

Simon Renny-Byfield

PERSONAL DETAILS

Address Department of Plant Sciences
Robbins Hall
University of California, Davis
California, USA, 95616

Mobile (515) 509-3184

E-Mail sbyfield@ucdavis.edu

ACADEMIC QUALIFICATIONS

Ph.D. Plant Evolutionary Genomics 2008-2012
Queen Mary University of London, UK
Supervisors: Professor Andrew R. Leitch
Thesis Title: Evolution of repetitive DNA in angiosperms: Examples from *Nicotiana*

B.Sc Genetics First Class Honors 2005-2008
Queen Mary University of London, UK

PROFESSIONAL EXPERIENCE

Post-Doctoral Research University of California, Davis
Supervisor: Dr. Jeffrey Ross-Ibarra
2014-present

Post-Doctoral Research Iowa State University
Supervisor: Prof. Jonathan F. Wendel
2012-2014

PUBLICATIONS

- [1] Buggs, R. J., **Renny-Byfield, S.**, Chester, M., Jordan-Thaden, I. E., Viccini, L. F., Chamala, S., Leitch, A. R., Schnable, P. S., Barbazuk, W. B., Soltis, P. S., and Soltis, D. E. (2012). Next-generation sequencing and genome evolution in allopolyploids. *American Journal of Botany*, 99:372–382.
- [2] Gong, L., Grover, C. E., Masonbrink, R., **Renny-Byfield, S.**, Gallagher, J. P., and Wendel, J. (2015). A cluster of recently inserted transposable elements associated with sirnas in gossypium raimondii. *The Plant Genome*, in press.
- [3] Kelly, L. J., Leitch, A. R., Fay, M. F., **Renny-Byfield, S.**, Pellicer, J., Macas, J., and Leitch, I. J. (2012). Why size really matters when sequencing plant genomes. *Plant Ecology and Diversity*, 5(4):415–425.
- [4] Kelly, L. J., **Renny-Byfield, S.**, Pellicer, J., Macas, J., Novk, P., Neumann, P., Lysak, M. A., Day, P. D., Berger, M., Fay, M. F., Nichols, R. A., Leitch, A. R., and Leitch, I. J. (2015). Analysis of the giant genomes of *Fritillaria* (liliaceae) indicates that a lack of DNA removal characterizes extreme expansions in genome size. *New Phytologist*, pages n/a–n/a.
- [5] Koukalova, B., Moraes, A. P., **Renny-Byfield, S.**, Matyasek, R., Leitch, A. R., and Kovarik, A. (2010). Fall and rise of satellite repeats in allopolyploids of *Nicotiana* over c. 5 million years. *New Phytologist*, 186(1):148–160.
- [6] Kovarik, A., **Renny-Byfield, S.**, and Leitch, A. R. (2011). *Evolutionary implications of genome and karyotype restructuring in Nicotiana tabacum L.*, pages 209–224. Springer, New York.

- [7] Masonbrink, R. E., Gallagher, J. P., Jareczek, J. J., **Renny-Byfield, S.**, Grover, C. E., Gong, L., and Wendel, J. F. (2014). CenH3 evolution in diploids and polyploids of three angiosperm genera. *BMC plant biology*, 14(1):383.
- [8] Matyasek, R., **Renny-Byfield, S.**[†], Fulnecek, J., Macas, J., Grandbastien, M.-A., Nichols, R., Leitch, A., and Kovarik, A. (2012). Next generation sequencing analysis reveals a relationship between rDNA unit diversity and locus number in *Nicotiana* diploids. *BMC Genomics*, 13:722.
- [9] **Renny-Byfield, S.**, Ainouche, M., Leitch, I. J., Lim, K. Y., Le Comber, S. C., and Leitch, A. R. (2010). Flow cytometry and GISH reveal mixed ploidy populations and *Spartina* nonaploids with genomes of *S. alterniflora* and *S. maritima* origin. *Annals of Botany*, 105(4):527–533.
- [10] **Renny-Byfield, S.**, Chester, M., Kovak, A., Le Comber, S. C., Grandbastien, M.-A., Deloger, M., Nichols, R. A., Macas, J., Novk, P., W. Chase, M., and R. Leitch, A. (2011). Next generation sequencing reveals genome downsizing in allotetraploid *Nicotiana tabacum*, predominantly through the elimination of paternally derived repetitive DNAs. *Molecular Biology and Evolution*, 28(10):2843–2854.
- [11] **Renny-Byfield, S.**, Gallagher, J. P., Grover, C. E., Szadkowski, E., Page, J. T., Udall, J. A., Wang, X., Paterson, A. H., and Wendel, J. F. (2014). Ancient gene duplicates in *Gossypium* (cotton) exhibit near-complete expression divergence. *Genome Biology and Evolution*, 6(3):559–571.
- [12] **Renny-Byfield, S.**, Gong, L., Gallagher, J. P., and Wendel, J. F. (2015). Persistence of subgenomes in paleopolyploid cotton after 60 my of evolution. *Molecular Biology and Evolution*, 32(4):1063–1071.
- [13] **Renny-Byfield, S.**, Kovarik, A., Chester, M., Nichols, R. A., Macas, J., Novak, P., and Leitch, A. R. (2012). Independent, rapid and targeted loss of a highly repetitive DNA sequence derived from the paternal genome donor in natural and synthetic *Nicotiana tabacum*. *PLoS One*, 7(5):e36963.
- [14] **Renny-Byfield, S.**, Kovarik, A., Kelly, L. J., Macas, J., Novak, P., Chase, M. W., Nichols, R. A., Pancholi, M. R., Grandbastien, M.-A., and Leitch, A. R. (2013). Diploidization and genome size change in allopolyploids is associated with differential dynamics of low- and high-copy sequences. *The Plant Journal*, 74(5):829–839.
- [15] **Renny-Byfield, S.** and Wendel, J. (2014). Doubling down on genomes: Polyploidy and crop plants. *American Journal of Botany*, 101(10):1–15.

[†] joint first author

TEACHING

Teaching Assistant

Chromosomal and Population Genomics

2008-2012

Queen Mary University of London

Teaching Assistant

Undergraduate Thesis Advisor

2008-2012

Queen Mary University of London

Guest Lecturer

MSc Research Seminar

2012

Queen Mary University of London

AWARDS AND GRANTS

PhD Fellowship

Natural Environment Research Council via Queen Mary University of London
£18,000 per annum stipend and consumables

2008-2012

Extra Consumables

£4000

2008-2012

Bevan Prize

Outstanding Academic achievement in Genetics

2008

Irene Manton Prize

Best Ph.D in Botany

2014

Queen Mary University of London

Queen Mary University of London

Linnean Society of London

CODING AND HIGH PERFORMANCE COMPUTING

Perl	Advanced
R	Advanced
Bash	Proficient
High Performance Computing	Proficient

PEER REVIEW

Heredity
BMC Genomics
PLOS One
Botanical Journal of the Linnean Society
BMC Plant Biology
New Phytologist

REFERENCES

Dr. Jeffrey Ross-Ibarra

University of California, Davis

Department of Plant Sciences

Robbins Hall

Davis CA, 95616

rossibarra@ucdavis.edu

530-752-1152

Prof. Jonathan F. Wendel

Iowa State University

Department of Ecology, Evolution and Organismal Biology

Bessey Hall

Ames IA, 50010

jfw@iastate.edu

(515) 294-7117

Prof. Andrew R. Leitch

Queen Mary University of London

Fogg Building

School of Biological and Chemical Sciences

London UK, E1 4NS

a.r.leitch@qmul.ac.uk

+44 (0)20 7882 6483