. *Journal of Insect Physiology* 69: 65-73.

ten Brink DJ, Hendriksma HP, Bruun HH (2013) Habitat specialization through germination cueing: a comparative study of herbs from open and shaded habitats. *Annals of Botany* 111: 283-92.

Hendriksma HP, Küting M, Härtel S, Dohrmann AB, Steffan-Dewenter I, Tebbe CC (2013) Effect of stacked insecticidal Cry proteins from maize pollen on nurse bees (*Apis mellifera carnica*) and their gut bacteria. *PLoS ONE* 8(3): e59589.

Hendriksma HP (2012) Dissertation (PhD) University of Würzburg, Germany.

Hendriksma HP, Härtel S, Babendreier D, Ohe von der W, Steffan-Dewenter I (2012) Effects of multiple Bt-proteins and GNA-Lectin on in vitro reared honey bee larvae. *Apidologie* 43: 549–560.

Hendriksma HP, Härtel S, Steffan-Dewenter I (2011) Testing pollen of single and stacked insect-resistant Bt-maize on in vitro reared honey bee larvae. *PLoS ONE* 6: e28174.

Hendriksma HP, Härtel S, Steffan-Dewenter I (2011) Honey bee risk assessment: New approaches for in vitro larvae rearing and data analysis. *Methods in Ecology and Evolution* 2: 509–517.

Hendriksma HP, Härtel S (2010) A simple trap to measure worker bee mortality in small test colonies. *Journal of Apicultural Research* 49: 215-217.

Hendriksma HP, Calis JNM & Boot WJ (2004) Stimulating natural supersedure of honeybee queens, *Apis mellifera*. *Proceedings of The Netherlands Entomological Society Meeting* 15: 29-33.

CONTRIBUTIONS TO CONFERENCE PROCEEDINGS

Proceedings of the 6th EurBee Congress (European Association for Bee Research), Murcia, Spain (2014) Abstract: Amino acid and carbohydrate tradeoffs by honey bee nectar foragers.

Proceedings BAGECO11, Corfu, Greece (2011) Abstract: Effects of genetically modified maize expressing Bt-toxins on microbial communities in plants, rhizospheres and honey bees?

Proceedings of the DGaaE, Berlin, Germany (2011) Abstract: Assessing potential effects of multiple insect resistant maize on in vitro reared honey bee larvae.

Programme of the 4th EIGMO Congress, Rostock, Germany (2010). Abstract: Effects of Bt maize with multiple insect resistance on lifespan and hatching weight of honeybee workers.

Programme of the 4th EIGMO Congress, Rostock, Germany (2010). Abstract: Evaluation of insect resistant Bt maize pollen consumption in honeybee workers under semi-field conditions.

Proceedings of the PMEM, 4th Workshop, Quedlinburg, Germany (2010) Abstract: Multiple insect resistant Bt maize pollen consumption in honeybee workers under semi-field conditions.

Proceedings of the DGaaE, Göttingen, Germany (2009). Abstract: Effects of Bt maize with multiple insect resistance on honeybee workers' longevity and hatching weight.

Proceedings of The Netherlands Entomological Society Meeting 15, Wageningen, The Netherlands (2004) Abstract: Stimulating natural supersedure of honeybee queens, *Apis mellifera*.

REVIEW CONTRIBUTIONS

Animal Behaviour
 African Journal of Microbiology Research
 Apidologie
 Biological Conservation
Entomologia Experimentalis et Applicata
 Entomology, Ornithology & Herpetology
 Foods
 Environmental Pollution
 Functional Ecology
 Insects
 Insect Science
 Journal of Asia-Pacific Entomology
 Journal of Insect Physiology
 Nature Scientific Reports
 Oikos
 PlosOne

MENTORING

2017	Zoe Pritchard	Biology, undergraduate
2017	Collin Pachow	Biology, undergraduate
2017	Naomi Nguyen	Biology, undergraduate
2016	Justin Bain	Biology, undergraduate
2015	Maor Zavitan	Biology, undergraduate
2014	Noga Skolnik	Veterinary studies, undergraduate
2014	Omer Gadot	Veterinary studies, graduate
2013	Karmi Oxman	Biology, undergraduate
2008	Anja Zigan	Biology, undergraduate

PRESENTATIONS (classes, talks, posters)

Class: Drivers of bee decline. A lecture at the EBE Club (undergraduates) of the Department of Ecology Behavior and Evolution, UCSD. February 7th 2017.

Class: Pollen and nectar quantity and quality: Tradeoffs by honey bee foragers. 2 guest lectures in *Experimental research methods* at the University of San Diego (USD). December 9th 2016.

Class: Environmental Risk Assessment. Part of the HERO lecture series in the Division of Biological Sciences at UCSD. March 7th 2016.

Class: Honey bee declines. Part of HUMAN IMPACT lecture series BILD18 in the Division of Biological Sciences at UCSD. May 2nd 2016.

Class: Non-target effects of Bt-maize on honey bees. International agronomy course, Robert H. Smith Faculty of Agriculture, Food & Environment, May 18th 2014, Rehovot.

Presentation: Bees Balance. Visiting Scientist Talk at the Nieh lab, UCSD, La Jolla, November 23rd 2017.

Presentation: Honey bee self-medication. San Diego Beekeeping Society, San Diego, July 10th 2017.

Presentation: Honey bee nosemosis. Encinitas Bee Society, Encinitas, June 5th 2017.

Presentation: Perception of Honey bee Challenges. "The Let's Talk About the Weather" environment series at T. Short Gallery in Little Italy, San Diego. January 11th 2017.

Presentation: Testing the effects of nicotine on honey bee nosemosis. 16th Annual International Conference, hosted at USDA APHIS, Washington. October 17th-20th, 2016.

Presentation: Amino acid and carbohydrate tradeoffs by honey bee nectar foragers. 6th EurBee Congress (European Association for Bee Research), September 9th-11th 2014, Murcia, Spain.

Presentation: Honey bee colonies in Israel and the mystery of floral pollen. Beekeepers Spring Conference, Faculty of Agriculture, February 28th 2014, Rehovot, Israel.

Presentation: Effects of Bt-maize on non-target organisms. Beekeepers Spring Conference, Faculty of Agriculture, March 13th 2013, Rehovot, Israel.

Presentation: Non-target effects of Bt-maize on honey bees. 20th Zorik Lev beekeepers conference, December 12th 2012, Volcani Center, Agricultural Research Organization, Beit Dagan, Israel.

Presentation: Honey bee risk assessment of Bt-maize. Conference of the Center of Agriculture, Environment and Natural Resources, Kibbutz Palmachim, October 10th 2012, Israel.

Doctoral thesis defense: Non-target effects of a multiple insect resistant Bt-maize on the honey bee (*Apis mellifera* L.), March 13th 2012, Zoology III, Wuerzburg, Germany.

Presentation: Digestion and bacterial community structures in the digestive tract of honey bees show no adverse effects by Bt-maize pollen. 58th AG Tagung, March 29th 2011, Berlin, Germany.

Presentation: Effect of transgenic maize pollen on survival and weight of in vitro reared honey bees. 4th EurBee congress, MET University. EURBEE September 7th-9th 2010, Ankara, Turkey.

Presentation: Bt corn pollen, transgenic proteins and honeybee larvae: A laboratory method testing potential toxicity. The 15th DZG Graduate Meeting, April 16th-18th 2010, Freiburg, Germany

Presentation: A laboratory method testing potential toxicity of transgenic corn pollen and Bt proteins. 57th AG-Tagung March 23rd-25th 2010, Herne, Germany.

Presentation: Transgenic corn pollen, transgenic proteins and honeybee larvae; A laboratory method testing potential toxicity. BMBF project meeting February 2nd-3rd 2010, Kitzingen, Germany.

Presentation: Effects of stacked Bt maize on longevity and hatching weight of honeybee workers. 56th AG Tagung, March 23rd-26th 2009, Schwerin, Germany.

Presentation: Effects of stacked Bt maize on honey bee colonies, Johann Heinrich von Thünen Institut, Institut für Biodiversität, March 2nd 2009, Braunschweig, Germany.

Presentation: Stimulating natural supersedure of honey bee queens, *Apis mellifera*. 15th annual meeting of the Netherlands Entomological Society, December 17th 2003, Ede, The Netherlands.

Poster: co-authored Zoe Pritchard et al., Effects of honey bee colony presence on bumble bee populations in Iowa prairies. #128310 ESA - 2018 North Central Branch Meeting

Poster: A prairie hive companion: Can prairies help honey bee colonies thrive in intensively cultivated landscapes? Hendriksma et al., November 11, 2017, 105th Iowa Honey Producers Association, Annual Meeting and Convention, Oskaloosa, USA.

Poster: A prairie hive companion: Can prairies help honey bee colonies thrive in intensively cultivated landscapes? November 5-8, 2017, Entomological Society of America, Denver, USA.

Poster: co-authored Omer Gadot (et al.) בקרה ואיוון בתזונת דבורת הדבש, Student Showcase, Robert H. Smith Faculty of Agriculture, Food & Environment, September 26, 2015, Rehovot, Israel.

Poster: co-authored Wright G (et al.), stakeholders meeting of the Insect Pollinators Initiative, October 21st 2014, Wellcome Trust, England.

- Poster: Honey bee forager preferences and nutritional balancing of amino acids. Nutritional Homeostasis Workshop, April 1st-4th 2013, LIMES Institute, University of Bonn, Germany.
- Poster: A new laboratory method to test direct GM crop effects on in vitro reared honeybee larvae. 11th ISBGMO conference, November 15th-20th 2010, Buenos Aires, Argentina.
- Poster: Multiple insect resistant Bt maize pollen consumption in honeybee workers under semi-field conditions. PMEM May 03rd-04th 2010, Quedlinburg, Germany.
- Poster: Evaluation of multiple insect resistant Bt maize pollen consumption in honeybee workers under semi-field conditions. 4th EIGMO meeting May 14th-16th 2009, Rostock, Germany.
- Poster (Prized) Multiple insect resistant Bt maize pollen consumption in honeybee workers under semi-field conditions. BayCEER workshop, April 2nd 2009, Bayreuth, Germany.
- Poster: Multiple insect resistant Bt maize pollen consumption in honeybee workers under semi-field conditions. 56th AG Tagung, March 24th 2009, Schwerin, Germany.

MEDIA

- Prairie <https://www.knowablemagazine.org/>
- Fatty Acids <http://wildbeetualanghoney.com/>
- Amino Acids <http://www.beeeculture.com/>
- Bt corn pollen <http://www.agrobio.org/ambiente/>
- In vitro rearing <http://www.innovations-report.com/>

ADDITIONAL EXPERIENCE

- 1993 – current: In Wageningen (’01-’07) I maintained apiaries at De Wolfswaard and De Hoge Born, and helped at apiaries of the Department of Entomology (’04), Ecological Botanical Garden (’08-’10 Bayreuth), Department of Zoology (’10-’12 Würzburg), at Elliot and the BFS (’15-’17 San Diego).
- 1998 Member of the biology student union, organizing introductory events for first year students.
- 2000 Voluntary work with sea turtles, wild birds and stray dogs in Greece.
- 1997 – 2003 WSR Argo rowing club member; I was the treasurer for *Afroevic*, and was active in organizing local and national rowing contests (e.g. *Sprint*), coaching new members, maintaining the boats and our building, and organizing camps.
- 2004 – 2008 As local beekeeper and entrepreneur I rented out bee colonies to fruit-growers for pollination services, and I produced honey which I sold locally at shops and markets.