

Zengqiang QIAN

Personal Information

- **Gender:** Male
- **Born** in China, in August 1980
- **Contact information**

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Research Interests

- Evolutionary biology
- Molecular ecology of plants and insects
- Insect sociobiology
- Climate change biology

I have broad interests in evolutionary biology and molecular ecology of both plants and insects (social insects in particular). Currently, I am focusing my major attention upon the molecular phylogeny of the ant genera *Camponotus* and *Polyrhachis* in China, and the sociogenetic organization and nestmate recognition in the spiny ant *Polyrhachis dives* Smith.

Employment

2012.08 - Present Lecturer College of Life Sciences, Shaanxi Normal University

Xi'an, Shaanxi, China

Teaching

- Ecology (0841064) (Undergraduate-Level)
- Field Practice in Ecology (Undergraduate-Level)

Education

2007-2011 Ph.D. School of Marine and Tropical Biology, James Cook University

Townsville, QLD, Australia

- Major: Tropical Ecology and Zoology
- Supervised by Prof. Ross. H. Crozier (who deceased on 12 November 2009), Assoc./Prof. Simon K. A. Robson, Prof. Birgit C. Schlick-Steiner, Dr. Florian M. Steiner and Dr. Helge Schlüns
- Thesis title: Evolution of Social Structure in the Ant Genus *Myrmecia* Fabricius (Hymenoptera: Formicidae)

2003-2006 M.Sc. College of Life Sciences, Northwest University Xi'an, Shaanxi,

China

- Major: Ecology (Molecular Ecology)
- Supervised by Prof. Gui-Fang Zhao
- Thesis title: Ecological Genetics of *Reaumuria soongorica* (Pall.) Maxim. Population in the Oasis-Desert Ecotone in Fukang, Xinjiang, and Its Implications for Molecular Evolution

1999-2003 B.Sc. College of Life Sciences, Northwest University Xi'an, Shaanxi,

China

- Major: Biological Sciences

Honours / Scholarships

- Endeavour Postgraduate Award, by the Department of Education, Employment and Workplace Relations (DEEWR), Australia (2007-2010)
- China Scholarship Council Scholarship to James Cook University Australia (JCU-CSC Scholarship), by China Scholarship Council, Ministry of Education, China (2007-2010)
- Award for Scientific and Technological Progresses in Shaanxi Province, by Shaanxi Provincial Government of China (Participator; 2006)

- Postgraduate Excellence Scholarship, by Northwest University (China) (2004)
- Undergraduate Excellence Scholarship, by Northwest University (China) (Thrice, 1999-2003)
- Academic Excellence Award, by the College of Life Sciences, Northwest University (China) (2001)

Academic, Research and Teaching Experiences

- Attended the Second Academic Conference on Zoology in Western China (w/ oral presentation) (Xi'an, China; 08/2013)
- Field surveys in Paluma Range National Park, Queensland (Australia) (Five times, 2007-2010)
- Attended the National Conference of Systematic and Evolutionary Botany in China (w/ abstract) (Xi'an, China; 2006.08)
- Field survey across several provinces in China, including Hubei, Chongqing, Henan and Sichuan Province (2004)
- Attended the Second National Symposium on Toxicological History and Treatment of Unexpected Poisoning Accidents (Xi'an, China; 2004.06)

Professional Memberships

- International Union for the Study of Social Insects (IUSSI) Australian Section (2009-Present)
- Entomological Society of Shaanxi Province (ESS)

Project Funding

- 'Sociogenetic Organization and Nestmate Recognition in the Spiny Ant *Polyrhachis dives* Smith' -- supported by the National Natural Science Foundation of China (Program No. 31300308) (2014-2016)
- 'Nestmate Recognition in the Black Ant *Polyrhachis dives* Roger' -- supported by the Natural Science Basic Research Plan in Shaanxi Province of China (Program No.

2013JQ3007) (2014-2015)

- ‘Nestmate Recognition in the Spiny Ant *Polyrhachis dives* Smith’ -- supported by the Fundamental Research Funds for the Central Universities in China (Project No. GK201302020) (2012-2013)

Publications

Peer Reviewed Publications

Qian, Z.-Q.* (2014) The complete mitogenome of the Cydno Longwing *Heliconius cydno* (Insecta: Lepidoptera: Nymphalidae). *Mitochondrial DNA*, (Early Online)

Qian, Z.-Q.* (2014) The complete mitogenome of the dampwood termite *Zootermopsis nevadensis* (Insecta: Isoptera: Termopsidae). *Mitochondrial DNA*, (Early Online)

Yan, X.-H., Fang, M.-F., **Qian, Z.-Q.**, Liu, Z.-L., Wang, M.-L., Tian, C.-P., Du, M.-H., Li, Y.-J., Li, Z.-H., Zhao, G.-F. (2014) Isolation and characterization of polymorphic microsatellites in the perennial herb *Euphorbia kansui* using paired-end Illumina shotgun sequencing. *Conservation Genetics Resources*, **6**: 841-843.

Zhou, T.-H., Wu, K.-X., **Qian, Z.-Q.**, Zhao, G.-F., Li, S. (2014) Genetic diversity of the threatened Chinese endemic plant, *Sinowilsonia henryi* Hemsli. (Hamamelidaceae), revealed by inter-simple sequence repeat (ISSR) markers. *Biochemical Systematics and Ecology*, **56**: 171-177.

Li, S., **Qian, Z.**, Fu, Y., Zheng, W., Li, H. (2014) Isolation and characterization of polymorphic microsatellites in the Tibetan cypress *Cupressus gigantea* using paired-end Illumina shotgun sequencing. *Conservation Genetics Resources*, **6**: 795-797.

Li, Z., Liu, Z., Wang, M., **Qian, Z.**, Zhao, P., Zhu, J., Yang, Y., Yan, X., Li, Y. and Zhao, G. (2014) A review on studies of speciation in the presence of gene flow: evolution of reproductive isolation. *Biodiversity Science*, **22**: 88-96.

Qian, Z.-Q.*, Schlick-Steiner, B.C., Steiner, F.M., Robson, S.K.A., Schlüns, H., Schlüns, E.A. and Crozier, R.H. (2012) Colony genetic structure in the Australian jumper ant *Myrmecia pilosula*. *Insectes Sociaux*, **59**, 109-117.

- Qian, Z.-Q.***, Schlüns, H., Schlick-Steiner, B.C., Steiner, F.M., Robson, S.K.A., Schlüns, E.A. and Crozier, R.H. (2011) Intraspecific support for the polygyny-vs.-polyandry hypothesis in the bulldog ant *Myrmecia brevinoda*. *Molecular Ecology*, **20**, 3681-3691.
- Qian, Z.-Q.***, Ceccarelli, F.S., Carew, M.E., Schlüns, H., Schlick-Steiner, B.C. and Steiner, F.M. (2011) Characterization of polymorphic microsatellites in the giant bulldog ant, *Myrmecia brevinoda* and the jumper ant, *M. pilosula*. *Journal of Insect Science*, **11**, 71.
- Zhou, T.-H., Li, S., **Qian, Z.-Q.**, Su, H.-L., Huang, Z.-H., Guo, Z.-G., Dai, P.-F., Liu, Z.-L. and Zhao, G.-F. (2010) Strong phylogeographic pattern of cpDNA variation reveals multiple glacial refugia for *Saruma henryi* Oliv. (Aristolochiaceae), an endangered herb endemic to China. *Molecular Phylogenetics and Evolution*, **57**, 176-188.
- Zhou, T.-H., **Qian, Z.-Q.**, Li, S., Guo, Z.-G., Huang, Z.-H., Liu, Z.-L. and Zhao, G.-F. (2010) Genetic diversity of the endangered Chinese endemic herb *Saruma henryi* Oliv. (Aristolochiaceae) and its implications for conservation. *Population Ecology*, **52**, 223-231.
- Qian, Z.-Q.**, Crozier, Y.C., Schlick-Steiner, B.C., Steiner, F.M. and Crozier, R.H. (2009) Characterization of expressed sequence tag (EST)-derived microsatellite loci in the fire ant *Solenopsis invicta* (Hymenoptera: Formicidae). *Conservation Genetics*, **10**, 1373-1376.
- Jiang, L.-Y., **Qian, Z.-Q.**, Guo, Z.-G., Wang, C. and Zhao, G.-F. (2009) Polyploid origins in *Gynostemma pentaphyllum* (Cucurbitaceae) inferred from multiple gene sequences. *Molecular Phylogenetics and Evolution*, **52**, 183-191.
- Zhou, T.-H., Zhao, G.-F., Li, S. and **Qian, Z.-Q.** (2009) Characterization of EST-derived microsatellite loci in *Saruma henryi* Oliv., an endangered Chinese endemic herb. *Conservation Genetics Resources*, **1**, 67-70.
- Dong, S.-S., Huang, X., **Qian, Z.-Q.**, Zhou, T.-H., Li, S. and Zhao, G.-F. (2009) Isolation and characterization of fourteen dinucleotide microsatellite loci in the endangered herb *Saruma henryi* Oliv. (Aristolochiaceae). *Conservation Genetics Resources*, **1**, 221-224.
- Li, M.-M., Cai, Y.-L., **Qian, Z.-Q.** and Zhao, G.-F. (2009) Genetic diversity and

differentiation in Chinese sour cherry *Prunus pseudocerasus* Lindl., and its implications for conservation. *Genetic Resources and Crop Evolution*, **56**, 455-464.

Qian, Z.-Q., Xu, L., Wang, Y.-L., Yang, J. and Zhao, G.-F. (2008) Ecological genetics of *Reaumuria soongorica* (Pall.) Maxim. population in the oasis-desert ecotone in Fukang, Xinjiang, and its implications for molecular evolution. *Biochemical Systematics and Ecology*, **36**, 593-601.

Wang, C., Zhang, H., **Qian, Z.-Q.** and Zhao, G.-F. (2008) Genetic differentiation in endangered *Gynostemma pentaphyllum* (Thunb.) Makino based on ISSR polymorphism and its implications for conservation. *Biochemical Systematics and Ecology*, **36**, 699-705.

Wang, Y.-L., Sun, G.-L., Li, S.-F., **Qian, Z.-Q.** and Zhao, G.-F. (2008) Population structure and genetic diversity of *Clintonia udensis* Trautv. et Mey. (Liliaceae). *International Journal of Plant Sciences*, **169**, 1238-1247.

Yang, J., **Qian, Z.-Q.**, Liu, Z.-L., Li, S., Sun, G.-L. and Zhao, G.-F. (2007) Genetic diversity and geographical differentiation of *Dipteronia* Oliv. (Aceraceae) endemic to China as revealed by AFLP analysis. *Biochemical Systematics and Ecology*, **35**, 593-599.

Yu, X.-M., Zhou, Q., **Qian, Z.-Q.**, Li, S. and Zhao, G.-F. (2006) Analysis of genetic diversity and population differentiation of *Larix potaninii* var. *chinensis* using microsatellite DNA. *Biochemical Genetics*, **44**, 483-493.

Qian, Z.-Q., Li, S., Zhu, X.-J., Wang, L. and Zhao, G.-F. (2006) A preliminary study of genetic polymorphisms of *Haloxylon ammodendron* isozymes. *Acta Botanica Boreali-Occidentalia Sinica*, **25**, 2436-2442.

Zhu, X.-J., **Qian, Z.-Q.**, Wang, X.-L. and Yue, M. (2006) Changes of anti-oxidative enzymes in *Vicia faba* L. seedlings irradiated by He-Ne laser in different stages. *Acta Laser Biology Sinica*, **15**, 551-556.

Li, S., **Qian, Z.**, Cai, Y. and Zhao, G. (2006) A comparison of the genetic diversity in *Dipteronia sinensis* Oliv. and *Dipteronia dyeriana* Henry. *Frontiers of Biology in China*, **1**, 381-388.

- Cai, Y., Li, S., Cao, D., **Qian, Z.**, Zhao, G. and Han, M. (2006) Use of amplified DNA sequences for the genetic analysis of the cherry germplasm. *Acta Horticulturae Sinica*, **33**, 249-254.
- Cai, Y.-L., Cao, D.-W., Li, S., **Qian, Z.-Q.** and Zhao, G.-F. (2006) RAPD analysis of *Prunus avium* L. varieties and their rootstocks. *Acta Botanica Boreali-Occidentalia Sinica*, **26**, 1125-1132.
- Li, S., **Qian, Z.-Q.**, Cai, Y.-L. and Zhao, G.-F. (2005) A comparative study of the genetic diversity of *Dipteronia sinensis* and *Dipteronia dyeriana*. *Acta Phytoecologica Sinica*, **29**, 785-792.
- Li, S., Cai, Y.-L., **Qian, Z.-Q.** and Zhao, G.-F. (2004) Researches on the relationship between the morphological and genetic variations of *Dipteronia dyeriana* Henry (Aceraceae). *Acta Ecologica Sinica*, **24**, 925-931.

Conference Abstracts

- Qian, Z.-Q.**, Robson, S.K.A., Schlüns, H., Schlick-Steiner, B.C., Steiner, F.M. and Crozier, R.H. (2010) Colony structure in three species of the ant genus *Myrmecia*. XVI Congress of the International Union for the Study of Social Insects (IUSSI), Copenhagen, Denmark. (w/ poster presentation)
- Qian, Z.-Q.** and Zhao, G.-F. (2006) Population ecological genetics of *Reaumuria soongorica* (Pall.) Maxim in the oasis-desert ecotone in Fukang, Xinjiang. National Conference of Systematics & Evolutionary Botany in China. Xi'an, China.