Weixuan Ning
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Education

11/2018 – 05/2023, PhD Plant Biology, Massey University, New Zealand
09/2015 – 05/2018; MSc Ecology and Population Genetics, University of Oulu, Finland
09/2011 – 06/2015; BSc Biotechnology, the University of Jinzhong, China

Research Experience

11/2023 – present; Postdoc, Wendel & Grover Lab, Iowa State University, USA.
Population genomic analysis of wild cotton populations (*Gossypium hirsutum*).
04/2023 – 10/2023; Senior Research Assistant, the University of Hong Kong, Hong Kong.
Investigating population genetic variation of *Aquilaria sinensis* in Hong Kong.
01/2023 – 03/2023; Research Assistant, Tate Lab, Massey University, New Zealand.
Phylogenomic analysis of New Zealand *Myosotis* and polyploids in *Tragopogon*.
08/2017 – 01/2018; Internship; Hancock group, Max Planck Institute for Plant Breeding, Germany.
Phenotyping and analyzing the effect of different vernalization doses and photoperiod length on African *Arabidopsis thaliana* populations.
01/2016 – 12/2017; Traineeship; Savolainen group, Plant Genetics, Oulu University, Finland.
Collecting phenotypic data from growth chamber-grown *Arabidopsis lyrata*.
05/2016 – 06/2016; Internship; Lascoux group, Population and Evolutionary Genetics, Uppsala University, Sweden.
Allele-specific expression analysis of allotetraploid *Capsella bursa-pastoris*.

Peer Reviewed Publications

Ning, W., Kayal, E., Wendel, J. F., Hsu, C. Y., Magbanua, Z. V., Pechanova, O., ... & Grover, C. E. (2026). Population genomics informs conservation strategies for critically endangered *Kokia* species in Hawai‘i. *Ecology and Evolution*, *16*(4), e73104.

Ning, W., Hu, G., Yuan, D., Arick, M. A., Hsu, C. Y., Magbanua, Z. V., ... & Wendel, J. F. (2026). Comparative population genomics of relictual Caribbean island *Gossypium hirsutum*. *Molecular Ecology*, 35(2), e70239.

Ning, W., Meudt, H. M., Nicolas, A. N., Plunkett, G. M., Heenan, P. B., Lee, W. G., & Tate, J. A. (2025). Resolving reticulate evolutionary histories of polyploid species of *Azorella* (Apiaceae) endemic to New Zealand. *Molecular Phylogenetics and Evolution*, 108469.

Meudt, H. M., Pearson, S. M., **Ning, W.**, Prebble, J. M., & Tate, J. A. (2025). Forget-me-not phylogenomics: Improving the resolution and taxonomy of a rapid island and mountain radiation in Aotearoa New Zealand (*Myosotis*; Boraginaceae). *Molecular Phylogenetics and Evolution*, *204*, 108250.

Ning, W., Rogers, K. M., Hsu, C. Y., Magbanua, Z. V., Pechanova, O., Arick, M. A., ... Grover, C.E., & Wendel, J. F. (2024). Origin and diversity of the wild cottons (*Gossypium hirsutum*) of Mound Key, Florida. *Scientific Reports*, 14(1), 14046.

Ning, W., Meudt, H. M., & Tate, J. A. (2024). A roadmap of phylogenomic methods for studying polyploid plant genera. *Applications in Plant Sciences*, e11580.

Hämälä, T., **Ning, W.**, Kuittinen, H., Aryamanesh, N., & Savolainen, O. (2022). Environmental response in gene expression and DNA methylation reveals factors influencing the adaptive potential of *Arabidopsis lyrata*. *eLife* 11:e83115.

McLay, T. G., Birch, J. L., Gunn, B. F., **Ning, W.**, Tate, J. A., Nauheimer, L., ... & Jackson, C. J. (2021). New targets acquired: Improving locus recovery from the Angiosperms353 probe set. *Applications in Plant Sciences*, 9(7).

Other Publications (Submitted, In Preparation, or Non–Peer Reviewed)

Ning, W., Meudt, H. M., Heenan, P. B., Lee, W. G., & Tate, J. A. (2026). Diversification of the polyploid-rich genus *Azorella* (Apiaceae) in New Zealand. *In prep*.

Reid, K., Fung, U. Y. Y., Sands, A., **Ning, W.**, Andersson, A. A., Tsang, R. H. L., … Merilä, J. (2026). Linking suspects to an illegally felled incense tree (*Aquilaria sinensis*) using DNA forensics. *Forensic Science International*. Submitted.

Ning, W., Arick, M. A. II, Udall, J. A., Hsu, C.-Y., Abdala-Roberts, L., Solís-Rodríguez, U., … Wendel, J. F. (2026). Genomic diversity and the domestication history of cotton (*Gossypium hirsutum*). *Proceedings of the National Academy of Sciences of the United States of Americ*a. Submitted.

Fung, U. Y. Y., Sands, A. F., Andersson, A. A., Reid, K., **Ning, W.**, Tam, S. T., … Merilä, J. (2025). Genetics and protection of *Aquilaria* species (Thymelaeceae) vulnerable to illegal harvesting. *Annals of Botany*. Submitted.

Ning, W., Grover, C. E., Wendel, J. F. (2024). Discovery of genetic diversity left behind by the bottleneck of cotton domestication. Behind the Paper, Research Communities by Springer Nature.

Ning, W. (2020). Phylogenomic analysis of New Zealand polyploid *Azorella* (Apiaceae). *Australasian Systematic Botany Society Newsletter* 185: 38– 41.

Research Skills

Field work skills: Field collection of plants; Herbarium specimen collection and processing.

Experimental design: Large common garden experiment design; Seed germination; Plant crossing, trait phenotyping and chromosome number counting; Phenotypic data analysis with ImageJ; Microphenotypic data collection with SEM; Genome size estimation using flow cytometer.

Next-generation sequencing laboratory work: DNA extraction from various plant tissues (field-collected and herbarium-sampled leaves; wood chips; woody steam); mRNA extraction; Primer design and PCR program optimization for Sanger sequencing; Genomic and transcriptomic library preparation and quantification for Illumina and PacBio sequencers; Long reads sequencing using PacBio and Nanopore sequencers. Hybridization of genomic libraries with biotinylated probes (Target-enrichment sequencing).

Bioinformatic skills: Ten years' experience (since 2016) with Linux and R; Basics of Python usage; Analyzing genomic, transcriptomic, and target-enriched data for model and non-model plant species; Phylogenetic and phylogenomic reconstruction of species relationships.

Teaching Experience

09/2024 – 12/2024; Co-instructor of EEOB566 - Molecular Evolution, Iowa State University
Co-teaching and leading the paper discussions in the Molecular Evolution class for post-graduate students at Iowa State University with Prof. Wendel.

08/2021 – 04/2022; Tate Lab, Massey University
Mentoring fellow lab members to perform genomic library construction and hybridization reactions with predesigned biotinylated probes. Assisting with their experimental design.

Semester 2, 2019 & Semester 2, 2021; Lab demonstrator, Plant Biology, Massey University
Teaching undergraduate students microscopy usage, identifying plant anatomical and morphological structures, assisting with their experimental design for plant physiology studies, and marking lab assignments and tests.

Semester 1, 2019 & Semester 1, 2022; Lab demonstrator, Biology of Cells, Massey University
Teaching undergraduate students correct pipettor and microscope usage, assisting with designing serial dilutions and other quantitative calculations, preparing leaf epidermal peels and mitotic squashes, demonstrating aseptic technique for bacterial plating, and marking lab assignments.

Conference Presentations

07/2025, Poster Presentation, SMBE, Beijing, China.
10/2024, Oral Presentation, Iowa State University department seminar, Ames, USA.
07/2024, Poster Presentation, SMBE, Puerto Vallarta, Mexico.
11/2022, Oral Presentation, Australasian Systematic Botany Society, virtual meeting.
07/2022, Oral Presentation, Botany 2022, virtual meeting.
07/2021, Oral Presentation, Botany 2021, virtual meeting.
07/2021, Oral Presentation, Australasian Systematic Botany Society, virtual meeting.
07/2020, Oral Presentation, Botany 2020, virtual meeting.
11/2019, Oral Presentation, Australasian Systematic Botany Society, Wellington, NZ.
12/2018, Oral Presentation, NZ Molecular Ecology, Palmerston North, NZ.

Research Grants and Awards

01/2026; Postdoc research; Postdoc Professional Development Grant; 1,000 $USD
07/2021; PhD research; Hellaby Grasslands Trust; 7,000 $NZD
06/2020; PhD research; Hutton Fund Award; 1,000 $NZD
09/2019; PhD research; ASBS Hansjörg Eichler Scientific Research Fund; 5,000 $AUD
11/20218 - 11/2022; PhD research; Marsden Fund PhD scholarship
09/2018; MSc research; Parvela award; 2,000 €
08/2017; Internship at MPIPZ; Erasmus scholarship; 3,000 €
08/2017; Internship at MPIPZ; MPIPZ funding; 1,200 €
04/2017; MSc research; Oulu University scholarship; 1,000 €
05/2016; Internship at Uppsala University; Erasmus scholarship; 1,500 €

Community Service

Manuscript reviews: Scientific Data, New Phytologist, Peer Community In, New Zealand Journal of Botany