

**SHANNON LYNN DATWYLER**  
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## **EDUCATION:**

Ph.D. 2001. The Ohio State University; Department of Evolution, Ecology and Organismal Biology

B.A. 1995. Willamette University (Biology)

## **POSITIONS HELD:**

### Administrative:

*Interim Associate Dean (August 2019-present)*

College of Natural Sciences and Mathematics, California State University, Sacramento

*Department Chair (August 2016-July 2019)*

Department of Biological Sciences, California State University, Sacramento

*Interim department chair (January 2016-August 2016)*

Department of Biological Sciences, California State University, Sacramento

*Assistant Department Chair (August 2015-December 2015)*

Department of Biological Sciences, California State University, Sacramento

### Academic:

*Professor (September 2015-present)*

Department of Biological Sciences, California State University, Sacramento

*Associate Professor (September 2010-August 2015)*

Department of Biological Sciences, California State University, Sacramento

*Assistant Professor (August 2004-August 2010)*

Department of Biological Sciences, California State University, Sacramento

*Postdoctoral Research Associate (June 2002-August 2004)*

Department of Plant Biology, University of Minnesota; Postdoctoral Advisor: Dr. George Weiblen; Focus of research: Systematics and breeding system evolution in Urticales; Genetics of sex expression in hemp.

*Visiting Assistant Professor (August 2001-May 2002)*

Biology Department, Whitman College, Walla Walla, WA

## **ADMINISTRATIVE EXPERIENCE:**

- **INTERIM ASSOCIATE DEAN FOR STUDENT SUCCESS** (August 2019-Present) Responsible for daily operations in the college, including the following:
  - **Student Success:** I am committed to data-driven equity-minded change in STEM education and have worked collaboratively with faculty and chairs to address opportunity gaps in gateway courses. I have been an active participant both in the first and second iteration of Hornet Launch (first-year student pre-scheduling initiative) to provide all students with a productive, 15-unit schedule in their first semester/year. As part of this initiative, I have collaborated with Associate Deans, Academic Affairs representatives, and the Registrar's Office team to plan and build student schedules both for students with NSM majors and in other programs across campus. During this process, I have also collaborated with the Department of Chemistry and the Department of Mathematics and Statistics to ensure effective mechanisms to place students (in lieu of placement exams) in Math and Chemistry courses.

- **Curriculum Management:** In this role, I work collaboratively with Department Chairs to manage class schedules in the College and ensure efficiencies in the class offerings. In the time I have served in this position, the efficiency of our course offerings has increased by approximately 5% (measured as the ratio of FTES to the Number of Sections offered). I have also worked with the college curriculum committee to organize workshops on course change proposals and and communication with college faculty around course and program change proposal deadlines.
- **Staff Supervision:** I have provided direct supervision for 13 staff positions representing five different classifications and four distinct bargaining units. I also serve as the administrator in charge for all administrative and technical staff in the college (43 in total), and thereby am responsible for ensuring annual evaluation for all college staff and am the first point of contact for staff-related issues. In this position, I have worked closely with the dean to address salary inequities among staff by analyzing and identifying staff with salary compression and/or inversion, and developing a regular schedule for in-range progressions for all staff in the college to address these issues. Furthermore, I worked closely with the college safety manager to meet regularly with all technical staff within the college during campus closures to ensure that staff had a forum to meet and address any safety or operational concerns that were coming forward.
- **Space Management:** In this role, I have worked closely with both Space Management and NSM chairs and schedulers to maximize space utilization for both priority classrooms in the college. Furthermore, I have collaborated with Associate Deans from colleges with shared space allocations to renegotiate classroom schedules to ensure an equitable classroom allocation for each college. I worked closely with Information Resources and Technology and our college ITC on plans for classroom technology upgrades and renovation plans, and have been collaborating with Space Management, Facilities Management and Department Chairs on laboratory renovations and moves within the college.
- **Oversight of College Centers:** I provide oversight for the three college centers: NSM Advising Center, the Center for Science and Math Success (CSMS), and the Center for Math and Science Education (CMASE). For these centers, I serve in an advisory capacity with planning and staff/student issues that arise and work with directors/coordinators as needed to set priorities and goals and advocate on their behalf.
- **Safety Initiatives:** I work closely with the college safety manager to oversee and provide direction on the safety initiatives within the college. In this role, we meet regularly with Environmental Health and Safety representatives to collaboratively set priorities and address safety issues in the college. I also serve as an ex-officio member of the NSM Safety Committee.
- **Faculty mentorship and training:** I have also collaborated with the Associate Dean for Research in NSM in the development of New Faculty Onboarding activities (approximately 8, 2-hour discussions/workshops) on topics including policies and procedures within the college, academic advising, student mentorship, and grant development. During the Fall 2021 semester, I also collaborated with the NSM Advising Center Coordinator to offer a 6-session advising workshop covering a variety of resources, policies and topics commonly encountered when advising students.
- **DEPARTMENT CHAIR, BIOLOGICAL SCIENCES (August 2016-July 2019):** Biological Sciences is a large and dynamic department with approximately 1500 undergraduate students, 50 graduate students, 10 administrative and technical staff, 25 tenured/tenure track faculty, 35 non-tenure track faculty and 7-10 graduate teaching associates. Responsibilities included:
  - **Student Success and Curriculum Management:** As chair, my responsibilities included managing the course schedule in Biological Sciences, hiring of lecturers, supervision of staff employees within the Department, oversight and leadership major committees within the Department. During my tenure as chair, the number of students in the department increased by 9%, the Average Unit Load (AUL)

increased by 11%, and the proportion of students who graduated increased by 3.5%. Furthermore, the total FTES offered by the Department increased by 16%.

- **Staff Supervision:** I worked closely with both administrative and technical staff to ensure adequate coverage in the growing department and to improve communication among staff positions and complete hiring of four staff positions during my time as chair. I also successfully negotiated for one additional technical staff position, a time base increase of one administrative staff position (from 0.5-1.0 time base), and completed two reclassification requests for existing staff in the Department (one administrative and one technical staff member).
- **Faculty Leadership:** I worked closely with faculty through the shared governance process in Biological Sciences, including some minor changes to committee structure and conversations about modifications to the existing governance model.
- **Faculty Hiring and Mentorship:** The Department conducted seven tenure-track faculty searches with nine faculty hires during my tenure as chair. I held both formal and informal meetings regularly with pre-tenure faculty to check in on teaching responsibilities, research and space needs and to ensure that they were clear on the expectations for Retention, Tenure and Promotion.
- **Facilities and Budget Planning:** I oversaw facilities planning for Biological Sciences teaching and research space in the Tschannen Science Complex (4 shared research laboratory spaces accommodating 16 faculty in total, 13 instructional laboratories, and 9 instructional and research support spaces) and coordinated and led the process of equipment requests and purchasing for Biological Sciences (approximately \$2 million) as well as coordination and planning of the move program for Biological Sciences. I also led the department through strategic planning process.
- **Outreach Efforts:** I coordinated with University Admissions to provide information on the Biological Sciences pre-major to incoming transfer students to improve outcomes for this population, and also coordinated faculty, staff and student participation in Admitted Students Day in 2018/2019.
- **ASSISTANT/INTERIM DEPARTMENT CHAIR, BIOLOGICAL SCIENCES** (August 2015-August 2016); Worked with Dean and Associate Dean in the College of Natural Sciences and Mathematics during department chair transition, including leading the department through development and implementation of communication guidelines, managing the class schedule for Biological Sciences, developing a strategy for committee and departmental meeting agendas and communication, and learned about and developed strategies to support staff in the department.

#### **LEADERSHIP TRAINING:**

- Principles of Supervision for Managers: Joint Cohort with Cal Poly, San Luis Obispo. Seven session series covering best practices for supervisors; June-July 2021.
- Completion of MPP 101 Trainings (11, 2-hour modules)
- Participation in the PULSE (Partnership for Undergraduate Life Science Education) Northwest Network workshop as part of a team of Biological Sciences faculty from Sacramento State; October 2017.
- ACE Leadership Academy for Department Chairs, Participant; January 2017

#### **SELECTED AWARDS AND RECOGNITIONS:**

- Faculty speaker, Natural Sciences and Mathematics Commencement Ceremony, California State University, Sacramento; Fall 2011

- Outstanding University Service Award Recipient; College of Natural Sciences and Mathematics, 2010-2011

## **SELECTED LEADERSHIP IN UNIVERSITY AND PROFESSIONAL SERVICE:**

- **Curriculum:**
  - Served on the Selection committee for the student planner tool (to replace SmartPlanner); Spring 2021
  - Served as a member of the Hornet Launch Implementation team during the first two iterations (Fall 2020/spring 2021 and Fall 2021 implementations)
  - Served as a member of the Biological Sciences Curriculum committee (2005-2019); Responsible for providing feedback to the Chair on course offering frequency and the class schedule and review of course and program change proposals from the Department.
  - Served as a co-Chair of the Biological Sciences Curriculum Meta-Task Force charged with redesign of the Biological Sciences curriculum and a focus on backward design in this process (2004-2006)
  - Served as course coordinator for BIO 1 from 2006-2011. During this time the course grew in both number of sections (2 lecture sections and 6 labs/activities to 3 lectures and 9 labs/activities) per semester
  - Served as a member of the NSM Curriculum Resources Committee from 2008-2014, and 2016-present, serving as committee chair from 2010-2012.
  - Served as the primary author for revision of the Biological Sciences curriculum from 2006-2009. This involved working collaboratively with faculty stakeholders in each program area, an assessment of learning outcomes for both courses and all nine programs in Biological Sciences, oversight and coordination of new course proposals (Form As) and program change proposals (Form Bs), as well as fiscal and course offering analyses for the proposed program changes.
- **Learning Outcome Assessment:**
  - Served on Biological Sciences Assessment Committee from 2008-2014, authored four Annual Assessment reports for Biological Sciences
  - Served as University Faculty Assessment Consultant from 2012-2014; Responsible for reviewing Departmental Assessment reports and providing feedback as well as workshops on developing effective assessment reports to the University Community.
- **Program Review:**
  - Served on an internal program review team (3 team members) for Humanities and Religious Studies Department at Sacramento State (2008-2009) and contributed to the final program review report.
  - Served on External Program Review team (2 members) for the Biology Department at San Francisco State University (Fall 2019) and served as the primary author for the program review report.
  - Served as External Program Reviewer for Biology and Microbiology programs at CSU, Chico (Fall 2019) and authored the final program review reports.
  - Served on External Program Review team (2 members) for the Biology Department at CSU, Stanislaus (Fall 2018) and served as co-author for the program review report.
- **Faculty Scholarship Community co-facilitator:**
  - The CORPs: the Collaborative Organization for Research Planning and Sustainability; Co-developed with Dr. Thomas Landerholm. This program was developed as an opportunity for faculty to work collaboratively in documenting funding opportunities and in developing a mechanism to sustain internal funding sources through the time that they were successful in obtaining external funding.
  - The CORPs II: the Collaborative Organization for Research Planning and Sustainability; Second award was co-facilitated with Dr. Jamie Kneitel.

- **Budget:**
  - Served as Chair representative on the Academic Affairs Budget Advisory Committee (2017-2019). The primary charge of the committee during this time was to consider Department Chair workload and compensation. I worked with the committee to develop a model that was shared with the committee that considered multiple complexity factors in compensating Department Chairs.
  - Served as chair of the Biological Sciences Budget, Equipment and Space Committee (2015-2019). In this capacity, I worked with faculty and staff representatives to determine Operating Expense budget allocations in the department, including prioritization of equipment calls and space allocation.
  
- **Safety:**
  - Served in an ad-hoc role on the Natural Sciences and Mathematics Safety Committee (2019-present). This group represents both faculty and staff in the college in a variety of roles and is responsible for establishing guidelines and policies to ensure a culture of safety within the college.
  - Served as a representative to the University Executive Safety Committee (2019-present). This group reviews campus-level policy changes and is responsible for providing feedback for implementation of new policy.

#### GRANTS AWARDED:

- 2021-2022 NSM-Fest: Reengaging students, faculty and staff following the COVID-19 pandemic; Campus Grants Program (University Enterprises, Inc.), Sacramento State; \$1,500
- 2020-2021 Development of just-in-time instruction for students who are nearly Chemistry ready; Sacramento State Graduation Initiative 2025 Proposal; Joint Authored with the Chemistry Department; \$45,983
- 2020-2021 The Commit to Study Program (C2S) to develop student study strategies in first- and second-year students; Sacramento State Graduation Initiative 2025 Proposal; Joint authored with the Center for Science and Math Success; \$50,854
- 2010-2014 Patterns of Speciation in *Penstemon* section *Saccanthera*: How important is polyploidy?; C. M. Goethe Biological Survey Award, CSU, Sacramento; \$10,000
- 2011-2014 Databasing the California State University, Sacramento Herbarium; C. M. Goethe Biological Survey Award, CSU, Sacramento; \$5,344
- 2013-2014 Collaborative Proposal: Harnessing the Power of Herbaria to Understand the Changing Flora of California: A Biodiversity Hotspot in Peril; National Science Foundation Grant Supplement; \$13,766; co-PI: Lucinda McDade
- 2008-2009 Urban bee diversity and dispersal along the American River; C. M. Goethe Biological Survey Award, CSU, Sacramento; \$5,000; Collaborator: Mr. Byron Love  
Pollination Biology of *Penstemon azureus*; CSU, Sacramento Research and Creative Activities Award Program; 2-month summer salary stipend
- 2005-2007 Biological and genetic diversity of *Penstemon* and associated pollinators in the American and Sacramento River Watersheds C. M. Goethe Biological Survey Award, CSU, Sacramento; \$5,000
- 2007 Building a new introductory series for majors in the Biological Sciences: effective teaching and assessment in BIO 1.CSU, Sacramento Pedagogy Enhancement Award Program; \$500 and 3 units of assigned time; Collaborators: Dr. Nicholas Ewing and Dr. Hao Nguyen

- 2007 Detecting Hybridization and Species Differences In Native Camas Lilies: How important are habitats, pollinators, and genetics?; Earthwatch Institute Student Challenge Awards Program; \$17,598; Collaborator: Dr. Susan Kephart
- 2003 Genetic mapping of economically-important traits in hemp (*Cannabis sativa* L.); Minnesota Agricultural Experimental Station seed grant; \$15,000; co-PIs: Drs. George Weiblen and Ulrike Tschirner

#### RESEARCH INTERESTS:

- *Plant systematics and evolution*: Speciation in plants; the role of pollinator communities in reproductive isolation; Phylogeography of closely-related species complexes; Adaptive radiations; The role of polyploidy in plant diversification
- *Teaching and Pedagogy*: data-driven decision making in curriculum changes; working toward equitable outcomes for students in STEM disciplines; curriculum development and implementation

#### STUDENT MENTORSHIP:

- Mentored Four graduate students who completed the M.S. degree.
- Served as member of the supervisory committee for nine additional M.S. students.
- Mentored 13 undergraduate students on laboratory and field-based research projects

#### ORAL AND POSTER PRESENTATIONS:

- Nine posters with undergraduate student co-authors (three at regional/national meetings)
- Three Oral presentations at national meetings, two of which were presented by students

#### PUBLICATIONS (\* indicates student author):

- Lawrence, T. L.\* and S. L. Datwyler. 2016. Testing the hypothesis of Allopolyploidy in the origin of *Penstemon azureus* (Plantaginaceae). *Frontiers in Ecology and Evolution*. <https://doi.org/10.3389>
- Eckert, A. J., H. Shahi\*, S. Datwyler, and D. B. Neale. 2012. Spatially variable natural selection and the divergence between parapatric subspecies of lodgepole pine (*Pinus contorta*, Pinaceae). *American Journal of Botany* 99(8): 1323-1334.
- Larkey, D. J.\*, S. L. Datwyler and W. C. Lancaster. 2012. Vertebral fusion in bats: phylogenetic patterns and functional relationships. In G. F. Gunnell & N. B. Simmons. *Evolutionary history of bats: fossils, molecules and morphology*, New York: Cambridge University Press.
- Fishbein, M., S. Kephart, M. Wilder, K. M. Halpin and S. L. Datwyler. 2010. Phylogeny of *Camassia* (Agavaceae) inferred from plastid *rpl16* intron and *trnD-trnY-trnE-trnT* intergenic spacer DNA Sequences: implications for species delimitation. *Systematic Botany* 35(1): 77-85.
- Wolfe, A. D., C. P. Randle, S. L. Datwyler, J. J. Morawetz, N. Arguedas and J. Diaz. 2006. Phylogeny, taxonomic affinities, and biogeography of *Penstemon* (Plantaginaceae) based on ITS and cpDNA sequence data. *American Journal of Botany*. 93 (11): 1699-1713.
- Datwyler, S. L. and G. D. Weiblen. 2006. Genetic variation in hemp and marijuana (*Cannabis sativa* L.) indicated by amplified fragment length polymorphisms. *Journal of Forensic Science* 51 (2): 371-375.

- Zerega, N. J. C., W. L. Clement\*, S. L. Datwyler, and G. D. Weiblen. 2005. Biogeography and divergence times in the mulberry family based on chloroplast and nuclear DNA sequences. *Molecular Phylogenetics and Evolution*, 37: 402-416.
- Datwyler, S. L. and G. D. Weiblen. 2004. On the origin of the fig: phylogenetic relationships of Moraceae from *ndhF* sequences. *American Journal of Botany* 91(5): 767-777.
- Datwyler, S. L. and A. D. Wolfe. 2004. Phylogenetic and biogeographic relationships of *Penstemon* subg. *Dasanthera*. *Systematic Botany* 29(1): 165-176.
- Wolfe, A. D., S. L. Datwyler and C. P. Randle. 2002. Evolutionary biogeographic relationships among tribe Cheloneae (Scrophulariaceae). *Systematic Botany* 27(1): 138-148.