

Kenneth M. Olsen

Department of Biology, Box 1137
1 Brookings Drive
Washington University
St. Louis, MO 63130-4899

Phone: (314) 935-7013
Fax: (314) 935-4432
Email: kolsen@wustl.edu
URL: <https://www.olsen-lab.org>

RESEARCH INTERESTS

My research focuses on the genetic basis of evolution in plants: how is the variation that we find within species shaped by natural selection, population history, and other evolutionary forces? One way that I examine this question is by using crop domestication as a genetic model for rapid evolutionary change. Currently my lab group is studying the evolutionary genomics of weedy rice, a major agricultural weed that has evolved through the process of “de-domestication.” I also study the evolutionary genomics of wild plant species. Topics of interest include the molecular basis of local adaptation, the forces affecting genome-wide patterns of linkage disequilibrium, and genomic signatures of selection. A current study system focuses on cyanogenesis polymorphisms in clover and their role in climatic adaptation.

PROFESSIONAL POSITIONS

Professor, Department of Biology, Washington University, St. Louis, MO
July 2017 – present

Associate Department Chair, Department of Biology, Washington University, St. Louis, MO
April 2020 – present

Research Associate, Missouri Botanical Garden, St. Louis, MO
October 2006 – present

Adjunct Professor, University of Chiang Mai, Thailand
May 2016- April 2018

Associate Professor, Department of Biology, Washington University, St. Louis, MO
July 2011 – June 2017

Assistant Professor, Department of Biology, Washington University, St. Louis, MO
July 2005 – June 2011

Research Scientist, Department of Biology, Washington University, St. Louis, MO
February – June 2005

EDUCATION

Washington University, St. Louis, MO
A.B., Biology major, French minor, College Honors, 1991

The University of Texas at Austin
M.A., Department of Botany, 1993

Washington University, St. Louis, MO
PhD, Program in Population and Evolutionary Biology, 2000

North Carolina State University
Post-doctoral Research Associate, Department of Genetics
August 2000 – January 2005

CURRENT SUPPORT

NSF PGRP: RESEARCH-PGR: Characterizing the genomic basis of weedy rice competitiveness.
IOS-1947609. PI: K.M. Olsen; co-PIs: A.L. Caicedo, Y. Jia, C.N. Topp. Total costs: \$2,560,467.
March 2020 – February 2023.

Biology Danforth Endowment Seed Grant: Dissecting the role of root system architecture in the competitive success of weedy rice. PI: K.M. Olsen; Collaborators: C.N. Topp, D. Fike, M. Cho.
Total costs: \$80,000. July 2020 – June 2023.

Living Earth Collaborative: Below-ground perspectives on biodiversity: Root systems, comparative genomics, and domestication of North American grapevines. Lead PIs: A.J. Miller (St. Louis University) and K.M. Olsen. \$16,400 to Washington University (total: \$30,730). Awarded April 2018.

RECENT PAST SUPPORT

NSF IOS-IEP 1557770. Genetic and physiological mechanisms of local climatic adaptation in a widespread perennial plant species. PI: K.M. Olsen, co-PIs F.B. Fritschi, Univ. MO, P. Munoz, Univ. FL. February 2016-January 2020. Total costs to Washington University: \$709,181.

US Golf Association: Identifying the physiological and genetic basis of salt tolerance in seashore Paspalum. PI: E Kellogg (Donald Danforth Plant Science Center); co-PIs: K.M. Olsen, I. Baxter (DDPSC). Jan 2018 - Dec 2018. \$39,997

NSF Dissertation Research: Ecological genomics of local adaptation in a perennial plant species, DEB-1601641. PI: K.M. Olsen, co-PI: Sara Wright. Total costs: \$19,825. June 2016 – May 2018.

US Golf Association: Developing phenotypic and genomic tools to study salt-tolerance in seashore paspalum. PI: E Kellogg (Donald Danforth Plant Science Center); co-PIs: K.M. Olsen, I. Baxter (DDPSC). May 2016 – April 2017. \$30,000.

I-CARES (WU International Center for Advanced Renewable Energy & Sustainability): Harvesting natural variation in *Camelina species* for biofuel improvement. PI: K.M. Olsen; Collaborators: Jordan Brock (EEPB PhD student), T. Kutchan (Donald Danforth Plant Science Center), I. Al-Shehbaz (MO Botanical Garden), M. Lysak (Central European Institute of Technology) May 2016 – April 2017. \$40,000.

NSF PGRP-CGSP: Genomic structure and contemporary evolution of weediness in red rice. Plant Genome Research Program, IOS-1032023. Co-PI. (PI: A. L. Caicedo, UMass-Amherst; co-PI: Y. Jia, USDA). Total costs: \$2,490,833; subaward to Washington University: \$533,178. October 2010 – January 2017.

Clover cyanogenesis: integrating ecological and molecular genetics in the study of adaptation. NSF CAREER award, DEB-0845497. PI: K.M. Olsen. Total costs: \$915,500. August 2009 – July 2014.

Dissertation Research: Determining the mechanisms of recurrent cline evolution in white clover (*Trifolium repens*), NSF DEB-1110588. PI: K.M. Olsen, co-PI: Nicholas Kooyers. Total costs: \$13,539. June 2011 – May 2013.

The evolutionary genomics of invasive weedy rice. NSF (Plant Genome Research Program), DBI-0638820. PI: K.M. Olsen; co-PIs: A.L. Caicedo (UMass-Amherst) and Y. Jia (USDA). Total costs: \$1,121,523. October 2006 – September 2010

Evolutionary response to parallel selective pressures in cultivated rice species. NIH Ruth L. Kirschstein National Research Service Award (NRSA) Individual Fellowship (PHS 416-1). Sponsor for post-doctoral fellow Briana Gross; Total costs: \$141,318. August 2007 – July 2010

Human exploration and dispersal history of the coconut (*Cocos nucifera* L.). National Geographic Society, 8178-07, PI: Kenneth M. Olsen, Total costs: \$20,000. March 2007 – February 2009

PUBLICATIONS (h-index = 47; i10 index = 105; Citations: >10,500)

See also: <https://scholar.google.com/citations?user=pRWAwVEAAAAJ&hl=en>

*Peer-reviewed papers (*senior or corresponding author); undergraduate authors underlined*

122. Wedger, M.J., N. Roma-Burgos, and K.M. Olsen* (2022). Genomic revolution of US weedy rice in response to 21st century agricultural technologies. *Communications Biology*, in press.

121. Austin, M.W., P.O. Cole, **K.M. Olsen** and A.B. Smith (2022). Climate change is associated with increased allocation to potential outcrossing in a common mixed mating species. *American Journal of Botany*, in press.
120. Brock, J.R., M.M. Ritchey, and **K.M. Olsen** (2022). Molecular and archaeological evidence on the geographical origin of domestication for *Camelina sativa* (Brassicaceae). *American Journal of Botany*, in press.
119. Innes, S.G., J.S. Santangelo, N.J. Kooyers, **K.M. Olsen**, and M.T.J. Johnson (2022). Evolution in response to climate in the native and introduced ranges of a globally distributed plant. *Evolution* 76: 1495-1511. <https://onlinelibrary.wiley.com/doi/10.1111/evo.14514>
118. Zhong, L., Y. Zhu, and **K.M. Olsen*** (2022). Hard vs. soft selective sweeps during domestication and improvement in soybean. *Molecular Ecology* 31: 3137-3153. <https://onlinelibrary.wiley.com/doi/abs/10.1111/mec.16454> .
117. Santangelo, J.S. et al. [287 authors]. (2022). Global urban environmental change drives adaptation in white clover. *Science* 375: 1275-1281. <https://www.science.org/doi/full/10.1126/science.abk0989>
116. Wu, D., J Qiu, J Sun, B.K. Song, **K.M. Olsen**, and L Fan (2022). Weedy rice, a hidden gold mine in the paddy field. *Molecular Plant* 15: 566-568. <https://doi.org/10.1016/j.molp.2022.01.008>
115. Wu, D. E. Shen, B. Jiang, Y. Feng, W. Tang, S. Lao, L. Jia, H.-Y. Lin, L. Xie, X. Weng, C. Dong, Q. Qian, F. Lin, H. Xu, H. Lu, L. Cutti, H. Chen, S. Deng, L. Guo, T.-S. Chuah, B.-K. Song, L. Scarabel, J. Qiu, Q.-H. Zhu, Q. Yu, M. Timko, H. Yamaguchi, A. Merotto Jr, Y. Qiu, **K.M. Olsen**, L. Fan, and C. Ye (2022). Genomic insights into the evolution of *Echinochloa* species as weed and orphan Crop. *Nature Communications* 13: 1-16.
114. Jia, Y., Y.V. Singh, D. Gealy, Y. Liu J. Ma, C.S. Thurber, N. Roma-Burgos, **K.M. Olsen**, and A.L. Caicedo (2022). Registration of two rice mapping populations using weedy rice ecotypes as a novel germplasm resource. *Journal of Plant Registrations* 16:162-175. <https://doi.org/10.1002/plr2.20174>
113. Lu, R.-S., Y. Chen, X.-Y. Zhang, Y. Feng, H.P. Comes, Z. Li, Z.-S. Zheng, Y. Yuan, L.-Y. Wang, Z.-J. Huang, Y. Guo, G.-P. Sun, **K.M. Olsen**, J. Chen, Y.-X. Qiu (2022). Genome sequencing and transcriptome analyses provide insights into the origin and domestication of water caltrop (*Trapa* spp., Lythraceae). *Plant Biotechnology Journal* 20: 761-776. <https://doi.org/10.1111/pbi.13758>
112. Zheng, X., H. Pang, J. Wang, , X. Yao, Y. Song, F. Li, D. Lou, J. Ge, Z. Zhao, W. Qiao, S.R. Kim, G. Ye, **K.M. Olsen***, C. Liu, and Q. Yang (2022). Genomic signatures of domestication and adaptation during geographical expansions of rice cultivation. *Plant Biotechnology Journal* 20: 16-18. <https://doi.org/10.1111/pbi.13730>
111. Brock, J.R., T. Mandáková, M. McKain, M.A. Lysak, and **K.M. Olsen*** (2022). Chloroplast phylogenomics in *Camelina* (Brassicaceae) reveals multiple origins of polyploid species and the maternal lineage of *C. sativa*. *Horticulture Research* 9:uhab050. <https://doi.org/10.1093/hr/uhab050>
110. Wright, S.J., D.M. Goad, B.L. Gross, P.R. Muñoz, and **K.M. Olsen*** (2021). Genetic trade-offs underlie divergent life history strategies for local adaptation in white clover. *Molecular Ecology*, in press.
109. Goad, D.M., E.A. Kellogg, I. Baxter, and **K.M. Olsen*** (2021). Intraspecific variation in elemental accumulation and its association with salt tolerance in *Paspalum vaginatum*. *G3* 11:jkab275. DOI: 10.1093/g3journal/jkab275

108. **Olsen, K.M.***, D.M. Goad, S.J. Wright, M.L. Dutta, S.R. Myers, L.L. Small, and L.-F. Li. Dual-species origin of an adaptive chemical defense polymorphism (2021). *New Phytologist* 232: 1477-1487.
107. Imaizumi, T., K. Ebana, Y. Kawahara, C. Muto, H. Kobayashi, A. Koarai, and **K.M. Olsen** (2021). Genomic divergence during feralization reveals conserved and novel mechanisms of parallel weediness evolution. *Communications Biology* 4: 952. DOI: 10.1038/s42003-021-02484-5
106. Roma-Burgos, N., M.P.S. Sudo, **K.M. Olsen**, I. Werle, and B.K. Song (2021). Weedy rice (*Oryza* spp.): What's in a name? *Weed Science* 5: 505-513. <https://doi.org/10.1017/wsc.2021.22>
105. Gotarkar, D.N., T. Longkumer, N. Yamamoto, A.K. Nanda, T. Iglesias Gonzalez, L.-F. Li, B. Miro Cau, E. Blanco Gonzalez, M. Montes-Bayon, **K.M. Olsen**, Y.C. Hsing, and A. Kohli (2021). A drought-responsive rice amidohydrolase is the elusive plant guanine deaminase with the potential to modulate the epigenome. *Physiologia Plantarum* 172: 1853–1866. <http://dx.doi.org/10.1111/ppl.13392>
104. Wei, X., J. Qiu, K. Yong, J. Fan, Q. Zhang, H. Hua, J. Liu, Q. Wang, **K.M. Olsen**, B. Han, and X. Huang (2021). A quantitative genomics map guides rice breeding. *Nature Genetics* 53: 243-253. DOI: 10.1038/s41588-020-00769-9
103. Goad, D.M., I. Baxter, E.A. Kellogg, and **K.M. Olsen*** (2021). Hybridization, polyploidy and clonality influence geographic patterns of diversity and salt tolerance in the model halophyte seashore paspalum (*Paspalum vaginatum*). *Molecular Ecology* 30: 148–161. DOI: 10.1111/mec.15715.
102. Vigueira, C.C., P.A. Vigueira, **K.M. Olsen**, CR Wagner, and ZB Chittick (2020). Weedy rice from South Korea arose from two distinct de-domestication events. *Frontiers in Agronomy* 2: 602612. DOI:10.3389/fagro.2020.602612
101. Brock, J.R., T. Scott, A.Y. Lee, S.L. Mosyakin, and **K.M. Olsen*** (2020). Interactions between genetics and environment shape *Camelina* seed oil composition. *BMC Plant Biology* 20: 423. DOI:10.1186/s12870-020-02641-8
100. Waselkov, K.E., N.D. Regenold, R.C. Lum, and **K.M. Olsen** (2020). Agricultural adaptation of the native North American weed waterhemp, *Amaranthus tuberculatus* (Amaranthaceae). *PLoS One* 15(9): e0238861. DOI: 10.1371/journal.pone.0238861
99. Ye, C.-Y, D. Wu, L.-F. Mao, L. Jia, J. Qiu, S. Lao, M. Chen, B. Jiang, W. Tang, Q. Peng, L. Pan, L. Wang, X. Feng, L. Guo, C. Zhang, E.A. Kellogg, **K.M. Olsen**, L. Bai, and L. Fan. 2020. The genomes of the allohexaploid *Echinochloa crus-galli* and its progenitors provide insights into polyploidization-driven adaptation. *Molecular Plant* 13: 1-13. <https://doi.org/10.1016/j.molp.2020.07.001>
98. Goad, D.M., Y. Jia, A. Gibbons, Y. Liu, D.R. Gealy, A.L. Caicedo, and **K.M. Olsen** (2020). Identification of novel QTL conferring sheath blight resistance in two weedy rice mapping populations. *Rice* 13: 21. DOI: 10.1186/s12284-020-00381-9
97. Qiu, J., L. Jia, D. Wu, X. Weng, L. Chen, J. Sun, M. Chen, L. Mao, B. Jiang, C. Ye, G. Turra, L. Guo, G. Ye, Q.-H. Zhu, T. Imaizumi, B.-K. Song, L. Scarabel, A. Merotto Jr, **K.M. Olsen***, and L. Fan* (2020). Diverse genetic mechanisms underlie worldwide convergent rice feralization. *Genome Biology* 21:70. DOI: 10.1186/s13059-020-01980-x
96. Xie, H., Y. Han, X. Li, W. Dai, X. Song, **K.M. Olsen**, and S. Qiang (2020). Climate-dependent variation in cold tolerance of weedy rice and rice mediated by *OsICE1* promoter methylation. *Molecular Ecology* 29: 121-137. doi: 10.1111/mec.15305

95. Zheng, X.-M., J. Chen, H. Pang, S. Liu, J. Wang, W. Qiao, H. Wang, J. Liu*, **K.M. Olsen***, and Q. Yang* (2019). Genome-wide analyses reveal the role of non-coding variation in complex traits during rice domestication. *Science Advances* 5: aax3619. DOI: 10.1126/sciadv.aax3619
94. Ye, C., W. Tang, D. Wu, L. Jia, J. Qiu, M. Chen, L. Mao, F. Lin, H. Xu, X. Yu, Y. Lu, Y. Wang, **K.M. Olsen**, M. Timko, and L. Fan (2019). Genomic evidence of human selection on Vavilovian mimicry. *Nature Ecology & Evolution* 3: 1474-1482.
93. Wedger, M.J., T. Pusadee, A. Wongtamee, and **K.M. Olsen*** (2019). Discordant patterns of introgression suggest historical gene flow into Thai weedy rice from domesticated and wild relatives. *Journal of Heredity* 110: 601-609.
92. Neik, T.-X., J.-Y. Chai, S.-Y. Tan, M. Sudo, Y. Cui, J. Jayaraj, S.-S. Teo, **K.M. Olsen*** and B.K. Song (2019). When West meets East: The origins and spread of weedy rice between continental and island Southeast Asia. *G3* 9: 2941-2950.
91. Wedger, M.J., C.N. Topp, and **K.M. Olsen*** (2019). Convergent evolution of root system architecture in two independently evolved lineages of weedy rice. *New Phytologist* 223: 1031-1042.
90. Pusadee, T., A. Wongtamee, B. Rerkasem, K.M. Olsen, and S. Jamjod (2019). Farmers drive genetic diversity of Thai purple rice (*Oryza sativa* L.) landraces. *Economic Botany* 73: 76-85.
89. Guo, L., J. Qiu, L.-F. Li, B. Lu, **K. M. Olsen**, L. Fan (2018). Genomic clues for crop-weed interactions and evolution. *Trends in Plant Science* 12: 1102-1115.
88. Huang, Z., S. Kelly, R. Matsuo, L.-F. Li, Y. Li, **K. M. Olsen**, Y. Jia, A.L. Caicedo (2018). The role of standing variation in the evolution of weediness traits in South Asian weedy rice (*Oryza* spp.). *G3* 8: 3679-3690.
87. Brock, J.R., A.A. Dönmez, M.A. Beilstein, and **K.M. Olsen** (2018). Phylogenetics of *Camelina* Crantz. (Brassicaceae) and insights on the origin of gold-of-pleasure (*Camelina sativa*). *Molecular Phylogenetics and Evolution* 127: 834-842.
86. Kooyers, N.J., B.H. Bakken, M.C. Ungerer, and **K.M. Olsen*** (2018). Freeze-induced cyanide toxicity does not maintain the cyanogenesis polymorphism in white clover (*Trifolium repens* L.). *American Journal of Botany* 105: 1224-1231.
85. **Olsen, K.M.*** and L.S. Small (2018). Micro- and macroevolutionary adaptation through repeated loss of a complete metabolic pathway. *New Phytologist* 219: 757-766.
84. Wedger, M.J. and **K.M. Olsen*** (2018). Evolving insights on weedy rice. *Ecological Genetics and Genomics* 7-8: 23-26.
83. Waselkov, K.E. A. Boleda, and **K.M. Olsen** (2018). A phylogeny of the genus *Amaranthus* (Amaranthaceae), based on several low-copy nuclear loci and chloroplast regions. *Systematic Botany* 43: 439-458.
82. Khumto, S., T. Pusadee, **K.M. Olsen** and S. Jamjod (2018). Genetic relationships between anther and stigma traits revealed by QTL analysis in two rice advanced-generation backcross populations. *Euphytica* 214: 5.
81. Vigueira, C.C., X.-S. Qi, B.-K. Song, L.-F. Li, A.L. Caicedo, Y. Jia, and **K.M. Olsen*** (2019). Call of the wild rice: *Oryza rufipogon* shapes weedy rice evolution in Southeast Asia. *Evolutionary Applications* 12: 93-104.
80. Zheng, X.-M., T. Gong, H.-L. Ou, D. Xue, W. Qiao, J. Wang, S. Liu, Q. Yang and **K.M. Olsen*** (2017). Genome-wide association study of rice grain width variation. *Genome* 8: 1-8.
79. **Olsen, K.M.*** and L.-F. Li (2017). Rooting for new sources of natural rubber. *National Science Review* 5: 89.
78. Wright, S.J., D. Cui Zhou, A. Kuhle, and **K.M. Olsen*** (2017). Continent-wide climatic variation drives local adaptation in North American white clover. *Journal of Heredity* 109: 78-89.

77. Li, L.-F., Y.-L. Li, Y. Jia, A.L. Caicedo, and **K.M. Olsen*** (2017). Signatures of adaptation in the weedy rice genome. *Nature Genetics* 49: 811-814.
76. Huang, Z., N.D. Young, M. Reagon, K.E. Hyma, **K.M. Olsen**, Y. Jia, and A.L. Caicedo (2017). All roads lead to weediness: patterns of genomic divergence reveal extensive recurrent weedy rice origins from South Asian *Oryza*. *Molecular Ecology* 26: 3151–3167.
75. Cui, Y., B.K. Song, L.-F. Li, Y.-L. Li, Z. Huang, A.L. Caicedo, Y. Jia, and **K.M. Olsen*** (2016). Little white lies: pericarp color provides insights into the origins and evolution of Southeast Asian weedy rice. *G3* 6: 4105-4114.
74. Li, L.-F. and **K.M. Olsen*** (2016). To have and to hold: selection for seed and fruit retention during crop domestication. *Current Topics in Developmental Biology* 119: 63-109.
73. Vigueira, C.C., L.L. Small, and **K.M. Olsen*** (2016). Long-term balancing selection at the *Phosphorus Starvation Tolerance 1 (PSTOL1)* locus in wild, domesticated, and weedy rice (*Oryza*). *BMC Plant Biology* 16: 101.
72. Muto C., R. Ishikawa, **K.M. Olsen**, K. Kawano, C. Bounphanousay, T. Matoh, and Y-I. Sato (2016). Genetic diversity of the *wx* flanking region in rice landraces in northern Laos. *Breeding Science* 66: 580-590.
71. Sudianto, E., T.-X. Neik, S.M. Tam, T. Chuah, A.A. Idris, **K.M. Olsen**, and B.K. Song. (2016). Morphological diversity of Malaysian weedy rice (*Oryza sativa*) and its implications for weed management. *Weed Science* 64: 501–512.
70. Liu, Y., Y. Jia, D.R. Gealy, D.M. Goad, A.L. Caicedo, and **K.M. Olsen** (2016). Marker development for rice blast resistance gene *Pi66(t)* and application in the USDA rice mini-core collection. *Crop Science* 56: 1001-1008.
69. Hokanson, K.E., N.C. Ellstrand, A.G.O. Nixon, H.P. Kulembeka, **K.M. Olsen**, and A. Raybould (2016). Risk assessment of gene flow from genetically engineered virus resistant cassava to wild relatives in Africa: An expert panel report. *Transgenic Research* 25: 71-81.
68. Liu, Y., X. Qi, D.R. Gealy, **K.M. Olsen**, A.L. Caicedo, and Y. Jia (2015). QTL analysis for resistance to blast disease in US weedy rice. *Molecular Plant-Microbe Interactions* 28: 834-844.
67. Qi, X.-S., Y. Liu, C.C. Vigueira, N.D. Young, A.L. Caicedo, Y. Jia, D.R. Gealy, and **K.M. Olsen*** (2015). More than one way to evolve a weed: parallel evolution of U.S. weedy rice through independent genetic mechanisms. *Molecular Ecology* 24: 3329–3344.
66. Li, L.F., B. Liu, **K.M. Olsen**, and J.F. Wendel (2015). A reevaluation of the homoploid hybrid origin of *Aegilops tauschii*, the donor of the wheat D-subgenome. *New Phytologist* 208: 4-8.
65. Li, L.F., B. Liu, **K.M. Olsen**, and J.F. Wendel (2015). Multiple rounds of ancient and recent hybridizations have occurred within the *Aegilops–Triticum* complex. *New Phytologist* 208: 11-12.
64. Cervantes-Alcayde, M.A., M.E. Olson, **K.M. Olsen**, and L.E. Eguiarte (2015). Apparent similarity, underlying homoplasmy: morphology and molecular phylogeny of the North American clade of *Manihot* (Euphorbiaceae). *American Journal of Botany* 102: 1-13.
63. Liu, Y., X.S. Qi, N.D. Young, **K.M. Olsen**, A.L. Caicedo, and Y.L. Jia (2015). Characterization of resistance genes to rice blast fungus *Magnaporthe oryzae* in a "Green Revolution" rice variety. *Molecular Breeding* 35: 52.
62. **Olsen, K.M.***, N.J. Kooyers, and L.L. Small (2014). Adaptive gains through repeated gene loss: Parallel evolution of cyanogenesis polymorphisms in the genus *Trifolium* (Fabaceae). *Philosophical Transactions of the Royal Society B* 369:1648.
61. Khan, M.A., **K.M. Olsen**, V. Sovero, M.M. Kushad, and S.S. Korban (2014). Fruit quality traits have played critical roles in domestication of the apple. *Plant Genome* 7: 1-18.
60. Kooyers, N.J. and **K.M. Olsen*** (2014). Adaptive cyanogenesis clines evolve recurrently through geographical sorting of existing gene deletions. *Journal of Evolutionary Biology* 27: 2554–2558.

59. Waselkov, K.E. and **K.M. Olsen*** (2014). Population genetics and origin of the native North American agricultural weed waterhemp (*Amaranthus tuberculatus*). *American Journal of Botany* 101: 1726-1736.
58. Thurber, C.S., M. Reagon, **K.M. Olsen**, Y. Jia, and A.L. Caicedo. (2014). The evolution of flowering strategies in US weedy rice. *American Journal of Botany* 101: 1737-1747.
57. Song, B.-K., T.-S. Chuah, S.M. Tam, and **K.M. Olsen*** (2014). Malaysian weedy rice shows its true stripes: wild *Oryza* and elite rice cultivars shape agricultural weed evolution in Southeast Asia. *Molecular Ecology* 23: 5003-5017.
56. Doust, A.N.‡, L. Lukens‡, **K.M. Olsen‡**, M. Mauro-Herrera, A. Meyer, and K. Rogers (2014). Beyond the single gene: how epistasis and gene-by-environment effects influence crop domestication. *Proceedings of the National Academy of Sciences USA*, 111: 6178-6183. (‡authors contributed equally)

Faculty of 1000 selected paper

55. Larson, G., D.R. Piperno, R. Allaby, et al. (2014). Current perspectives and the future of domestication studies. *Proceedings of the National Academy of Sciences USA* 111: 6139-6146.
54. Kooyers, N.J., L.R. Gage, A. Al-Lozi, and **K.M. Olsen*** (2014). Aridity shapes cyanogenesis cline evolution in white clover (*Trifolium repens* L.). *Molecular Ecology* 23: 1053-1070.
53. Baudouin, L., B.F. Gunn, and **K.M. Olsen** (2014). The presence of coconut in southern Panama in pre-Columbian times: clearing up the confusion. *Annals of Botany* 113: 1-5.
52. **Olsen, K.M.*** and J.F. Wendel (2013). A bountiful harvest: genomic insights into crop domestication phenotypes. *Annual Review of Plant Biology* 64: 47-70.
51. Vigueira, C.C., W. Li, and **K.M. Olsen*** (2013). The role of *Bh4* in parallel evolution of hull color in domesticated and weedy rice. *Journal of Evolutionary Biology* 26: 1738-49.
50. Kooyers, N.J. and **K.M. Olsen*** (2013). Searching for the bull's-eye: agents and targets of selection vary among geographically disparate cyanogenesis clines in white clover (*Trifolium repens* L.). *Heredity* 111: 495-504.
49. **Olsen, K.M.*** and J.F. Wendel (2013). Crop plants as models for understanding plant adaptation and diversification. *Frontiers in Plant Science* 4: 290.
48. **Olsen, K.M.***, N.J. Kooyers, and L.L. Small (2013). Recurrent gene deletions and the evolution of adaptive cyanogenesis polymorphisms in white clover (*Trifolium repens* L.). *Molecular Ecology* 22: 724-738.
47. Vigueira, C.C., **K.M. Olsen**, and A.L. Caicedo. (2013). The red queen in the corn: agricultural weeds as models of rapid adaptive evolution. *Heredity* 110: 303-311.
46. Trejo, L., P. Ferial, **K.M. Olsen**, L.E. Eguiarte, B. Arroyo, J.A. Gruhn, and M.E. Olson (2012). Poinsettia's wild ancestor in the Mexican dry tropics: historical, genetic, and environmental evidence. *American Journal of Botany* 99: 1146-1157.
45. **Olsen, K.M.*** (2012). One gene's shattering effects. *Nature Genetics* 44: 616-617.
44. Kooyers, N.J. and **K.M. Olsen*** (2012). Rapid evolution of an adaptive cyanogenesis cline in introduced North American white clover (*Trifolium repens* L.). *Molecular Ecology* 21: 2455-2468.
43. Reagon, M., C.S. Thurber, **K.M. Olsen**, Y. Jia, and A.L. Caicedo (2011). The long and the short of it: *sd1* polymorphism and the evolution of growth trait divergence in U.S. weedy rice. *Molecular Ecology* 20: 3743-3756.
42. Gunn, B.F., L. Baudouin, and **K.M. Olsen*** (2011). Independent origins of cultivated coconut (*Cocos nucifera* L.) in the Old World Tropics. *PLoS ONE* 6: e21143.

Ranked in top 10% most cited PLoS ONE articles

41. Yu, G., **K.M. Olsen**, and B.A. Schaal (2011). Association between nonsynonymous mutations of *Starch Synthase IIa* and starch quality in rice (*Oryza sativa*). *New Phytologist* 189: 593-601.
40. Lee, S., Y. Jia, D.R. Gealy, M. Jia, **K.M. Olsen**, and A.L. Caicedo (2011). Molecular Evolution of the Rice Blast Resistance Gene *Pi-ta* in Invasive Weedy Rice in the USA. *PLoS ONE* 6: e26260.

39. Yu, G., **K.M. Olsen**, and B.A. Schaal (2011). Molecular evolution of endosperm starch synthesis pathway genes in rice (*Oryza sativa* L.) and its wild ancestor, *O. rufipogon* L. *Molecular Biology and Evolution* 28: 659–671.
38. Reagon, M., C.S. Thurber, **K.M. Olsen**, Y. Jia, and A.L. Caicedo (2010) Genomic patterns of nucleotide diversity in divergent populations of invasive U.S. weedy rice. *BMC Evolutionary Biology* 10: 180.
37. Gross, B.L. and **K.M. Olsen*** (2010). Genetic perspectives on crop domestication. *Trends in Plant Science* 15: 529-537.
36. Gross, B.L., F.T. Steffen, and **K.M. Olsen*** (2010). Molecular basis of white pericarps in African domesticated rice: Novel mutations at the *Rc* gene. *Journal of Evolutionary Biology* 23: 2747–2753.
35. Gross, B.L., S.C. Hsu, A.L. Caicedo, Y. Jia, and **K.M. Olsen*** (2010). Seeing red: the origin of grain pigmentation in US weedy rice. *Molecular Ecology* 19: 3380-3393.
34. Thurber, C., M. Reagon, B.L. Gross, **K.M. Olsen**, Y. Jia, and A.L. Caicedo (2010). Molecular evolution of shattering loci in US weedy rice. *Molecular Ecology* 19: 3271-3284.
33. Lee, S, S. Costanzo, Y. Jia, **K.M. Olsen**, and A.L. Caicedo (2009). Evolutionary dynamics of the genomic region around the blast resistance gene *Pi-ta* in AA genome *Oryza* species. *Genetics* 183: 1315-1325.
32. Gross, B.L. K.J. Skare, and **K.M. Olsen*** (2009). Novel *Phr1* mutations and the evolution of phenol reaction variation in US weedy rice (*Oryza sativa* L.). *New Phytologist* 184: 842–850.
31. **Olsen, K.M.***, S.-C. Hsu, and L.L. Small (2008). Evidence on the molecular basis of the *Ac/ac* adaptive cyanogenesis polymorphism in white clover (*Trifolium repens* L.). *Genetics* 179: 517–526.
30. **Olsen, K.M.*** and M.C. Ungerer (2008). Freezing tolerance and cyanogenesis in white clover (*Trifolium repens* L., Fabaceae). *International Journal of Plant Sciences* 169: 1141-1147.
29. **Olsen, K.M.*** and B.L. Gross (2008). Detecting multiple origins of domesticated crops. *Proceedings of the National Academy of Sciences USA* 105: 13701-13702.
28. Halsey, M.E., **K.M. Olsen**, N.J. Taylor, and P. Chavarriaga-Aguirre (2008). Reproductive biology of cassava (*Manihot esculenta* Crantz) and isolation of experimental field trials. *Crop Science* 48: 49–58.
27. Hurtado, P., **K.M. Olsen**, C. Buitrago, C. Ospina, J. Marin, M. Duque, C. de Vicente, P. Wongtiem, P. Wenzel, A. Killian, and M. Fregene (2008). Comparison of simple sequence repeat (SSR) and diversity array technology (DArT) markers for assessing genetic diversity in cassava (*Manihot esculenta* Crantz). *Plant Genetic Resources*, 6: 208-214.
26. Caicedo, A.L., S.H. Williamson, A. Fledel-Alon, T.L. York, N. Polato, **K.M. Olsen**, R. Nielsen, S. McCouch, C.D. Bustamante, and M.D. Purugganan (2007). Genome-wide patterns of nucleotide polymorphism in domesticated rice. *PLOS Genetics* 3: 1745-1756.
25. Mather, K.A., A.L. Caicedo, N. Polato, **K.M. Olsen**, S.R. McCouch, and M.D. Purugganan (2007). The extent of linkage disequilibrium in rice (*Oryza sativa* L.). *Genetics* 177: 2223–2232.
24. **Olsen, K.M.***, B.L. Sutherland, and L.L. Small (2007). Molecular evolution of the *Li/li* chemical defence polymorphism in white clover (*Trifolium repens* L.). *Molecular Ecology* 16: 4180-4193.
23. **Olsen, K.M.*** and B.A. Schaal (2007). Insights on the evolution of a vegetatively propagated crop species. *Molecular Ecology* 16 (14): 2838-2840.
22. **Olsen, K.M.***, A.L. Caicedo, and Y. Jia (2007). Evolutionary genomics of weedy red rice in the USA. *Journal of Integrative Plant Biology* 49 (6): 811–816.
21. Narasimhamoorthy, B., J.H. Bouton, **K.M. Olsen**, and M.K. Sledge (2007). Quantitative trait loci and candidate gene mapping of aluminum tolerance in diploid alfalfa. *Theoretical and Applied Genetics* 114: 901–913.

20. **Olsen, K.M.**, A.L. Caicedo, N. Palato, A. McClung, S. McCouch, and M.D. Purugganan (2006). Selection under domestication: evidence for a sweep in the rice *Waxy* genomic region. *Genetics* 173: 975-983.
19. Kuo, H.-F., **K.M. Olsen**, and E.J. Richards (2006). Natural variation in a subtelomeric region of *Arabidopsis*: implications for the genomic dynamics of a chromosome end. *Genetics* 173: 401-417.
18. **Olsen, K.M.*** (2004). SNPs, SSRs and Inferences on Cassava's Origin. *Plant Molecular Biology* 56: 517-526.
17. Caicedo, A.L., J.R. Stinchcombe, **K.M. Olsen**, J. Schmitt, and M.D. Purugganan (2004). Epistatic interaction between the *Arabidopsis* *FRI* and *FLC* flowering time genes generates a latitudinal cline in a life history trait. *Proceedings of the National Academy of Sciences USA* 101: 15670-15675.
16. **Olsen, K.M.**, S.S. Halldorsdottir, J.R. Stinchcombe, J. Schmitt, and M.D. Purugganan. (2004). Linkage disequilibrium mapping of *Arabidopsis* *CRY2* flowering time alleles. *Genetics* 167: 1361-1369.
15. Stinchcombe, J.R., C. Weinig, M.C. Ungerer, **K.M. Olsen**, C.A. Mays, S.S. Halldorsdottir, M.D. Purugganan, and J.M. Schmitt. (2004). A latitudinal cline in flowering time in *Arabidopsis thaliana* modulated by the flowering time gene *FRIGIDA*. *Proceedings of the National Academy of Sciences USA* 101: 4712-4717.
14. **Olsen, K.M.*** and M.D. Purugganan (2002). Molecular evidence on the origin and evolution of glutinous rice. *Genetics* 162: 941-950.
13. **Olsen, K.M.**, A. Womack, A.R. Garrett, J.I. Suddith, and M.D. Purugganan (2002). Contrasting evolutionary forces in the *Arabidopsis thaliana* floral developmental pathway. *Genetics* 160: 1641-1650.
12. Bustamante, C.D., R. Nielsen, S.A. Sawyer, **K.M. Olsen**, M.D. Purugganan, and D.L. Hartl (2002). The cost of inbreeding in *Arabidopsis*. *Nature* 416: 531-534.
11. **Olsen, K.M.*** (2002). Population history of *Manihot esculenta* (Euphorbiaceae) inferred from nuclear DNA sequences. *Molecular Ecology* 11: 901-911.
10. **Olsen, K.M.*** and B.A. Schaal (2001). Microsatellite variation in cassava and its wild relatives: further evidence for a southern Amazonian origin of domestication. *American Journal of Botany* 88: 131-142.
9. Schaal, B.A. and **K.M. Olsen** (2000). Gene genealogies and population variation in plants. *Proceedings of the National Academy of Sciences USA* 97: 7024-7029.
8. **Olsen, K.M.*** and B.A. Schaal (1999). Evidence on the origin of cassava: phylogeography of *Manihot esculenta*. *Proceedings of the National Academy of Sciences USA* 96: 5586-5591.
7. **Olsen, K.M.*** (1999). Minisatellite evolution in a single-copy nuclear gene: phylogenetic assessment of repeat-length homology and mutational mechanisms. *Molecular Biology and Evolution* 16: 1406-1409.
6. Schaal, B.A., D.A. Hayworth, **K.M. Olsen**, J.T. Rauscher, and W.A. Smith (1998). Phylogeographic studies in plants: problems and prospects. *Molecular Ecology* 7: 465-474.
5. Winston, W.E., O.J. Sexton, and **K.M. Olsen** (1998). Effect of the 1993 and 1995 floods on vegetation of the Marais Temps Clair Conservation Area, St. Charles County, Missouri. *Transactions, Missouri Academy of Science* 32: 91-98.
4. **Olsen, K.M.*** (1997). Pollination effectiveness and pollinator importance in a population of *Heterotheca subaxillaris* (Asteraceae). *Oecologia* 109: 114-121.
3. Schaal, B., L.J.C.B. Carvalho, T. Prinzie, **K.M. Olsen**, M. Hernández, G. Cabral, and D. Moeller (1997). Phylogenetic relationships and genetic diversity in *Manihot* species. *African Journal of Root Tuber Crops* 2: 147-149.
2. Xu, L., R. Malaviya, **K.M. Olsen**, and B.A. Jakschik (1993). Effect of culture conditions on mast cell eicosanoid synthesis. *Prostaglandins* 45: 385-398.

- Ramos, B.F., R. Qureshi, **K.M. Olsen**, and B.A. Jakschik (1990). The importance of mast cells for the neutrophil influx in immune complex-induced peritonitis in mice. *Journal of Immunology* 145: 1868-1873.

Commentaries, Book Chapters, Online Contributions and Conference Proceedings:

- Olsen, K.M. (2022). The rice pangenome branches out. *Cell Research*, in press. DOI: 10.1038/s41422-022-00699-7
- Dilipkumar, M., V. Kumar, B-K. Song, K.M. Olsen, T.-S. Chuah, S. Ahmed, and S. Qiang (2021). Weedy rice (*Oryza* spp.). Ch. 13 in: Bhagirath Chauhan (Editor), *Biology and Management of Problematic Crop Weed Species*, 1st Edition. Academic Press (Elsevier), London. 423 pp.
- Li, L.-F. and **K.M. Olsen*** (2020). Population Genomics of Weedy Crop Relatives: Insights from Weedy Rice. In: *Population Genomics: Crop Plants*, Om P. Rajora, ed. Springer Nature Switzerland AG. https://doi.org/10.1007/13836_2020_77
- Olsen, K.M.*** (2014). Cassava. In: *The Archaeology of Food: An Encyclopedia*. Mary C. Beaudry and Karen Bescherer Metheny, eds. New York: AltaMira/Rowman & Littlefield.
- Olsen, K.M.*** (2014). "The Evidence of Evolution." In: *Oxford Bibliographies in Evolution*. Ed. Jonathan B. Losos. New York: Oxford University Press. DOI: 10.1093/OBO/9780199941728-0031, <http://www.oxfordbibliographies.com>
- Gross, B. L. and **K.M. Olsen*** (2009). Evolutionary genomics of weedy rice. Ch. 6 In: *Weedy and Invasive Plant Genomics*. N. Stewart, ed. Blackwell Scientific Publishing, Oxford.
- Olsen, K.M.*** and B.A. Schaal (2006) DNA Sequence Data and Inferences on Cassava's Origin of Domestication. pp. 123-132 In *Documenting Domestication: New Genetic and Archaeological Paradigms*, M. A. Zeder *et al.*, eds. University of California Press, Berkeley, CA.
- Schaal, B.A., **K.M. Olsen**, and L.J.C.B. Carvalho (2006) Evolution, Domestication, and Agrobiodiversity in the Tropical Crop Cassava. pp. 269-284 In *Darwin's Harvest: New Approaches to the Origins, Evolution, and Conservation of Crops*, T. J. Motley *et al.*, eds. Columbia University Press, New York.
- Olsen, K.M.** and M.D. Purugganan (2004). Plant population genomics, linkage disequilibrium mapping and the genetics of adaptation. pp. 45-52 In *Molecular Genetics and Ecology of Plant Adaptation*. Proceedings of an International Workshop held December 11-13, 2002, in Vancouver, British Columbia, Canada. Q.C.B. Cronk, J. Whitton, R.H. Ree, and I.E.P Taylor (eds.). NRC Research Press, Ottawa, Ontario.
- Olsen, K.M.*** A Multilocus Assessment of Cassava's Origin of Domestication. pp. 101-118 in *Plant Evolutionary Genetics and the Biology of Weeds*. B. A. Schaal *et al.*, eds. Endemic Species Research Institute, Chi-Chi, Nantou County, Taiwan. 2004.
- Purugganan, M.D., **K.M. Olsen**, M.C. Ungerer, and J. Schmitt. Adaptive Evolution of an *Arabidopsis* Inflorescence Architecture Gene. Proceedings, International Symposium on Genetic Diversity in Plants, National Sun Yat-sen University, Kaohsiung, Taiwan, November 10-11, 2001.
- Olsen, K.M.**, M. Hernández, and B.A. Schaal (2000). A survey of DNA sequence variation in cassava and other *Manihot* species. Pp. 129-134 in L.J.C.B. Carvalho and A.M. Thro (eds.), *Proceedings of the Fourth International Scientific Meeting of the Cassava Biotechnology Network*, Salvador, Bahia, Brazil, November 3-7, 1998, Brazilian Agricultural Research Corporation – EMBRAPA.

*Manuscripts in review or in prep. (*senior or corresponding author); undergraduate authors underlined*

- Zheng, X, L. Zhong; H. Pang, F. Li; D. Lou, J. Ge; W. Fan, T. Wang, Z. Han, W. Qiao, X. Pan, Y. Zhu, J. Wang, C. Tang, X. Wang, J. Zhang, Z. Xu, S.R. Kim, A. Kohli, G. Ye, K.M. Olsen, W. Fang, Q. Yang. Integrated rice high-quality genome assemblies uncover lost genome segments and their association with morphological trait diversity during rice domestication. In review.

- Jindalouang, R., T. Pusadee, C. Maneechote, B. Rerkasem, **K.M. Olsen**, and S. Jamjod. Morphological variation in invasiveness-associated traits in Thai weedy rice (*Oryza sativa* f. *spontanea*) *In revision*.
- Griffiths, A.G.*, C.B. Anderson, D. Cui-Zhou, X.-S. Qi, B.K. Franzmayr, and **K.M. Olsen***, and W.M. Williams. Mating system evolution and inferences on the Pleistocene history of *Trifolium occidentale* in Europe. *Manuscript in prep.* (co-corresponding author)
- Olsen, K.M.***, S.J. Wright, N.J. Kooyers, J. Lampe, D.G. Wetherington, D.C. Zhou, and L.L. Small. Local through adaptive differentiation in gene copy number variants (CNVs) in white clover (*Trifolium repens* L.). *Manuscript in prep.*
- Qi, X.-S., Y. Liu, C.C. Vigueira, N.D. Young, A.L. Caicedo, Y. Jia, D.R. Gealy, and **K.M. Olsen***. Comparative QTL mapping in US weedy rice reveals pleiotropy for key growth traits. *Manuscript in prep.*

INVITED SEMINARS AND SYMPOSIA

Departmental seminars:

Instituto de Biología – UNAM, Mexico City (Dec 8, 2020); Institute of Crop Science, Chinese Academy of Agricultural Sciences, Beijing (Aug 2, 2019); Nanjing Agricultural University (March 26, 2019); Fudan University, Shanghai (March 22, 2019); Washington University (Oct 8, 2018); Zhejiang University, Hangzhou (Aug 16, 2018); Fudan University, Shanghai (April 11, 2018), Institute of Botany, Chinese Academy of Science (April 10, 2018), Chinese Academy of Agricultural Sciences, Beijing (April 9, 2018), University of Minnesota (Oct. 6, 2017), Nanjing Agricultural University (July 27, 2017), Sun Yat-sen University (July 20, 2017), Chiang Mai University (March 15, 2017), University of Arizona (Nov 24, 2015); Kansas State Univ. (June 5, 2015); University of Georgia (Feb 23, 2015); Monash University Malaysia (Feb 26, 2014); AgResearch New Zealand (Nov 7, 2013); Univ. Florida (Oct 22 and Oct 23, 2013); Univ. Illinois – Urbana Champaign (Oct 17, 2013); Iowa State (Aug 29, 2013); Univ. Illinois – Urbana Champaign (April 10, 2013); Univ. IL – Chicago (Nov 27, 2012); Univ. Mass. – Amherst (Mar 1, 2012); Univ. Wisconsin (Nov 16 and Nov 17, 2011); St. Louis University (Sep 23, 2011); Noble Foundation (June 22, 2011); Univ. Texas – Austin (March 8, 2011); Purdue Univ. (Feb 22, 2010); WU Tyson Research Center (July 9, 2009); Univ. Illinois – Urbana Champaign (Feb 25, 2009); Clemson Univ. (Feb 6, 2009); New York Univ. (Oct 18, 2007); Miami Univ. of Ohio (April 20, 2007); Iowa State Univ. (March 22, 2007); Kansas State Univ. (Feb 23, 2007); Centro Internacional de Agricultura Tropical (CIAT, Cali, Colombia) (June 7, 2006); National Rice Research Center, Stuttgart, AR (May 4, 2006); Univ. Missouri – Rolla, (May 1, 2006); St. Louis Univ. (March 10, 2006); Univ. of Missouri - St. Louis (Dec 6, 2005); Southern Illinois Univ. Edwardsville (Oct 17, 2005); Washington Univ. (Mar 2, 2004); Univ. of Oregon (Feb 11, 2004); Univ. of Arizona (Feb 23, 2004); Univ. of Pittsburgh (Feb 2, 2004); Univ. of Missouri (Jan 20, 2004); Louisiana State Univ. (Dec 4, 2003); North Carolina State Univ. (Nov 3, 2003); Universidad de los Andes, Bogotá, Colombia (June 11, 2003); Univ. of British Columbia (April 14, 2003); Univ. of North Carolina – Chapel Hill (Feb 27, 2003); National Cheng Kung Univ., Taiwan (Nov 9, 2001); Duke Univ. (Sep 21, 2000); Univ. Missouri - St. Louis (Oct 20, 1999); North Carolina State Univ. (Oct 1, 1999); Centro Internacional de Agricultura Tropical (CIAT, Cali, Colombia) (Jan 10, 1997); CENARGEN-EMPBRAPA, Brasília, Brazil (Dec 9, 1996)

Other invited talks:

- Olsen, K.M.** Fertility in Crop Evolution: Weedy Rice and Beyond. Invited speaker, *Crop Evolution Genomics & Future Agricultural Productivity* workshop. Plant and Animal Genome XXIX Conference. San Diego, CA. January 8-12, 2022. (*Conference cancelled due to pandemic.*)
- Wedger, M.J., N. Roma-Burgos, and **K.M. Olsen**. Genomic insights on recent weedy rice evolution in the southern USA. Invited colloquium speaker: *Darwins' reversals: What we now know about feralization and crop wild relatives*. Botany 2021 Meetings, July 18-23, 2021.
- Olsen, K.M.** De-domestication and Evolutionary Genomics of Weedy Rice. World Life Science Conference (WLSC 2018). Beijing, China. October 27-29, 2018.
- Olsen, K.M.** Signatures of adaptation in the genomes of US weedy rice. International Symposium for Weedy Rice. National Agriculture and Food Research Organization (NARO), Kyoto,

Japan. September 19, 2017

- Olsen, K.M.** Weedy rice and genomic insights into crop gene flow into wild and weedy relatives. Symposium speaker: Transgene Flow in Plants: Its Possible Social and Environmental Impacts. XIX International Botanical Congress, Shezhen, China. July 23-29, 2017.
- Olsen, K.M.** Whole genome sequencing provides insights on adaptation through de-domestication in weedy rice. Weedy and Invasive Plant Genomics Workshop, Plant and Animal Genome XXV Conference. San Diego, CA. January 14-18, 2017.
- Olsen, K.M.** Clover's poison pill: cyanogenesis and the genetics of local adaptation. 14th Annual Ecological Genomics Symposium, Kansas City, Missouri. October 28-30, 2016.
- Olsen, K.M.** Escaping the bonds of domestication: parallel evolution shapes the weedy rice genome. Seventh International Crop Science Congress, Beijing, China. August 14-19, 2016.
- Olsen, K.M.** Evolutionary genomics of weedy rice. PGC-Asia Plant Genomics conference. Kuala Lumpur, Malaysia. February 24-25, 2014.
- Olsen, K.M., X. Qi, C.C. Vigueira, and B.K. Song.** Evolution of weedy rice in a domesticated landscape. Domestication Genomics Workshop, Plant and Animal Genome XXII Conference. San Diego, CA. January 11-15, 2014.
- Olsen, K.M.** De-domestication and the evolution of weedy rice. Plant Genomics Conference USA. St. Louis, MO. September 23-24, 2013.
- Olsen, K.M.** Molecular origins of adaptive cyanogenesis variation in white clover. Plenary speaker, annual Meeting, Canadian Society of Plant Biologists / La Société canadienne de biologie végétale (CSPB/SCBV 2012). Edmonton, Alberta. June 25-27, 2012.
- Olsen, K.M.** Tracing the origins of adaptive variation in white clover (*Trifolium repens* L.). 8th Okazaki Biology Conference, OBC8: Speciation and Adaptation II — Environment and Epigenetics. Okazaki, Japan. March 18-23, 2012.
- Olsen, K.M.** 2011 Recipient, Jean Andrews Centennial Visiting Professorship in Tropical and Economic Botany (University of Texas at Austin, March 6-10, 2011). Genetic signatures of crop domestication in the Old World tropics. March 7, 2011.
- Olsen, K.M.** Featured symposium speaker. Genetic signatures and consequences of dual crop domestication events in the Old World tropics. *Food for Thought: 21st Century Perspectives on Ethnobotany*, Smithsonian Botanical Symposium 2010, Washington, DC, September 24-25, 2010.
- Olsen, K.M.** Keynote speaker. Tracing the origins of adaptation in plant species. 74th Annual Meeting of the American Society of Plant Biologists, Northeast Section. Adelphi University, Garden City, NY, April 16-17, 2010.
- Olsen, K.M.** Evolution of weedy rice in the USA. *6th International Rice Genetics Symposium*. International Rice Research Institute (IRRI), Manila, Philippines, November 16-19, 2009.
- Olsen, K.M., B.L. Gross, M. Reagon, Y. Jia, and A. Caicedo.** Molecular evolution of weed-adaptive traits in US red rice populations. *Molecular Evolution Symposium*. Ninth International Plant Molecular Biology (IPMB) Congress. St. Louis, MO. October 25-30, 2009.
- Olsen, K.M.** Major symposium speaker, *Darwin's Legacy: Evolution and Plant Biology*. Cyanogenesis in *Trifolium*. Joint Annual Meetings of the American Society of Plant Biologists and the Phycological Society of America. Honolulu, HI. July 18-22, 2009.
- Olsen, K.M., M. Reagon, A.L. Caicedo, B.L. Gross, Y. Jia, and S. Lee.** Origins and Evolution of Weedy Rice in the US. Weedy and Invasive Plant Genomics Workshop, Plant and Animal Genome XVII Conference. San Diego, CA. January 10-14, 2009.
- Gross, B.L., M. Reagon, A.L. Caicedo, and **K.M. Olsen.** Evolution of a Grain Color Gene and the Origins of Weedy Rice. Invited poster, 11th Annual Japanese-American Kavli Frontiers of Science Symposium, National Academy of Sciences, Arnold and Mabel Beckman Center, Irvine, CA. December 5-7, 2008.
- Olsen, K.M.** Origins and evolution of weedy rice in the US. Agricultural Weeds: Bridging the Gap Between Evolutionary Ecology and Crop Science. University of Georgia. September 11-13,

2008.

- Olsen, K.M.,** A.L. Caicedo, and Y. Jia. Evolutionary genomics of invasive weedy rice. Poster presented at Plant Genome Research Program 11th Annual Awardee Meeting, Sept. 3-5, 2008.
- Olsen, K.M.** Molecular evolution of an adaptive cyanogenesis polymorphism in white clover. Banbury Center Meeting: Genetics of Crop Domestication. Cold Spring Harbor, NY. October 14-17, 2007.
- Olsen, K.M.,** A.L. Caicedo, and Y. Jia. The evolutionary genomics of invasive weedy rice. Poster presented at Plant Genome Research Program 10th Annual Awardee Meeting, Sept. 6-7, 2007.
- Olsen, K.M.** Evolutionary genomics of rice: the impact of selection during domestication. Okazaki Biology Conference, OBC 5: Speciation and Adaptation — Ecological Genomics of Model Organisms and Beyond. Okazaki, Japan. March 11-16, 2007.
- Olsen, K.M.** *Manihot* Biodiversity. What is Next For Cassava?, ILTAB, Donald Danforth Plant Science Center. St. Louis, MO. January 30-31, 2007.
- Olsen, K.M.** The origin of glutinous rice and variation in the *Waxy* genomic region. Diversity, Management, Protection and Utilization of Local Rice Germplasm, Chiang Mai, Thailand. August 1-2, 2005.
- Olsen, K.M.** and B.A. Schaal. Genetic diversity and evolution in *Manihot* (Euphorbiaceae). XVII International Botanical Congress, Vienna, Austria. July 17-23, 2005.
- Olsen, K.M.,** S.S. Halldorsdottir, J.R. Stinchcombe, J.M. Schmitt, and M.D. Purugganan. Linkage disequilibrium mapping of *Arabidopsis* *CRY2* flowering time alleles. Society for the Study of Evolution symposium: Regulatory Genes and the Evolution of Plant Phenotype. Fort Collins, CO. June 26-30, 2004.
- Olsen, K.M.** Phylogeography and investigations of crop origins. International Symposium on Genetic Diversity of Plants. National Sun-Yat-Sen University, Kaohsiung, Taiwan. November 10-11, 2001.
- Olsen, K.M.** Phylogeography of *Manihot esculenta* and the origins of cassava. Fourth International Scientific Meeting of the Cassava Biotechnology Network, Salvador, Bahia, Brazil. November 3-7, 1998.

OTHER PRESENTATIONS AND POSTERS

- Olsen, K.M.,** D.M. Goad, S.J. Wright, M.L. Dutta, S.R. Myers, L.L. Small, and L-F. Li. Chemical defense evolution by allopolyploid speciation: dual-species origin of white clover cyanogenesis. Evolution 2021 Conference, June 21-25, 2021 (Virtual)
- Li, L.-F., Y.-L. Li, Y. Jia, A.L. Caicedo, and **K.M. Olsen**. Breaking the Bonds of Domestication: Adaptation Shapes the Weedy Rice Genome. Poster presented at 2016 American Genetics Association President's Symposium, Pacific Grove, CA. July 14-17, 2016.
- Qi, X., Y. Liu, Y. Jia, A.L. Caicedo, and **K.M. Olsen**. De-domestication and the evolutionary genomics of weedy red rice. Poster presented at SBE 2014 annual meetings, San Juan, Puerto Rico. June 8-12, 2014.
- Vigueira, C.C., W. Li, B.-K. Song, J. Davis, and **K.M. Olsen**. Genetic Diversity Of Weedy and Cultivated Rice: Models For Evolution In Agroecosystems. Oral presentation, Plant and Animal Genome XXI conference, San Diego, CA. January 12-16, 2013.
- Song, B.-K., E. Sudianto, T.-X. Neik, and **K.M. Olsen**. Malaysian Weedy Rice Shows Its True Stripes. Poster presented at the Plant and Animal Genome XXI conference, San Diego, CA. January 12-16, 2013.
- Kooyers, N.J. and **K.M. Olsen**. Stressed out: Tradeoffs corresponding to water and nutrient limitations may maintain cyanogenesis clines in white clover (*Trifolium repens* L.). Oral presentation, 97th Annual meeting of the Ecological Society of America, Portland, OR. August 5-10, 2012.

- Olsen, K.M.**, N.J. Kooyers, and L.L. Small. Recurrent gene deletions maintain adaptive cyanogenesis polymorphisms in white clover (*Trifolium repens* L.) Oral presentation, 1st Joint Congress on Evolutionary Biology, Ottawa, Canada. July 6-10, 2012.
- Kooyers, N.J., and **K.M. Olsen**. Finding the bullseye: targets of selection vary between geographically disparate cyanogenesis cline replicates in white clover (*Trifolium repens* L.). Oral presentation, 1st Joint Congress on Evolutionary Biology, Ottawa, Canada. July 6-10, 2012.
- Waselkov, K.E., **K.M. Olsen**, and B.A. Schaal. Molecular phylogenetics and weed evolution in the genus *Amaranthus* (Amaranthaceae). Oral presentation, Systematics Section/ ASPT. Botany 2012: The Next Generation, Columbus, OH. July 7-11, 2012.
- Vigueira, C., and **K.M. Olsen**. Black or white: the evolution of hull color in weedy red rice. Oral presentation, 1st Joint Congress on Evolutionary Biology, Ottawa, Canada. July 6-10, 2012.
- Gunn, B.F., C. Kulheim, M.D. Crisp, R. Peakall, M. Prebble, J. Miller, L. Baudouin, and **K.M. Olsen**. Genomic studies of the coconut (*Cocos nucifera* L.). Poster presented at the Plant and Animal Genome XX conference, San Diego, CA. January 14-18, 2012.
- Hyma, K., **K.M. Olsen**, Y. Jia, and A.L. Caicedo. Genomic structure of weedy rice. Poster presented at the Plant and Animal Genome XX conference, San Diego, CA. January 14-18, 2012.
- Song, B.K., S.M. Tam, T.-S. Chuah, A. Adilah Idris, and **K.M. Olsen**. Population genetic analysis of Malaysian weedy rice (*Oryza sativa*). Poster presented at the 9th Annual Ecological Genomics Symposium, Kansas City, Missouri. November 4-6, 2011.
- Hsu, S.-C., **K.M. Olsen**, T. Pusaddee, and B.A. Schaal. Global evidence suggests separate crop origins of weedy rice (*Oryza sativa* L.). Oral presentation, Botany 2011, St. Louis, MO. July 9-13, 2011.
- Thurber, C., **K.M. Olsen**, Y. Jia, and A.L. Caicedo. Molecular evolution of flowering time loci in U.S. weedy rice. Oral presentation, Botany 2011, St. Louis, MO. July 9-13, 2011.
- Waselkov, K.E., **K.M. Olsen**, and B.A. Schaal. How does a weed arise? Genetic evidence for the origin of the Midwestern agricultural weed *Amaranthus tuberculatus* (Amaranthaceae). Oral presentation, Botany 2011, St. Louis, MO. July 9-13, 2011.
- Kooyers, N.J. and **K.M. Olsen**. Replaying Life's Tape: determining the mechanisms underlying parallel evolution of cyanogenesis clines in white clover (*Trifolium repens* L.). Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists. Norman, OK. June 17-22, 2011.
- Waselkov, K.E., **K.M. Olsen**, and B.A. Schaal. Weeding through the evolutionary past: genetic evidence for the origin of the Midwestern agricultural weed *Amaranthus tuberculatus* (waterhemp). Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists. Norman, OK. June 17-22, 2011.
- Kooyers, N.J. and **K.M. Olsen**. Mechanisms of parallel cline evolution in introduced populations of white clover (*Trifolium repens* L.). Poster presented at the 18th Biennial Penn State Plant Biology Symposium: Plant Evolutionary Genetics and Genomics. University Park, PA. May 18-21, 2011.
- Hsu, S.-C., **K.M. Olsen**, H.S. Suh, J. Ushiki, M.M. Veloso, and B.A. Schaal. Multiple origins of weedy rice: Genomics and worldwide sampling. Poster presented at the Plant and Animal Genome XVIII conference, San Diego, CA January 15-19, 2011
- Waselkov, K.E., **K.M. Olsen**, and B.A. Schaal. Phenotypic and genetic differentiation across the range of the Midwestern agricultural weed *Amaranthus tuberculatus* (Amaranthaceae). Poster presented at the 8th Annual Ecological Genomics Symposium, Kansas City, Missouri. November 5-7, 2010.
- Kooyers, N.J. and **K.M. Olsen**. Testing predictions of clinal dynamics using a system of recurrent clines in cyanogenesis in white clover (*Trifolium repens*). Poster presented at the 8th Annual Ecological Genomics Symposium, Kansas City, Missouri. November 5-7, 2010.
- Lee, S., Y. Jia, S. Costanzo, **K.M. Olsen**, A.L. Caicedo, D.R. Gealy, and M. Jia. Evolutionary

- dynamics and structure of the rice blast resistance locus *Pi-ta* in wild, cultivated, and US weedy rice. Oral presentation, 5th International Rice Blast Conference, Little Rock, AR. August 10-14, 2010.
- Waselkov, K.E., **K.M. Olsen**, and B.A. Schaal. Genotypic differentiation across the range of the Midwestern agricultural weed *Amaranthus tuberculatus*. Poster presented at Botany 2010, Providence, RI. July 31-August 4, 2010.
- Hsu, S.-C., **K.M. Olsen**, H.K. Hsu, J. Ushiki, and B.A. Schaal. Genetic association of weedy and cultivated rice: insight from Japanese, S. Korean and US weedy rice. Poster presented at the 18th annual meeting of the Society for Molecular Biology and Evolution (SMBE), Lyon, France. July 4-8, 2010.
- Gunn, B.F., L. Baudouin, and **K.M. Olsen**. Coconut dissemination and genetic diversity. Oral presentation, Palms 2010: International Symposium of the Biology of the Palm Family, Montpellier, France. May 5-7, 2010.
- Thurber, C., **K.M. Olsen**, Y. Jia, and A.L. Caicedo. The origin and evolution of seed shattering in U.S. invasive weedy rice. Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists. Portland, OR. June 25-29, 2010.
- Olsen, K.M.**, B.L. Gross, S.-C. Hsu, M. Reagon, Y. Jia, and A.L. Caicedo. Molecular evolution of weed-adaptive traits in US red rice populations. Poster presented at the Plant and Animal Genome XVIII conference, San Diego, CA. January 9-13, 2010.
- Kooyers, N.J. and **K.M. Olsen**. Coarse-grain selection creates clinal variation in introduced populations of white clover (*Trifolium repens*). Poster presented at the 7th Annual Ecological Genomics Symposium, Kansas City, Missouri. November 13-15, 2009.
- Gunn, B.F., L. Baudouin, and **K.M. Olsen**. Independent origins of cultivated coconuts (*Cocos nucifera* L.) and human explorations in the Old World Tropics. Poster presented at the Ninth International Plant Molecular Biology (IPMB) Congress. St. Louis, MO. October 25-30, 2009.
- Gross, B.L., M. Reagon, A.L. Caicedo, and **K.M. Olsen**. Seed color in US red rice: the origin and evolution of a weedy trait. Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, Moscow, ID. June 12-16, 2009.
- Waselkov, K.E., **K.M. Olsen**, and B.A. Schaal. Population Genetics of Weed Evolution in the Genus *Amaranthus*. Poster presented at the Botany and Mycology 2009 Meetings, Snowbird, UT. July 25-29, 2009.
- Yu, G., **K.M. Olsen**, and B.A. Schaal. Evolution of the starch synthesis pathway in rice. Oral presentation, Botany and Mycology 2009 Meetings, Snowbird, UT. July 25-29, 2009.
- Olsen, K.M.**, N.J. Kooyers, and L.L. Small. Adaptive Gene Presence / Absence Polymorphisms for Cyanogenesis Occur in Multiple Clover Species (*Trifolium*, Fabaceae). Poster presented at the Ecological Genomics Symposium, Kansas City, Missouri. November 14-16, 2008.
- Gross, B.L., M. Reagon, A.L. Caicedo, and **K.M. Olsen**. Evolution of a Grain Color Gene and the Origins of Weedy Rice. Poster presented at the Ecological Genomics Symposium, Kansas City, Missouri. November 14-16, 2008.
- Olsen, K.M.** Molecular evolution of the cyanogenesis adaptive polymorphism in white clover (*Trifolium repens*). Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, Minneapolis, MN. June 20-24, 2008.
- Olsen, K.M.**, S.-C. Hsu, and L.L. Small. A gene presence / absence polymorphism controls the *Ac/ac* cyanogenesis polymorphism in white clover (*Trifolium repens* L.). Poster presented at the Ecological Genomics Symposium, Kansas City, Missouri. November 9-11, 2007.
- Olsen, K.M.**, A.L. Caicedo, and Y. Jia. Evolutionary genomics of invasive weedy rice. Poster presented at the Plant and Animal Genome XV conference, San Diego. January 13-17, 2007.

- Olsen, K.M.**, B.L. Sutherland, and L.L. Small. Molecular population genetics of a chemical defense polymorphism in white clover (*Trifolium repens* L., Fabaceae). Poster presented at the Ecological Genomics Symposium, Kansas City, Missouri. November 3-5, 2006
- Sutherland, B.L and **K.M. Olsen**. Molecular evolution of a chemical defense polymorphism in white clover (*Trifolium repens*). Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, Stony Brook, NY. June 23-27, 2006.
- Purugganan, M.D., S. McCouch, R. Nielsen, C. Bustamante, B. Gardner, A.L. Caicedo, and **K.M. Olsen**. The Evolutionary Genomics of Rice. Poster presented at the Plant and Animal Genome XII Conference, San Diego. January 10-14, 2004.
- Korves, T., **K.M. Olsen**, B. Singh, N. Reese, M. Vadeboncoeur, S. Halldorsdottir, M. Purugganan, and J. Schmitt. Genetic variation for over-winter survival in *Arabidopsis thaliana*. Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, and American Society of Naturalists, Chico, California. June 20-24, 2003.
- Olsen, K.M.** and M.D. Purugganan. Phylogeography of *Oryza sativa* using the *Waxy* gene: evidence on the origin of glutinous rice. Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, Urbana, Illinois. June 28 – July 2, 2002.
- Olsen, K.M.** and M.D. Purugganan. Molecular evolution of floral developmental genes in *Arabidopsis thaliana*. Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, American Society of Naturalists, Knoxville, Tennessee. June 26-30, 2001.
- Olsen, K.M.** and B.A. Schaal. Phylogeography of *Manihot esculenta*: evidence on the origin of cassava. Poster presented at The XVI International Botanical Congress, St. Louis, Missouri. August 1-7, 1999.
- Olsen, K.M.** Phylogeography of *Manihot esculenta* (Euphorbiaceae): on the origin of cassava. Oral presentation, Annual meetings, Society for the Study of Evolution, Society of Systematic Biologists, American Society of Naturalists, Madison, Wisconsin. June 22-27, 1999.
- Olsen, K.M.** Plant Phylogeography and *Manihot esculenta*. Joint in-house seminar series, Plant Biology Program and Population / Evolutionary Biology Program, Washington University, St. Louis, Missouri. March 24, 1998.
- Olsen, K.M.** Phylogeography in plants as illustrated in *Manihot* (Euphorbiaceae). In-house seminar series, Washington University Biology Department, St. Louis, Missouri. January 16, 1998.
- Jakschik, B.A., L. Xu, and **K.M. Olsen**. Regulation of mast cell eicosanoid synthesis by bone marrow macrophages. Poster presented at The Seventh International Conference on Prostaglandins and Related Compounds, Florence, Italy. May 28-June 1, 1990.
- Xu, L., **K.M. Olsen**, and B.A. Jakschik. Suppression of mast cell leukotriene formation by bone marrow macrophages. Poster presented at annual meetings, Federation of American Societies for Experimental Biology. FASEB Journal 4: A1145, 1990

PROFESSIONAL SOCIETIES

- American Genetic Association
- Botanical Society of America
- Genetics Society of America
- International Weed Science Society
- Society for Molecular Biology and Evolution
- Society for the Study of Evolution

HONORS AND AWARDS

- Inaugural Fellow, Washington University Institute for School Partnership, 2011
- NSF CAREER Award, 2009
- Sigma Xi, 2004
- Phi Kappa Phi, 1992

- Phi Beta Kappa, 1991
- Washington University Stalker Award in Biology, 1991

SERVICE

- Council, American Genetic Association (elected 2020-2022)

Editorial Boards:

- Journal of Heredity (Associate Editor, 2011-present)
- PLoS One (Associate Editor, 2014-present)
- Rice (Editorial Board member, 2020 – present)
- PNAS (Guest Editor - 2012, 2017, 2020)
- Molecular Ecology Special Issue Guest Editor (Resistance Evolution, 2020)
- Molecular Ecology (Editorial Review Board, 2012-present)
- BMC Genetics (Associate Editor, 2012-2017)
- Frontiers in Plant Genetics and Genomics (Review Editor, 2011-2017)
- Plant Molecular Biology Reporter (Associate Editor, 2012-2015)
- PLoS Genetics (Guest Editor - 2009, 2013, 2018)

Journal article reviewer:

Agronomy for Sustainable Development; Annales Botanici Fennici; Annals of Botany; American Journal of Botany; Archaeological and Anthropological Sciences; Australian Journal of Botany; Biochemical Genetics; BMC Genetics; BMC Genomics; BMC Plant Biology; Conservation Genetics; Crop Protection; Crop Science; Ecological Monographs; Economic Botany; EMBO Reports; Evolution; Evolutionary Applications; Evolutionary Ecology; G3 (Genes, Genomes, Genetics); Genetica; Genetical Research; Genetics; Genome; Genome Biology; Genome Research; Global Change Biology; Heredity; International Journal of Plant Sciences; Journal of Heredity; Journal of Integrative Plant Biology; Journal of Systematics and Evolution; Latin American Antiquity; Molecular Biology and Evolution; Molecular Breeding; Molecular Ecology; Molecular Phylogenetics and Evolution; Molecular Plant-Microbe Interactions; National Science Review (China); Nature Communications; Nature Genetics; Nature Plants; Nature Reviews Genetics; New Phytologist; Notices of the American Mathematical Society; Novon; PeerJ; Pest Management Science; Philippine Agricultural Scientist; Philosophical Transactions of the Royal Society B; Plant Cell; Plant Communications; Plant Genetic Resources; Plant Molecular Biology; Plant Molecular Biology Reporter; Plant Physiology; Plants, People, Planet; PLoS Genetics; PLoS ONE; Proceedings of the National Academy of Sciences USA; Proceedings of the Royal Society B; Science; Scientific Research and Essays; Taxon; Theoretical and Applied Genetics; Trends in Ecology and Evolution; Trends in Plant Science; Weed Science

- Top Reviewer for Molecular Ecology 2012: <http://www.molecularecologist.com/2013/02/mol-ecol-best-reviewers/>

Ad hoc grant reviewer:

National Science Foundation:

- DEB (Evolutionary Processes, Systematic Biology, Ecology)
- IOS (Developmental Systems, EDGE, PGRP)
- DBI: Plant Genome (TRPGR)

Czech Science Foundation (GAČR)

NWO-OCENW KLEIN (Netherlands)

National Geographic Society

Natural Environment Research Council (NERC, UK)

The Wellcome Trust (UK)

Kansas State University Ecological Genomics Institute

University of Puerto Rico Institutional Research Fund (FIPI)

USDA (ARS)

US-Israel Binational Science Foundation (BSF)

US-Israel Binational Agricultural Research & Development Fund (BARD)

NSF panels: Plant Genome Research Program; PGRP-BREAD; PGRP Reverse site-visit; Evolutionary Genetics (pre-proposals; full proposals); EDGE

USDA panels: National Institute of Food and Agriculture -Biotechnology Risk Assessment Grants (NIFA-BRAG) (3 years)

External tenure reviewer and other performance reviews:

- letter writer for 5 junior faculty at R1 universities
- external evaluator for 2 USDA-ARS Scientists (Research Position Evaluation System, RPES)

Conference organizing committees and Scientific advisory boards:

- Symposium co-chair, *Genome Biology: Structure, Function and Comparison*. Rice Genetics 8 (RG8), Singapore, October 14-17, 2018.
- Symposium co-organizer and session co-chair: Origins, domestication and dispersal. Seventh International Crop Science Congress, Beijing, China, August 14-19, 2016 .
- Advisory board, Harris World Ecology Center, UM-St. Louis (2011-2015).
- Organizing committee, 2014 Plant Genomics Congress USA, St. Louis, MO, September 11-12, 2014.
- Scientific Advisory Panel, VIRCA (Virus resistant cassava for Africa) 2014-present. Collaborative program between the Donald Danforth Plant Science Center, the Uganda National Crops Resources Research Institute, and the Kenya Agricultural Research Institute.
- Advisory board, W. L. Brown Center for Plant Genetic Resources, MO Bot. Garden (2005-2013)
- NSF Plant Genome Grant DBI-0817707, Comparative Evolutionary Genomics of Cotton, J. Wendel, PI; co-PIs: A. Paterson, A. Leshem-Ackerman, A. Gingle, J. Udall (2009-present).
- Washington University representative, Local Organizing Committee, 12th International Symposium on the Biosafety of Genetically Modified Organisms (ISBGMO), September 17-20, 2012. St. Louis, MO (2011-2012).

Public lectures:

- *Clover's Poison Pill: Cyanide, Plants and Evolution in Your Backyard*. "Science on Tap" speaker, Kirkwood Station Brewing Company, Kirkwood, MO. May 31, 2017
- Lady Bird Johnson Wildflower Center, Austin, TX. *What can DNA tell us about crop origins?* March 9, 2011.
- St. Louis Science Center, Evolution speaker series. *Clover's poison pill: cyanide and natural selection at work in your lawn*. April 24, 2010.
- Ethical Society of St. Louis, *On the sesquicentennial of Darwin's publication of On the Origin of Species*. Feb 15, 2009.
- "Science on Tap" public science forum, co-sponsored by Washington University and Schlafly Brewery, St. Louis, MO. Discussion leader following screening of documentary film "King Corn", January 30, 2008.

Other Outreach:

- Presented lecture to the Genomics Education Partnership (GEP) alumni workshop: "The Neutral Theory of Molecular Evolution and tests of selection with DNA sequences" June 13, 2020.
- Guide for "Fascinating Plants" public outreach plant walk, Missouri Botanical Garden, sponsored by the Botanical Society of America. May 18, 2015.
- Mentor, summer lab internship: Mr. Ben Nims, Maplewood High School. Summer 2015
- Mentor, summer lab internship: Mr. Chuck McWilliams, Maplewood High School. Summers 2012, 2013, 2014, 2022
- Arkansas Rice Expo 2013. Weedy rice informational poster presented to farmers and other rice production stakeholders. Stuttgart, AR. Aug 2, 2013.

- Arkansas Rice Expo 2011. Weedy rice informational poster presented to farmers and other rice production stakeholders. Stuttgart, AR. Aug 4, 2011.
- Mentor, summer lab internships: Ms. Anne Puzzo, Granby High School Biology teacher, and Mr. Bill Rosser, Fayetteville High School. Summer 2011.
- Mentor, summer lab internships, Ms. Sheryl Silverberg, Lindbergh High School Biology teacher, Summers 2010, 2011.
- Invited Speaker, 2008 Missouri Scholars Academy. Three-week summer program for 330 gifted high school juniors from across Missouri, held annually at the University of Missouri – Columbia. June 17, 2008.
- Workshop leader for BioQUEST Curriculum Consortium (NSF-funded program to support educators in undergraduate Biology curriculum development). Led Plant Genomics session, Missouri Botanical Garden, June 15, 2008.
- Speaker at Wydown Middle School (Clayton, MO); spoke to 8th grade class of Mr. Scott Mandrell on the topic of “Domestication,” May 8, 2008.
- Mentor, summer lab internships, Ms. Aimee Schulte, Mehlville High School Biology teacher, Summers 2007, 2008
- Washington University Science Outreach, Guest speaker for *Diversity of Life* (Edu 6018), course for elementary through high school teachers. Sept. 13, 2005.

Washington University Service:

Division of Biology and Biomedical Sciences (DBBS) activities

- Chair, EEPB graduate admissions committee, 2011-2017, 2019, 2021, 2022
- EEPB graduate program steering committee, 2005-present
 - Admissions committee, 2005-present
 - Qualifying exams subcommittee, 2010, 2013, 2015, 2018
- DBBS Faculty Membership Committee, 2016-2018
- EEPB graduate advisor, 2013-2016
- EEPB interim program director, Fall 2016 semester; 2018-19 Academic year
- Washington University representative, organizing committee, St. Louis Ecology, Evolution, and Conservation retreat, 2012

College of Arts and Sciences activities

- Living Earth Collaborative Advisory Committee (2022-present)
- Strategic Planning Working Group on Graduate Education (2021)

Biology Department activities

- Chair’s advisory committee, 2018-present (Joe Jez)
- Biology adjunct faculty advisory committee, 2018-present
- Faculty head for Biology undergraduate research (Bio 200/500) and Biology Honors and Research Emphasis programs, 2011-present
- Biology Undergraduate Research Committee, 2019-present
- Hamburger Lecture selection committee: 2022-present
- Genetics/Genomics faculty search committee: 2022-2023
- Chair, Urban Biology/Environmental Justice faculty search committee 2021-2022
- Junior faculty mentoring: Jonathan Myers, Rachel Penczykowski, Joshua Blodgett, Michael Landis
- Danforth Plant Science Graduate Fellowship selection committee 2022
- Spector prize for top undergraduate thesis; Chair of selection committee: 2012-2019
- Environmental Biology Major steering committee: 2015-present
- Computational Biology/Genomics faculty search committee: 2017-2018
- Chair’s advisory committee, 2017-2018 (Kathy Miller)
- Chair, faculty search committee: Computational Biology/Evolutionary Genomics, 2016-2017
- Computational Biology/Genomics faculty search committee: 2015-2016
- Mallinckrodt Professor of Plant Biology faculty search committee: 2014-2015
- Ecologist faculty search committee: 2011-2012

- Plant Biologist faculty search committee: 2010-2011
- Evolutionary Biologist faculty search committee: 2009-2010
- Biology Curriculum Implementation Committee: 2010-2011
- Spector Prize undergraduate thesis reviewer: 2009, 2010
- SURF Research Ethics training seminar: 2009, 2010
- Summer Scholars Program in Biology, selection committee: 2006, 2008, 2010
- H. Stalker award, selection committee: 2007, 2008
- Plant Biologist faculty search committee: 2006-2007
- Beckman Scholars Program, selection committee, 2007
- Prospective undergraduate "April Welcome" presenter: 2006-2012

University/College activities

- Paleoethnobotanist Faculty search committee (Anthropology Dept.): 2018-2019
- Biological Anthropologist Faculty search committee (Anthropology Dept.): 2016-2017
- Faculty Fellow, Institute for School Partnership: 2011-present
- Tree Campus USA, campus advisory committee: 2010-present
- Faculty Spotlight Speaker, 2010-11 Orientation week
- Committee on Environmental Quality: 2007, 2008

Student Advising/Mentoring

PhD Thesis committees (graduation year)

Jason Kolbe (EEPB, 2005), Sarah Walshaw (Anthropology 2005), Kuo Fang Chung (EEPB, 2006), Angela Gordon Glore (Anthropology, 2006), Huawen Lin (Plant Biol., 2006), Huifen Kuo (Plant Biol., 2006), Ben Torke (EEPB, 2006), James Beck (EEPB, 2007), Jae-Hyeok Lee (Plant Biol., 2007), Matthew Gifford (EEPB, 2008), Russell Blaine (EEPB, 2008), Joseph Jarvis (EEPB, 2008), Hyun Seok Kim (Comp. Biol., 2008), Nicholas Griffin (EEPB, 2010), Katie Hyma (EEPB, 2010), Joshua Reece (EEPB, 2010), Sarah Tucker (Plant Biol., 2010), Felipe Zapata (UM-St. Louis Biol., 2010), Guoqin Yu (EEPB, 2010), Jeanne Sheffield (Plant Biol., MA 2011), Amber Burgett (EEPB, 2011), Kyra Krakos (EEPB, 2011), Nicole Miller (EEPB, 2011), Agnes Demianski (Plant Biol., MA 2011), J. Kevin Hanselka (Anthropology, 2011), Genevieve Croft (EEPB, 2012), Betsy Engle (Genetics, 2012), Steve Kroiss (EEPB, 2012), LeAndra Luecke (Anthropology, 2012), Pu Huang (EEPB, 2013), Nicholas Kooyers (EEPB, 2013), Kate Waselkov (EEPB, 2013), Robert Spengler (Anthropology, 2013), Kathryn Reed Williams (EEPB, 2014), Wan Shi (PMB, 2015), Tracy Douglas (EEPB, 2016), Jennifer Gruhn (EEPB, 2016), Katie Zelle Mortland (EEPB, 2016), BrieAnna Langlie (Anthropology, 2016), Natalie Mueller (Anthropology, 2016), Arthur Porto (EEPB, 2016), Devin Dobias (EEPB, MA 2017), Madeline Keleher (EEPB, 2017), Xueying Li (MGG, 2018), Zheng Peng (EEPB, 2019), Alexandra Asaro (CSB, 2019), Katie Geist (EEPB, 2019), Anne Zimmerman Phillips (PMB, 2019), Rachel Lyman (EEPB, 2021), Erika Schumacher (EEPB, current), Quinn Fox (current, EEPB), Alex Liu (current, PMB)

PhD advisees

Current:

- Wen-Hsi Kuo (EEPB)
- Brock Mashburn (EEPB) (Co-advisor; Primary advisor: Christine Edwards)

Past:

- Jordan Brock (EEPB); graduated August 2021
- Emma Frawley (EEPB) (Co-advisor: Natalie Mueller, Anthropology); left with MA, Dec 2021
- David Goad (EEPB) (Co-advisor: Toby Kellogg, DDPSC); graduated May 2021
- Sara Wright (EEPB); graduated August 2019
- Saran Khumto (Chiang Mai University Thailand; coadvised; Primary advisor: Dr. Tonaphee Pusadee), graduated December 2018
- Katherine Waselkov (EEPB) (Co-advisor: B. Schaal); graduated August 2013
- Nicholas Kooyers (EEPB); graduated May 2013
- Pu Huang (EEPB) (Co-advisor; Primary advisor: B. Schaal); graduated Jan. 2013
- Marshall Wedger (EEPB); graduated May 2022
- Guoqin Yu (EEPB) (Co-advisor; Primary advisor: B. Schaal); graduated May 2010

Postdoctoral advisees and Research Scientists

- Marshall Wedger (2022-present)
- Matthew Austin (Living Earth Collaborative postdoctoral fellow) (2020-present)
- Linfeng Li (2015-2017)
- Cynthia Vigueira (2011-2013)
- Xinshuai Qi (2013-2014)
- Briana L. Gross (2007-2010)

International visiting scholars hosted

- Yu Feng (Visiting PhD student), Zhejiang University, Hangzhou, China (Nov 2019 – Oct 2020)
- Dr. Limei Zhong, Nanchang University (Oct 2018-Sep 2019) (Visiting postdoctoral fellow)
- Dr. Jie Qiu, Zhejiang University (March 2018-Feb. 2019) (Visiting postdoctoral fellow)
- Dr. Xiaoming Zheng, Chinese Academy of Agricultural Science (Oct 2016-Oct 2017) (Visiting postdoctoral fellow)
- Saran Khumto, Chiang Mai University, Thailand (March-Nov 2016) (PhD student coadvisee)
- Yongxia Cui, Sichuan Agricultural University, China (Oct 2014 – Oct-2016) (visiting PhD student)
- Prof. Song Beng Kah, Monash University, Malaysia (Feb-Nov 2011, Feb-June 2012, Nov. 2012-Feb. 2013, April-June 2016)
- Dr. Weimin Dai, Nanjing Agricultural University, China (Feb 2015-Jan 2016)
- Dr. Linfeng Li, Northeast Normal University, Changchun, Jilin China (July 2014 – June 2015)
- Mohammad Abid Khan, Hazara University, Mansehra, Pakistan (Jan-June 2015) (visiting PhD student)
- Angélica Cervantes, UNAM Mexico (Summer 2010) (visiting PhD student)
- Laura Trejo, UNAM Mexico (Fall 2010) (visiting PhD student)
- Prof. Ikuo Nakamura, Chiba University, Japan (Summer 2009)
- Bee Gunn, Missouri Botanical Garden and Australian National University (2007-2008)

Graduate student rotations

Cheyenne Anderson (PMB), Antonio Brazelton (PMB), Jordan Brock (EEPB), Emma Frawley (EEPB), Ashley Galant (PMB), Katie Geist (EEPB), David Goad (EEPB), Jennifer Gruhn (EEPB), Doug Heigl (PMB), Shih-Chung Hsu (EEPB), Claudia Henriquez (EEPB), Pu Huang (EEPB), Nicholas Kooyers (EEPB), Wen-Hsi Kuo (EEPB), Rachel Lyman (EEPB), Nicole Miller (EEPB), Anne Zimmerman Phillips (PMB), Joshua Reece (EEPB), Kathryn Reed (EEPB), Wan Shi (Plant Biology), Brittany Sutherland (EEPB), Kevin Stiles (EEPB), Kate Waselkov (EEPB), Marshall Wedger (EEPB), Sara Jeanes Wright (EEPB)

Undergraduate research mentor (Bio 200/500)

Lauren Smith (2006), Tien-Chun Chen (2007), Joshua Levy (2007-2008), Graham Caulkins (2009), Patrick Carrera (2011), Joseph Lampe (2010-11, Honors Thesis), Sharon Jia (2012), Wantong Li (2012), Alexis Boleda (2012), Jennie Keum (2013), Daniel Cui Zhou (2013-2016), Akash Oza (2016-18), Julien Weinstein (2016-2017), Brenda Alvarado (2017), Maya Dutta (2017-19), Amy Lee (2017-19), Alex Mahmoud (2017-18), Eimear Cunningham (2020-2021), Nick Ho (2021-2022), Sophie Dorosin (2021-22), Evan Xiao (2022)

Other undergraduate mentoring (Summer interns & paid research positions)

Faith Steffens (2006), Erica Cole (2007), Karl Skare (2008), Graham Caulkins (2009), Cara Nickolaus (2009), David Vera-Vasquez (2009), Nathan Regenold (2010), Amal Al-Lozi (2010), Amy Wen (2011), Jeremy Davis (2012), Lily Gage (2012), Drew Wetherington (2013), Ignacio Rabadan (2013), Noah Feuer (2016), Amy Kuhle (2016), Julien Weinstein (2016), Bailee Warsing (2016), Akash Oza (2017), Brenda Alvarado (2017), Maya Dutta (2017), August Gremaud (2017), Alex Mahmoud (2017), Samantha Myers (2017), Erin Rowland (2017), Jessica Rehmann (2018-2019), Grace Li (2019-2020), Mason Leffler (2021-2022),

High school student mentoring

Solida Wise (2006), Asha Clark (2011), Drew Wetherington (2011-2012), India Riggins (2012), Zach Arias (2013), Sydney Ties (2016), Lydia Young (2016), Eileen Kosola (2017-18), Julia Beliz (2017-18)

TEACHING ACTIVITIES

Semester	Course	Responsibilities
Fall 2006	Evolution (Bio 3501), 4 units	Coursemaster; 50 undergraduates
Spring 2007	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 6 graduate students
Spring 2007	Seminar in Plant Biology (Bio 572), 3 units	Discussion leader, week of April 2; 4 graduate students
Summer 2007	Evolution (U29-525), 2 units	Coursemaster (with Barbara Schaal); 33 graduate students
Fall 2007	Evolution (Bio 3501), 4 units	Coursemaster; 47 undergraduates
Spring 2008	Seminar in Plant Biology (Bio 572), 3 units	Discussion leader, March 7; 7 graduate students
Spring 2008	Ethics and Research Science (Bio 5011)	Coursemaster (with Barbara Schaal), 10 graduate students
Summer 2008	Evolution (U29-525), 2 units	Coursemaster (with Barbara Schaal); 33 graduate students
Fall 2008	Evolution (Bio 3501), 4 units	Coursemaster; 67 undergraduates
Spring 2009	Seminar in Plant Biology (Bio 572), 3 units	Discussion leader, Jan 30; 11 graduate students
Summer 2009	Evolution (U29-525), 2 units	Coursemaster, 32 graduate students
Fall 2009	Evolution (Bio 3501), 4 units	Coursemaster; 61 undergraduates
Spring 2010	Seminar in Plant Biology (Bio 572), 3 units	Discussion leader, Feb 19; 5 graduate students
Fall 2010	Evolution (Bio 3501), 4 units	Coursemaster; 56 undergraduates
Spring 2011	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 8 graduate students
Fall 2011	Evolution (Bio 3501), 4 units	Coursemaster; 51 undergraduates
Fall 2011	University College Dean's Honors Seminar: Critical Thinking and Research (GS 230)	Faculty lecturer, Oct. 12; 8 students
Spring 2012	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 7 graduate students
Summer 2012	Evolution (U29-525), 2 units	Coursemaster, 13 graduate students
Fall 2012	Evolution (Bio 3501), 4 units	Coursemaster; 58 undergraduates
Spring 2013	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 8 graduate students
Spring 2013	Ethics and Research Science (Bio 5011)	Coursemaster (with David Queller), 6 graduate students
Spring 2014	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 9 graduate students

Summer 2014	Evolution (U29-525), 2 units	Coursemaster, 16 graduate students
Fall 2014	Evolution (Bio 3501), 4 units	Coursemaster, 72 undergraduates
Spring 2015	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 8 graduate students
Fall 2015	Evolution (Bio 3501), 4 units	Coursemaster, 67 undergraduates
Summer 2016	Evolution (U29-525), 2 units	Coursemaster, 32 graduate students
Fall 2016	Evolution (Bio 3501), 4 units	Coursemaster, 54 undergraduates
Spring 2017	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 12 graduate students
Fall 2017	Evolution (Bio 3501), 4 units	Coursemaster, 65 undergraduates
Spring 2018	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 6 graduate students
Summer 2018	Evolution (U29-525), 2 units	Coursemaster, 28 graduate students
Summer 2018	Topics in Evolutionary Genetics	Coursemaster, 25 graduate students; (Nanjing Agricultural University)
Fall 2018	Evolution (Bio 3501), 4 units	Coursemaster, 61 undergraduates
Spring 2019	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 6 graduate students
Fall 2019	Evolution (Bio 3501), 4 units	Coursemaster, 54 undergraduates
Spring 2020	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 11 graduate students
Fall 2021	Evolution (Bio 3501), 4 units	Coursemaster, 42 undergraduates
Spring 2022	Seminar in Population Biology (Bio 580), 3 units	Coursemaster; 15 graduate students
