

SVEN BUERKI

Assistant Professor, Department of Biological Sciences at Boise State University.

My lab applies a genome-to-phenome approach to investigate mechanisms of drought adaptations in natural ecosystems. We are currently focusing our efforts on the sagebrush steppe of western North America by using *Artemisia tridentata* as model organism. This research is integrated into the EPSCoR NSF GEM3 (<https://www.idahogem3.org/>) project.

I am broadly interested in bioinformatics, genomics, molecular evolution and reproducible science.



💻 RESEARCH EXPERIENCE

present	● Assistant Professor Department of Biological Sciences	📍 Boise State University, ID
2020 2019	● Research associate Missouri Botanical Garden	📍 Saint-Louis, MO
2017 2016	● Senior Curator in Charge, Ferns and General herbarium I & II Department of Life Sciences	📍 Natural History Museum, London, UK
2016 2015	● Researcher Department of Life Sciences	📍 Natural History Museum, London, UK
2014 2012	● Plant Evolutionary Biologist Jodrell Laboratory	📍 Royal Botanic Gardens, Kew, UK
2012 2010	● Marie-Curie postdoctoral fellow Jodrell Laboratory	📍 Royal Botanic Gardens, Kew, UK
	• Funded by the Marie-Curie Intra-European program	
2010 2009	● SNSF postdoctoral fellow Real Jardin Botanico	📍 Madrid, Spain
	• Funded by the Swiss National Science Foundation	
2005 2003	● Research Assistant Department of Evolutionary Botany	📍 University of Neuchâtel, Switzerland

🎓 EDUCATION

CONTACT

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/github.com/svenbuerki
ORCID <https://orcid.org/0000-0002-8299-6539>
📞 +1 208-426-1146

- 2009
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2005
- **PhD thesis**
Department of Evolutionary Botany  University of Neuchâtel, Switzerland
 - Worldwide biogeography and systematics of Sapindaceae: a molecular and taxonomic survey combining large data sets and novel methodological approaches
- 2005
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2000
- **Master of Science in Behaviour, Ecology and Evolution (with high distinction)**
Department of Evolutionary Botany  University of Neuchâtel, Switzerland
 - Biogeography and systematics of the genus Gouania (Rhamnaceae) in the western Indian Ocean

TEACHING EXPERIENCE

- present
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2020
- **VIP: Genome 2 phenotype**
Department of Biological Sciences  Boise State University, ID
 - Undergraduate and graduate level class
- present
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2017
- **BIOL497 & BIOL597 – Special Topics, Genomics & Bioinformatics**
Department of Biological Sciences  Boise State University, ID
 - Undergraduate and graduate level class
- **EEB 603 – Reproducible Science**
Department of Biological Sciences  Boise State University, ID
 - Graduate level class

GRANTS

- 2011
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FIELDWORK EXPERIENCE

I have conducted several botanical expeditions in Croatia, Fiji, Italy, Madagascar, Malaysia (Borneo and Peninsular Malaysia), Mauritius, New Caledonia, Singapore, Switzerland and USA.

EXTERNAL REFEREE

Journals

I have reviewed >200 manuscripts for the following journals: *Annals of Botany*; *Biodiversity and Conservation*; *Biological Journal of the Linnean Society*; *Botanical Journal of the Linnean Society*; *Candollea*; *Central European Journal of Biology, Evolution*; *International Journal of Plant Sciences*; *Journal of Biogeography*; *Journal of Ecology*; *Journal of System-*

atics and Evolution; Kew Bulletin; Molecular Ecology; Molecular Ecology Resources; Molecular Phylogenetics and Evolution; Oryx; Plant Systematics and Evolution; PLoS ONE; South African Journal of Botany; Systematic Biology; Systematic Botany; Taxon.

Grant review panel

- 2015: Agence Nationale de la Recherche, CES No 32, Sciences de la Vie, DEFSAV, France.

Research proposals

I have reviewed research proposals submitted to the National Geographic Society (USA) and the Systematic Association (UK).

Journal edition

- Associate editor: *PLoS ONE* (Jan 2014 – December 2018).
- Associate editor: *Systematic Botany* (April 2014 – August 2019).
- Associate editor: *Systematics and Biodiversity* (April 2015 – January 2020).
- Editorial board: *Candollea* (June 2016 – present)
- Guest editor: *Biological Journal of the Linnean Society* (for the special issue vol. 117 published in January 2016 reporting research presented at the Linnean Society in London in April 2014 during a conference entitled “Collections-based research in the genomic era” that I co-organized).

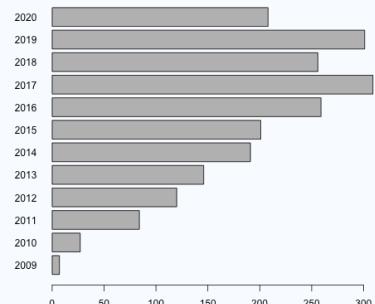
PUBLICATIONS IN PEER-REVIEWED JOURNALS

I have authored 100 Web of Knowledge papers (among which 28 as first and 28 as senior author) with 213 co-authors based in 37 countries, demonstrating my international recognition and my ability to collaborate with other scientists in a wide range of fields.

- 2020
- **#100 Typification, nomenclature and taxonomy of Pandanaceae described by Otto Warburg**
Willdenowia. In press.
 - Callmander MW, Vogt R, Donatelli A, Buerki S, Neppi C.
 - **#99 Two new genera of Sapindaceae (Cupanieae) from the southern Pacific: *Lepidocupania* and *Neoarytera***
Candollea. In press.
 - Buerki S, Munzinger J, PP Lowry II, Callmander MW.
 - **#98 New combinations for two species in the genus *Synima* (Sapindaceae, Cupanieae) from Queensland (Australia)**
Candollea. In press.
 - Callmander MW, Ford AJ, Buerki S.
 - **#97 (2772) Proposal to conserve the name *Pandanus ornatus* Kurz (*Benthonea ornata*) against *P. ornatus* W. Bull with a conserved type (Pandanaceae)**
Taxon. 69: 115-116.
 - Callmander MW, Buerki S, Gereau RE.
 - <https://doi.org/10.1002/tax.12337>

- Citation = 2162
- H-index = 26
- I10-index = 54

data from Google Scholar



- #96 Neotypification of *Pandanus odorifer*, the correct name for *P. odoratissimus* (Pandanaceae)

Taxon. In press.

- Callmander MW, Gallaher T, McNeill J, Beentje H, Nadaf AB, Middleton D, Buerki S.
- <https://doi.org/10.1002/tax.12406>

BOOKS

In press
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2020

- Update on the phylogenetic framework of Malagasy angiosperms: A tool to unravel the evolution and biogeography of this unparalleled flora and to support its conservation

Natural History of Madagascar, 2nd Edition

- Wojahn JMA, Callmander MW, Lowry II PP, Phillipson PB, Buerki S.
- In: S. Goodman & L. Gautier (eds)

- Sapindaceae

Natural History of Madagascar, 2nd Edition

- Buerki S, Phillipson PB, Lowry II PP, Wojahn JMA, Andriambololonera S, Callmander MW.
- In: S. Goodman & L. Gautier (eds)

- Bignoniaceae

Natural History of Madagascar, 2nd Edition

- Callmander MW, Phillipson PB, Buerki S.
- In: S. Goodman & L. Gautier (eds)

- Pandanaceae

Natural History of Madagascar, 2nd Edition

- Callmander MW, Laivao MO, Buerki S.
- In: S. Goodman & L. Gautier (eds)

2015

- La diversité des *Pandanus* des Tsingy

Namoroka: Mission à Madagascar

- 1 Callmander MW, Buerki S, Luino I, Laivao MO.
- In: L. Allorge & T. Haevermans (eds)
- Pp. 104-107.



SCIENTIFIC SYMPOSIA AND TALKS

2019

- Challenges and opportunities associated with assembling the 9 Gbp sagebrush genome to study drought adaptations

Seminar, Oct. 2019

 Idaho State University, USA

- Buerki S

- Lewis's lost *Lomatium* found: Investigating species boundaries in the rare plant species subcomplex, *Lomatium packardiae/anomalum*
Botany, new frontiers in botany, July 2019  Tucson, USA
 - Ottenlips M, Buerki S, Mansfield DH, Dodsworth S, Forest F, Smith J.
 - Challenges and strategy to produce a reference genome for sagebrush
NSF EPSCoR GEM3 Seminar, April 2019
 - Buerki S
- 2018
- Do we need a new species concept for conservation? Madagascar as case study
Forum on Biodiversity of Global Hotspots, October 2018  Boise State University, USA
 - Buerki S
 - Resolving species boundaries in the *Lomatium packardiae/L. anomalum* clade of the *L. triternatum* (Apiaceae) complex
Botany, new frontiers in botany, July 2018  Rochester, USA
 - Ottenlips M, Mansfield DH, Buerki S, Forest F, Dodsworth S, Smith J.
- 2017
- Role played by herbaria in describing, understanding and protecting plant biodiversity
Seminar, March 2017  University of Basel, Switzerland
 - Buerki S
- 2016
- Combining modelling and genetic approaches in conservation: application to the genus *Capurodendron* Aubrév. (Sapotaceae) in Madagascar
Biologie'16, the annual Swiss conference on Ecology, Evolution, Systematics, Biogeography and Conservation, February 2016  University of Lausanne, Switzerland
 - Garratt R, Naciri Y, Lehmann A, Buerki S, Callmander MW, Gautier L.