

## CURRICULUM VITAE

DAVID A. MOELLER

Department of Plant and Microbial Biology, University of Minnesota

### ACADEMIC RANK

Professor, Plant and Microbial Biology Department

Graduate Faculty Appointment in Plant and Microbial Biology & Ecology, Evolution, and Behavior

### EDUCATION

Degree	Institution	Date Degree Granted
B.A.	Washington University, <i>Summa cum laude</i> Biology, with honors	1997
Ph.D.	Cornell University Ecology and Evolutionary Biology	2003

### POSITIONS

2022 - present	Professor, Department of Plant and Microbial Biology
2015 - present	Associate Professor, Department of Plant and Microbial Biology
2015 - 2018, 2020-2021	Director of Undergraduate Studies, Department of Plant and Microbial Biology
2009- 2015	Assistant Professor, Department of Plant Biology
2008 - 2009	Assistant Professor, Department of Genetics, University of Georgia
2004 - 2007	Postdoctoral Associate, University of Minnesota, Dept. of Plant Biology

### Honors and Awards

Robert H. Whittaker Award, Cornell University

Outstanding Teaching Assistant Award, College of Agriculture and Life Sciences, Cornell University

Graduate Teaching Assistant Award, Dept. of Ecology and Evolutionary Biology, Cornell University

Phi Beta Kappa, elected, Washington University

Sigma Xi Honor Society, elected, Washington University

*Summa cum laude*, Honors in Biology, Washington University

Young Botanist Award, Botanical Society of America

Howard Hughes Undergraduate Research Fellowship, Washington University

### GRANTS

#### External Sources

11. 2018 –2022, Principal Investigator (Yaniv Brandvain, Co-PI)

National Science Foundation

The Role of Mating System Divergence in Plant Speciation

\$993,239

10. 2018 –2023, Principal Investigator (Monica Geber, Co-PI; Vincent Eckhart, Co-PI)

National Science Foundation

Evolutionary Demography – The Contribution of Adaptation and Environment to Population Dynamics, Range Size, and Niche Width

\$449,701

9. 2019 – 2022, Principal Investigator  
Legislative-Citizen Commission on Minnesota Resources  
Improved detection and future management of leafy spurge and common tansy using remote sensing, mechanistic species distribution models, and landscape genomics  
\$422,769
8. 2016 –2020, Co-Principal Investigator (Lauren Sullivan, PI; Allison Shaw, Co-PI)  
Legislative-Citizen Commission on Minnesota Resources  
Measuring Prairie Fragment Connectivity: Pollen and Seed Dispersal  
\$556,000
7. 2017 –2019, Principal Investigator (John Benning, Co-PI)  
National Science Foundation  
Dissertation Improvement Grant: Biotic Interactions and the Geographic Range Limit of *Clarkia xantiana* Across a Complex Environmental Gradient  
\$19,921
6. 2016 –2019, Principal Investigator (Peter Tiffin, Co-PI)  
Legislative-Citizen Commission on Minnesota Resources  
Climate Change and Range Expansion of Invasive Plants  
\$209,263
5. 2013 –2018, Co-Principal Investigator (Monica Geber, PI; Vincent Eckhart, Co-PI)  
National Science Foundation  
LTREB: Evolutionary Demography – The Contribution of Adaptation and Environment to Population Dynamics, Range Size, and Niche Width  
\$448,390
4. 2010 –2014, Principal Investigator (sole PI)  
National Science Foundation  
The Role of Natural Selection in Plant Speciation: A Test of the Reinforcement Hypothesis in *Clarkia*  
\$495,431
3. 2011 –2013, Principal Investigator  
Capitol Region Watershed District  
Sarita Wetland Native Plant Restoration: Re-Establishing Native Plant Communities in A Degraded Wetland on the University of Minnesota Campus  
\$8,800
2. 2005 –2010 Co-PI, functionally (Monica Geber, PI; Co-PIs: Vincent Eckhart, Peter Tiffin)  
National Science Foundation  
Collaborative Research: Ecological and Evolutionary-Genetic Limits to Range Expansion  
\$780,122
1. 2001 –2003, Co-Principal Investigator (Monica Geber, PI)  
National Science Foundation  
DDIG: Ecological Causes of the Evolution of Self-Pollination  
\$13,000

**7 REU and ROA Supplements to National Science Foundation Awards (\$74,241)**

## University Sources

4. 2019 – 2020, Principal Investigator: Institute on the Environment Mini Grant (with J. Benning and A. Gorton) Backyard Science: Urban conservation led by citizen scientists  
\$2720
3. 2012 – 2014, Principal Investigator (sole PI): John Hall Memorial Research Award  
Evolution of Species' Distributions in Response to Historical and Contemporary Climate  
\$17,325
2. 2012-2014, Principal Investigator (sole PI): UMN Grant-In-Aid  
Evolution of Species' Distributions in Response to Historical and Contemporary Climate  
\$30,062
1. 2009, Principal Investigator (sole PI): University of Georgia Grant-In-Aid  
Ecological Genetics of Adaptation to Climate Change Across A Latitudinal Gradient  
\$10,129

## PUBLICATIONS

(\*graduate student, †undergraduate author)

## Refereed Journal Articles

52. Sianta, S.A., S. Peischl, D.A. Moeller, & Y. Brandvain. Genetic load may increase or decrease with selfing depending upon the recombination environment. *Evolution*, in press.
51. Gorton, A.J.\*, J.W. Benning, P. Tiffin, & D.A. Moeller. 2022. The spatial scale of adaptation in a native annual plant and its implications for responses to climate change. *Evolution*, in press.
50. Lake, T.A\*., R.D. Briscoe Runquist, & D.A. Moeller. 2022. Deep learning detects invasive plant species across complex landscapes using Worldview-2 and PlanetScope satellite imagery. *Remote Sensing in Ecology and Conservation*. doi.org/10.1002/rse2.288.
49. Mueller, T.\*, E. Karlsen-Ayala, D.A. Moeller, & J. Bellemare. 2022. Of mutualism and migration: Will interactions with novel ericoid mycorrhizal communities help or hinder northward *Rhododendron* range shifts? *Oecologia* 198:839-852.
48. Erlandson, S.K\*., J. Bellemare, & D.A. Moeller. 2021. Limited range-filling among endemic forest herbs of Eastern North America and its implications for conservation with climate change. *Frontiers in Ecology and Evolution* 9:751728.
47. Benning, J.W.\* , & D.A. Moeller. 2021. Microbes, mutualism, and range margins: testing the fitness consequences of soil microbial communities across and beyond a native plant's range. *New Phytologist* 229:2886-2900.
46. Benning, J.W.\* , & D.A. Moeller. 2021. Plant-soil interactions limit lifetime fitness outside a native plant's geographic range margin. *Ecology* 102:e03254.
45. Briscoe Runquist, R.D., T.A. Lake\*, & D.A. Moeller. 2021. Improving predictions of range expansion for invasive species using joint species distribution models and surrogate co-occurring species. *Journal of Biogeography* 48:1693-1705.
44. Kostanecki, A.†, A.J. Gorton\*, & D.A. Moeller. 2021. An urban-rural spotlight: evolution at small spatial scales among urban and rural populations of common ragweed. *Journal of Urban Ecology* 7:doi.org/10.1093/jue/juab004.
43. Sullivan, L.L., K. Sperry, M. Michalska-Smith, D.A. Moeller, & A.K. Shaw. 2021. Consequences of ignoring dispersal variation in network models for landscape connectivity. *Conservation Biology* 35:944-954.

42. Lake, T.A.\*, R.D. Briscoe Runquist, & D.A. Moeller. 2020. Predicting range expansion of invasive species: pitfalls and best practices for obtaining biologically realistic projections. *Diversity and Distributions* 26:1767–1779.
41. Ruane, L., S. Magnum, K.W. Horner, & D.A. Moeller. 2020. The opportunity for outcrossing varies across the geographic range of the primarily selfing *Clarkia xantiana* ssp. *parviflora*. *American Journal of Botany* 107:1198-1207.
40. Hämälä, T., A.J. Gorton\*, D.A. Moeller, & P. Tiffin. 2020. Pleiotropy facilitates local adaptation to distant optima in common ragweed (*Ambrosia artemisiifolia*). *PLoS Genetics* 16:e1008707.
39. Briscoe Runquist R.D., A.J. Gorton\*, J.B. Yoder, N.J. Deacon, J.J. Grossman, S. Kothari, M.P. Lyons, S.N. Sheth, P. Tiffin, & D.A. Moeller. 2020. Context dependence of local adaptation to abiotic and biotic environments: a quantitative and qualitative synthesis. *American Naturalist* 195: 412-431. \*Highlighted in PNAS Front Matter
38. Benning, J.W.\*, & D.A. Moeller. 2019. Maladaptation beyond a geographic range limit driven by antagonistic and mutualistic biotic interactions across an abiotic gradient. *Evolution* 73: 2044-2059.
37. Gorton, A.J.\*, P. Tiffin, & D.A. Moeller. 2019. Does adaptation to historical climate shape plant responses to future rainfall patterns? A rainfall manipulation experiment with common ragweed. *Oecologia* 190:941-953.
36. Benning, J.W.\*, M.A. Geber, V.M. Eckhart, & D.A. Moeller. 2019. Biotic interactions limit the geographic range of an annual plant: herbivory and phenology mediate fitness beyond a range margin. *American Naturalist* 193:786-797.
35. Briscoe Runquist, R.D., T. Lake\*, P. Tiffin, & D.A. Moeller. 2019. Species distribution models predict late but not early stages of the invasion process for Palmer amaranth, a native invader and agricultural pest. *Scientific Reports* 9:2426.
34. Hargreaves, A.L., E. Suárez, K. Mehlreter, I. Myers-Smith, S.E. Vanderplank, H.L. Slinn, Y. Vargas, S. Haeussler, S. David, J. Muñoz, R.C. Almazán-Núñez, D. Loughnan, J.W. Benning\*, D.A. Moeller, J.F. Brodie, & P.A. Morales. 2019. Seed predation increases from the Arctic to the Equator and from high to low elevations. *Science Advances* 5:eaau4403.
33. Bolin, L.G.†, J.W. Benning\*, & D.A. Moeller. 2018. Mycorrhizal interactions do not influence plant-herbivore interactions in populations of *Clarkia xantiana* ssp. *xantiana* spanning from center to margin of the geographic range. *Ecology & Evolution* 8:10743–10753.
32. Gorton, A.J.\*, D.A. Moeller, & P. Tiffin. 2018. Little plant, big city: a test of adaptation to urban environments in common ragweed (*Ambrosia artemisiifolia*). *Proceedings of the Royal Society of London B* 285:20180968.
31. Pironen, S., J. Villellas, W. Thuiller, V.M. Eckhart, M.A. Geber, D.A. Moeller, & M.B. García. 2018. The “Hutchinsonian niche” as an assemblage of demographic niches: implications for species geographic ranges. *Ecography* 41:1103-1113.
30. Moeller, D.A., R.D. Briscoe Runquist, A.M. Moe, M.A. Geber, C. Goodwillie, P.-O. Cheptou, C.G. Eckert, E. Elle, M.O. Johnston, S. Kalisz, R.H. Ree, R.D. Sargent, M. Vallejo-Marin, & A.A. Winn. 2017. Global biogeography of mating system variation in seed plants. *Ecology Letters* 20:375-384.
29. Briscoe Runquist, R.D., M.A. Geber, M. Pickett-Leonard†, & D.A. Moeller. 2017. Mating system evolution under strong pollen limitation: Evidence of disruptive selection through male and female fitness in *Clarkia xantiana*. *American Naturalist* 189:549-563.
28. Pettengill, J.B., R.D. Briscoe Runquist, & D.A. Moeller. 2016. Mating system divergence affects the distribution of sequence diversity within and among populations of recently diverged subspecies of *Clarkia xantiana* (Onagraceae). *American Journal of Botany* 103:99-109.

27. Briscoe Runquist, R.D., E. Chu†, J.L. Iverson†, J.C. Kopp†, & D.A. Moeller. 2014. Rapid evolution of reproductive isolation between incipient outcrossing and selfing *Clarkia* species. *Evolution* 68:2885-2900.
26. Gould, B., D.A. Moeller, V.M. Eckhart, P. Tiffin, & M.A. Geber. 2014. Local adaptation and range boundary formation in response to complex environmental gradients across the geographic range of *Clarkia xantiana* ssp. *xantiana*. *Journal of Ecology* 102:95-107.
25. Briscoe Runquist, R.D. & D.A. Moeller. 2014. Floral and mating system divergence in secondary sympatry: testing an alternative hypothesis to reinforcement in *Clarkia*. *Annals of Botany* 100:1916-1921.
24. Briscoe Runquist, R.D. & D.A. Moeller. 2013. Resource reallocation does not influence estimates of pollen limitation or reproductive assurance in *Clarkia xantiana* ssp. *parviflora* (Onagraceae). *American Journal of Botany* 100:1916-1921.
23. Pettengill, J.B., & D.A. Moeller. 2012. Phylogeography of speciation: allopatric divergence and secondary contact between outcrossing and selfing *Clarkia*. *Molecular Ecology* 21:4578-4592.
22. Pettengill, J.B., & D.A. Moeller. 2012. Tempo and mode of mating system evolution between incipient *Clarkia* species. *Evolution* 66:1210-1225.
21. Moeller, D.A., M.A. Geber, V.M. Eckhart, & P. Tiffin. 2012. Reduced pollinator service and elevated pollen limitation at the geographic range limit of an annual plant. *Ecology* 93:1036-1048.
20. Winn, A.A., E. Elle, S. Kalisz, P.-O. Cheptou, C.G. Eckert, C. Goodwillie, M.O. Johnston, D.A. Moeller, R.H. Ree, R.D. Sargent, & M. Vallejo-Marin. 2011. Analysis of inbreeding depression in mixed mating plants provides evidence for selective interference and stable mixed mating. *Evolution* 65:3339-3359.
19. Moeller, D.A., M.A. Geber, & P. Tiffin. 2011. Population genetics and the evolution of geographic range limits in an annual plant. *American Naturalist* 178:S44-S61.
18. Eckhart, V.M., M.A. Geber, W.F. Morris, E.S. Fabio, P. Tiffin, & D.A. Moeller. 2011. The geography of demography: Long-term demographic studies and species distribution models reveal a species border limited by adaptation. *American Naturalist* 178:S26-S43.
17. Eckhart, V.M., I. Singh, A.M. Louthan, A.J. Keledjian, A. Chu, D.A. Moeller, & M.A. Geber. 2010. Plant-soil water relations and the species border of *Clarkia xantiana* ssp. *a* (Onagraceae). *International Journal of Plant Sciences* 171: 749-760.
16. Goodwillie, C., R. Sargent, C.G. Eckert, E. Elle, M.A. Geber, M.O. Johnston, S. Kalisz, D.A. Moeller, R.H. Ree, M. Vallejo-Marin, & A. Winn. 2010. Correlated evolution of mating system and floral display traits in flowering plants and its implications for the distribution of mating system variation. *New Phytologist* 185: 311-321.
15. Eckert, C.G., S. Kalisz, M.A. Geber, R. Sargent, E. Elle, P.-O. Cheptou, C. Goodwillie, M.O. Johnston, J.K. Kelly, D.A. Moeller, E. Porcher, R.H. Ree, M. Vallejo-Marin, & A. Winn. 2010. Plant mating systems in a changing world. *Trends in Ecology & Evolution* 25: 35-43.
14. Johnston, M.O., E. Porcher, P.-O. Cheptou, C.G. Eckert, E. Elle, M.A. Geber, S. Kalisz, J.K. Kelly, D.A. Moeller, M. Vallejo-Marin, & A. Winn. 2009. Correlations among fertility components can maintain mixed mating in plants. *American Naturalist* 173: 1-11.
13. Moeller, D.A. & P. Tiffin. 2008. Geographic variation in adaptation at the molecular level: A case study of plant immunity genes. *Evolution* 62: 3069-3081.
12. Moeller, D.A., M.I. Tenailon, & P. Tiffin. 2007. Population structure and its effects on patterns of nucleotide polymorphism in teosinte (*Zea mays* ssp. *parviglumis*). *Genetics* 176: 1799-1809.
11. Tiffin, P. & D.A. Moeller. 2006. Molecular evolution of plant immune system genes. *Trends in Genetics* 22: 662-670.
10. Moeller, D.A. 2006. Geographic structure of pollinator communities, reproductive

- assurance, and the evolution of self-pollination. *Ecology* 87: 1510-1522.
9. Wheelwright, N.T., E. Dukeshire, J. Fontaine, S. Gutow, D.A. Moeller, J.G. Schuetz, T.M. Smith, S. Rodgers, & A.G. Zink. 2006. Pollinator limitation, autogamy, and minimal inbreeding depression in insect-pollinated plants on a boreal island. *American Midland Naturalist* 155:19-38.
  8. Moeller, D.A. & P. Tiffin. 2005. Genetic diversity and the evolutionary history of plant immunity genes in two species of *Zea*. *Molecular Biology and Evolution* 22: 2480-2490.
  7. Moeller, D.A. & M.A. Geber. 2005. Ecological context of the evolution of self-pollination in *Clarkia xantiana*: population size, plant communities, and reproductive assurance. *Evolution* 59: 786-799.
  6. Moeller, D.A. 2005. Pollinator community structure and sources of spatial variation in plant-pollinator interactions in *Clarkia xantiana* ssp. *xantiana*. *Oecologia* 142: 28-37.
  5. Moeller, D.A. 2004. Facilitative interactions among plants via shared pollinators. *Ecology* 85: 3289-3301.
  4. Moeller, D.A. & B.A. Schaal. 1999. Genetic relationships among Native American maize accessions of the Great Plains assessed by RAPDs. *Theoretical and Applied Genetics* 99: 1061-1067.
  3. Schaal, B.A., L.J.C.B. Carvalho, T. Prinzie, K. Olsen, M. Hernandez, G. Cabral, & D.A. Moeller. 1997. Phylogenetic relationships and genetic diversity in *Manihot* species. *African Journal of Root and Tuber Crops* 2: 147-149.

#### Book Chapters

2. Bellemare, J. & **D.A. Moeller**. 2014. Climate change and the herbaceous layer of temperate deciduous forests. in. F.S. Gilliam, ed., *The Herbaceous Layer in Forests of Eastern North America* (2<sup>nd</sup> ed.), pp. 460-480. Oxford University Press.
1. Geber, M.A. & **D.A. Moeller**. 2006. Pollinator responses to plant communities and implications for reproductive character evolution; in L.D. Harder and S.C.H. Barrett, eds. *Ecology and Evolution of Flowers*, pp. 102-119. Oxford University Press.

#### TEACHING

##### University of Minnesota

- Fall 2011 - 2020 PMB3007W, Plant, Algal, and Fungal Diversity and Adaptation
- Fall 2020 - 2021 PMB8901, Preparation of Research Proposals
- Fall 2011 PBS 8081, Integrative Plant Biology – Connecting Molecules to Ecosystems
- Fall 2010 PBIO 4321, Minnesota Flora

##### University of Georgia

- Fall 2009 GENE 3000, Evolutionary Biology
- Fall 2008 GENE 3000, Evolutionary Biology
- Fall 2008 GENE 4950, Senior Seminar in Genetics
- Fall 2008 FRES 1010, Freshman Seminar in Biology

## ADVISING AND MENTORING

### Graduate Students

#### *Doctoral Students (current)*

1. Aidan Harrington (2021 - present)
2. Brooke Kern (2019 - present)
3. Thomas Lake (2018 - present)
4. Taryn Mueller (2018 - present)

#### *Doctoral Students (completed)*

1. John Benning (2019)
2. Amanda Gorton (2019) (co-advised with P. Tiffin)

#### *Masters Students (completed)*

1. Stephanie Erlandson (2018)

#### *Doctoral Committees*

- |                              |                         |
|------------------------------|-------------------------|
| 1. Naven Narayanan (current) | 16. Marta Lyons         |
| 2. Lucy Schroeder (current)  | 17. Erin Treiber        |
| 3. Rachel Pain (current)     | 18. Amber Eula-Nashoba  |
| 4. Thomas Radomski (current) | 19. Derek Nedveck       |
| 5. Mara Demers               | 20. Ana Gonzales        |
| 6. Kelsey Peterson           | 21. Michael Nelson      |
| 7. Alexander Harkness        | 22. Mohamed Yakub       |
| 8. Naomi Rushing             | 23. Zhou Fang           |
| 9. Josh Havill               | 24. Brendan Epstein     |
| 10. Rebekah Mohn             | 25. John Stanton-Geddes |
| 11. German Gutierrez         | 26. Cecile Deen         |
| 12. Anthony Schmitt          | 27. Louisa Staton       |
| 13. Nicholas Goldsmith       | 28. Tina Bell           |
| 14. Christina Smith          | 29. Scott Small         |
| 15. Beth Fallon              |                         |

### Post-doctoral Associates Supervised

1. Lauren Carley (10/2020 – present)
2. Shelley Sianta (1/2020 – present, primarily advised by Y. Brandvain)
3. John Benning (9/2019 – 9/2020)
4. Ryan Briscoe Runquist (3/2012—present)
5. Lauren Sullivan (7/2016 – 1/2019, coadvised with A. Shaw);  
Current position: Assistant Professor, U. of Missouri, Columbia, Division of Biological Sciences
6. Annika Moe (9/2012—8/2015);  
Current position: Education Program Specialist, CCAPS, U. of Minnesota
7. James Pettengill (8/2010—8/2011);  
Current position: Statistician/Bioinformatics, Whole Genome Sequencing Program, Center for Food Safety and Applied Nutrition, Food and Drug Administration, U.S.A.

### Research Technicians Supervised

1. Zachary Radford (9/2016 – present)
2. Katharine Wilson (1/2016 – 5/2016)
3. Erica Beckman (5/2010 – 12/2010)
4. Justin Iverson (5/2010 – 3/2013)
5. Raven Bier (4/2009-2010) (U. of Georgia)

### Undergraduate Researchers (†first or co-authors; \*honors thesis)

- |                      |                               |
|----------------------|-------------------------------|
| 1. Yubin Choi        | 16. Soham Shah*               |
| 2. Gabe Berken       | 17. Rebecca Hanson            |
| 3. Declan O'Leary    | 18. Michael Pickett-Leonard*† |
| 4. Labiba Mahmud     | 19. Eric Chu*†                |
| 5. Katherine Hallada | 20. Victoria Ukatu            |
| 6. Alexai Faulkner   | 21. Katie Tuininga            |
| 7. Isaac Olson       | 22. Kelia Axler               |
| 8. Eric Bakken       | 23. Bailey Kimbel             |
| 9. Will Stone        | 24. Jason Kopp†               |
| 10. Adam Kostanecki† | 25. Marta Lyons               |
| 11. Sarah Tran       | 26. Erica Beckman             |
| 12. Joo Yoon Kim     | 27. Justin Iverson†           |
| 13. Zachary Radford  | 28. Alexandre Wang            |
| 14. Thomas Lake†     | 29. Chelsea Jones             |
| 15. Lana Bolin†      | 30. Rebecca Carter            |

### Service To The Discipline

#### Editorships

Associate Editor for *Evolution* (2014-2016)

#### Journals For Which I Have Reviewed

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| 1. <i>American Journal of Botany</i>       | 17. <i>Heredity</i>                                |
| 2. <i>American Midland Naturalist</i>      | 18. <i>International Journal of Plant Sciences</i> |
| 3. <i>American Naturalist</i>              | 19. <i>Journal of Biogeography</i>                 |
| 4. <i>Annals of Botany</i>                 | 20. <i>Journal of Ecology</i>                      |
| 5. <i>Biological Invasions</i>             | 21. <i>Journal of Evolutionary Biology</i>         |
| 6. <i>Botany</i>                           | 22. <i>Molecular Ecology</i>                       |
| 7. <i>Ecological Monographs</i>            | 23. <i>Molecular Genetics &amp; Genomics</i>       |
| 8. <i>Ecology</i>                          | 24. <i>Molecular Phylogenetics &amp; Evolution</i> |
| 9. <i>Ecology Letters</i>                  | 25. <i>Nature Climate Change</i>                   |
| 10. <i>Evolution</i>                       | 26. <i>Nature Communications</i>                   |
| 11. <i>Evolution Letters</i>               | 27. <i>Nature Plants</i>                           |
| 12. <i>Evolutionary Biology</i>            | 28. <i>New Phytologist</i>                         |
| 13. <i>Evolutionary Ecology</i>            | 29. <i>Oecologia</i>                               |
| 14. <i>Functional Ecology</i>              | 30. <i>Oikos</i>                                   |
| 15. <i>Global Change Biology</i>           | 31. <i>Plant Biology</i>                           |
| 16. <i>Global Ecology and Biogeography</i> | 32. <i>Plant Species Biology</i>                   |



33. *PLoS Biology*
34. *PLoS Genetics*
35. *PLoS One*
36. *Proceedings of the National Academy of Sciences USA*
37. *Proceedings of the Royal Society of London B*
38. *Rhodora*
39. *Scientific Reports*
40. *Trends in Plant Science*
41. *Wetlands*