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Guijun Wan, PhD

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Education

Sep 2010 – Dec 2015 **Nanjing Agricultural University**
PhD, Insect Ecology
Nanjing, 210095, China

Thesis

Guijun Wan: Effects of virus and magnetic field on the development, reproduction and behavior of rice planthopper. 11/2015, Degree: PhD, Supervisor: Prof. Baoping Zhai & Prof. Fajun Chen.

Research Experience

Aug 2017 – present **Visiting Scholar**

Department of Biology, Texas A&M University

In the Merlin's Lab, I aim to further my training in circadian biology and study navigational mechanisms of migratory monarch butterflies.

Jan 2016 – present **Postdoctoral Faculty Candidate**

College of Resources and Environmental Sciences
Nanjing Agricultural University, Nanjing, 210095, China

I am interested in research fields related to insect orientation and navigation, insect migration, magnetobiology and circadian clock (especially its potential roles in hormone signal regulation and insect migration).

Awards

Dec 2014 Scholarship: National Scholarship for PhD Graduate Students (¥ 30000)

Oct 2014 Award: Excellent Poster. In: Insect Ecology and Pest Management, International Conference. Fuzhou

Sep 2014 Award: Excellent Postgraduate Leader of Nanjing Agricultural University

Jun 2010 Award: Excellent Graduate of Shandong Province

Skills

Professional skills Entomology, Behavior Ecology, Insect Migration, Insect Physiology, Insect Behavior, Molecular Biology, Population Ecology

Languages Chinese, English

Journal Publications

1. Jian Ma, Yechen Wang, Yanyue Hu, Minghong Lu, **Guijun Wan**, Fajun Chen, Wancai Liu, Baoping Zhai, Gao Hu: Brown planthopper *Nilaparvata lugens* (Stål) was concentrated at the rear of the typhoon Soudelor in Eastern China in August 2015. *Insect Science*. 03/2017; DOI:10.1111/1744-7917.12462.
2. Jingjing Xu, Wei Pan, Yingchao Zhang, Yue Li, **Guijun Wan**, Fajun Chen, Gregory A. Sword, Weidong Pan: Behavioral evidence for a magnetic sense in the oriental armyworm, *Mythimna separata*. *Biology Open* 03/2017; **6**(3). DOI:10.1242/bio.022954.
3. Jingjing Xu, **Guijun Wan**, Dingbang Hu, Juan He, Fajun Chen, Xianhui Wang, Hongxia Hua, Weidong Pan: Molecular characterization, tissue and developmental expression profiles of cryptochrome genes in wing dimorphic brown planthoppers, *Nilaparvata lugens*. *Insect Science* 12/2016; **23**(6). DOI:10.1111/1744-7917.12256.
4. **Guijun Wan**, Rui Yuan, Wenjing Wang, Kaiyun Fu, Jingyu Zhao, Shoulin Jiang, Weidong Pan, Gregory A. Sword, Fajun Chen: Reduced geomagnetic field may affect positive phototaxis and flight capacity of a migratory rice planthopper. *Animal Behaviour* 10/2016; **121**. DOI:10.1016/j.anbehav.2016.08.024.
5. Weidong Pan, **Guijun Wan**, Jingjing Xu, Xiaoming Li, Yuxin Liu, Liping Qi, Fajun Chen: Evidence for the presence of biogenic magnetic particles in the nocturnal migratory brown planthopper, *Nilaparvata lugens*. *Scientific Reports* 01/2016; **6**. DOI:10.1038/srep18771.
6. **Guijun Wan**, Shoulin Jiang, Wenjing Wang, Guoqing Li, Xiaorong Tao, Weidong Pan, Gregory A. Sword, Fajun Chen: Rice stripe virus counters reduced fecundity in its insect vector by modifying insect physiology, primary endosymbionts and feeding behavior. *Scientific Reports* 07/2015; **5**. DOI:10.1038/srep12527.
7. **Guijun Wan**, Wenjing Wang, Jingjing Xu, Quanfeng Yang, Mingjiang Dai, Fengjiao Zhang, Gregory A. Sword, Weidong Pan, Fajun Chen: Cryptochromes and Hormone Signal Transduction under Near-Zero Magnetic Fields: New Clues to Magnetic Field Effects in a Rice Planthopper. *PLoS ONE* 07/2015; **10**(7). DOI:10.1371/journal.pone.0132966.
8. **Guijun Wan**, Shoulin Jiang, Zongchao Zhao, Jingjing Xu, Xiaorong Tao, Gregory A. Sword, Yuebo Gao, Weidong Pan, Fajun Chen: Bio-effects of near-zero magnetic fields on the growth, development and reproduction of small brown planthopper, *Laodelphax striatellus* and brown planthopper, *Nilaparvata lugens*. *Journal of Insect Physiology* 07/2014; **68**. DOI:10.1016/j.jinsphys.2014.06.016.

9. **Guijun Wan**, Zhihao Dang, Gang Wu, Megha N Parajulee, Feng Ge, Fajun Chen: Single and fused trait transgenic Bt rice alter the species-specific responses of non-target planthoppers to elevated CO₂ and temperature. *Pest Management Science* 10/2013; **70**(5). DOI:10.1002/ps.3667.

Patents

During my PhD study (2010-2015), I have co-invented **10 patents** involving insect collection, insect behavior and environmental treatment experiments. (Authorized Numbers: CN201621333037.7; CN201610089776.4; CN201620127377.8; CN201620123345.0; CN201210574368.X; CN201420133901.3; CN201310003381.4; CN201310003381.4; CN201120042889.1; CN201120265335.8).

International Conference Proceedings

1. **Guijun Wan**, Weidong Pan, Fajun Chen. Physiological and behavioral response of migratory white-backed planthopper to the changes in geomagnetic field intensity, The 1st International Conference on Integrated Pest Management, Changsha, P.R. China, 2017.07.21-07.24. (Oral Presentation)
2. Fajun Chen, Shoulin Jiang, **Guijun Wan**, Megha N. Parajulee. EPG investigation of feeding behavioral response of cotton aphid, *Aphis gossypii* (Glover), to elevated CO₂, The 2016 International Congress of Entomology, Orlando, Florida, USA, 2016.09.25-09.30.
3. **Guijun Wan**, Jingjing Xu, Weidong Pan, Fajun Chen. Trade-offs triggered by rice stripe virus on the development and feeding behavior of its vector, *Laodelphax striatellus*, The International Conference on Insect Molecular Ecology and Pest Management, Fuzhou, P.R. China, 2014.10.28-10.31. (Oral Presentation)
4. Zhihao Dang, **Guijun Wan**, Weidong Pan, Fajun Chen. Study on the trapping abundances and rhythms of *Nilaparvata lugens*, *Sogatella furcifera* and *Laodelphax striatellus* caught by black-light lamp in Shandong Province, Rice Planthoppers: Ecology, Management, Socio-economics and Policy, International Conference, Hangzhou, P.R. China, 2012.11.20.
5. Yinhua Quan, **Guijun Wan**, Weidong Pan, Fajun Chen. Detection and identification of the magnetic materials in rice planthopper, *Nilaparvata lugens*, Rice Planthoppers: Ecology, Management, Socio-economics and Policy, International Conference, Hangzhou, P.R. China, 2012.11.20.

Research funding

1. The National Youth Science Foundation of China (PI; 2018-2020; Grant no. 31701787).
2. China Postdoctoral Science Foundation (PI; 2016-2019; Grant no. 2016M590470).
3. The Natural Science Foundation of Jiangsu Province Youth Fund (PI; 2016-2019; Grant no. SBK2016043525).