

Robbie Hart Curriculum Vitae

Assistant Curator, High Elevation Ecology and Ethnobotany
William L. Brown Center, Missouri Botanical Garden
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Education

2015 **Ph.D. in Biology (Ecology, Evolution and Systematics)**, University of Missouri-St. Louis
2004 **B.A. in Linguistics**, Swarthmore College, PA
2000 **Associate of Arts with Honors**, Peninsula College, WA

Awards and honors

2013 University of Missouri - St. Louis Biology Department Raven Fellowship
2011 University of Missouri TransWorld Airlines Merit Scholarship
2010 Graduate Teaching Excellence Award, University of Missouri - St. Louis
2009 & 2010 Honorable mention, NSF Graduate Research Fellowship Program
2001 – 2004 Swarthmore College Class of 1925 Scholarship

Positions held

2016 – **Assistant Curator** (Missouri Botanical Garden, St. Louis MO)
I currently design and manage programs in high elevation plant ecology, climate change, and ethnobotany, with emphasis on building research around a subnetwork of plots within the Global Observation Research Initiative in Alpine Environments (GLORIA) network. In our subnetwork, which spans Pakistan, Nepal, Bhutan and China, we monitor dynamics of and connections between vegetation, climate and ethnobotanical practice.

2013 – 2015 **Research Specialist** (Missouri Botanical Garden, St. Louis, MO).
Worked on programs in high elevation plant ecology, climate change, and ethnobotany, including analyzing data for Himalayan GLORIA plots.

2008 – 2012 **Ph.D. Fellow** (National Science Foundation ‘Southwest China IGERT’)
Part of an interdisciplinary group working to understand ecological factors, livelihood strategies and governance structures impacting biodiversity and economic development in Himalayan China.

2006 – 2008 **Administrative Services Manager** (North Olympic Library System, Port Angeles WA)
Developed and implemented grants, acted as liaison to board and community, supervised administrative workers. Assisted in strategic planning, budgeting, labor negotiations, director hire, and rebranding.

2006 – 2008 **Research Consultant** (Living Tongues Institute for Endangered Languages)
Research, quantitative analyses, and editing focusing on endangered language diversity.

2004 – 2006 **Research Assistant** (Swarthmore College, Swarthmore PA)
Research, editing, and graphics for *When Languages Die* (David Harrison, Oxford University Press, 2007).

Publications

Refereed journal articles

- 2017 **Robbie Hart** and Jan Salick. 'Dynamic ecological knowledge systems amid changing place and climate: Mt. Yulong rhododendrons'. *Journal of Ethnobiology* 37: 21-36.
- 2016 **Robbie Hart**, Elizabeth M. Georgian, and Jan Salick. 'Fast and Cheap in the Fall: Phylogenetic determinants of late flowering phenologies in Himalayan *Rhododendron* (Ericaceae)'. *American Journal of Botany* 103: 198-206.
- 2016 Rainer W. Bussmann, Narel Y. Paniagua-Zambrana, Shalva Sikharulidze, Zaal Kikvidze, David Kikodze, David Tchelidze, Manana Khutsishvili, Ketevan Batsatsashvili and **Robbie Hart**. A comparative ethnobotany of Khevsureti, Samtskhe-Javakheti, Tusheti, Svaneti, and Racha-Lechkhumi, Republic of Georgia (Sakartvelo), Caucasus'. *Journal of Ethnobiology and Ethnomedicine* 12: 43-61.
- 2016 Rainer W. Bussmann, Narel Y. Paniagua Zambrana, Laura A. Moya Huanca and **Robbie Hart**. Changing markets - medicinal plants in the markets of La Paz and El Alto, Bolivia. *Journal of Ethnopharmacology* 193: 76-95.
- 2016 Rainer W. Bussmann, Narel Y. Paniagua-Zambrana, Shalva Sikharulidze, Zaal Kikvidze, David Kikodze, David Tchelidze, Ketevan Batsatsashvili and **Robbie Hart**. 'Medicinal and Food Plants of Svaneti and Lechkhumi, Sakartvelo (Republic of Georgia), Caucasus'. *Medicinal and Aromatic Plants*.
- 2016 Hassan Sher, Rainer W. Bussmann, **Robbie Hart**, and Hugo J. de Boer. 'Traditional use of medicinal plants among Kalasha, Ismaeli and Sunni groups in Khyber Pakhtunkhwa province, Pakistan'. *Journal of Ethnopharmacology* 188: 57-69.
- 2015 Ryan J. Thoni and **Robbie Hart**. 'Repatriating a lost name: notes on McClelland and Griffith's *Cobitis boutanensis* (Cypriniformes: Nemacheilidae)'. *Zootaxa* 3999: 291 – 294.
- 2014 Sailesh Ranjitkar, Roeland Kindt, Nani Maiya Sujakhu, **Robbie Hart**, Wen Guo, Xuefei Yang, Krishna Kumar Shrestha, Jianchu Xu, Eike Luedeling. 'Separation of the bioclimatic spaces of Himalayan tree rhododendron species predicted by ensemble suitability models'. *Global Ecology and Conservation* 1: 2 – 12.
- 2014 **Robbie Hart**, Jan Salick, Sailesh Ranjitkar, and Xu Jianchu. 2014. 'Herbarium specimens show contrasting phenological responses to Himalayan climate'. *PNAS* 111: 10615 – 10619.

Book chapters

- 2014 **Robbie Hart**, Wayne Law and Peter Wyse Jackson. 'Biocultural collections for conservation'. In *Curating Biocultural Collections*, Jan Salick, Katie Konchar and Mark Nesbitt (eds.), pp. 329 – 346. Kew Press.
- 2007 **Robbie Hart**. 'Written Word, Oral World'. In *Book of Peoples of the World*, Wade Davis, K. David Harrison and Catherine Herbert Howell (eds.), pp. 252-255. National Geographic Society.

Books & theses

- 2015 *Climate-driven Change in Himalayan Rhododendron Phenology*. Doctoral Dissertation, Department of Biology, University of Missouri - St. Louis.
- 2004 *Up and Down the Mountain*. BA Thesis, Department of Linguistics, Swarthmore College, PA.

Book Reviews

- 2016 'Food and Environment in Early and Medieval China. (E.N. Anderson).' *Economic Botany* 70: 92.

Publications, continued

Publications in review / revision

Jan Salick, Fang Zhendong and **Robbie Hart**. 'Climate-driven community change in 12 Himalayan summits.' *Nature Plants*.

Robbie Hart and Rainer Bussmann. 'Trans-Himalayan transmission, or convergence? *Stauntonia* (Lardizabalaceae) as an ethnoveterinary medicine.' *Medicina nei Secoli*.

Jan Salick, **Robbie Hart** and Li Siyu. 'Naxi Cosmology of Mt. Yulong sacred sites with caveats for conservation.' *Royal Scottish Geographical Journal*.

Ankit Singh, Sudeep Chandra, M.C. Nautiyal, and **Robbie Hart**. 'Traditional herbal medicine, Urgam Valley, Uttarkhand.' *Indian Journal of Traditional Knowledge*.

Conference Activity

2017 (accepted) 'Phenological progressions of Mt. Yulong *Rhododendron* flowering over season and elevation'. Presentation at XIX International Botanical Congress, Shenzhen, China.

2017 (accepted) 'Ethnobotany of climate change in the greater Himalayan Region'. Presentation at the 58th Meeting of the Society of Economic Botany, Bragança, Portugal.

2016 'Dynamic ecological knowledge systems amid changing place and climate: Mt. Yulong rhododendrons'. Presentation at Mountains 2016: International Conference on Research for Sustainable Development in Mountain Regions, Bragança, Portugal.

2015 'Change in the Himalayan climate II: alpine community composition'. Presentation at the 3rd Global Change and the World's Mountains conference, Perth, Scotland (Mountains 3).

2015 'Sacred Mt. Yulong & Naxi perceptions of biodiversity conservation'. Presentation at Mountains 3.

2015 'Climate change in the high Himalaya: monitoring changes in alpine vegetation and ethnobotany'. Presentation & poster at Creating a Global Network of Mountain Observatories workshop, Gothic, Colorado.

2014 Co-chair, 'Mountain Ethnobiology' session at Mountain Observatories: a global fair and workshop on social-ecological systems, Reno, Nevada (Mountain Observatories).

2014 'Climate impacts on *Rhododendron* phenology: insights from traditional ecological knowledge and natural history collections.' Presentation at Mountain Observatories.

2014 'GLORIA resurveys of three Himalayan target areas'. Presentation at Mountain Observatories.

2014 Co-chair, 'Himalayan Climate Change and Ethnobotany' session at the 14th Congress of the International Society for Ethnobiology, Bumthang, Bhutan (ISE 14).

2014 'Climate change impacts on *Rhododendron* phenology: insights from historical collections, observational studies, and traditional ecological knowledge.' Presentation at ISE 14.

2014 'Ethnobotany of climate change in the Eastern Himalaya: a 2000 km transect, and two sites in Bhutan'. Presentation at ISE 14.

2012 'Rhododendron phenologies changing with climate'. Presentation at the 13th Congress of the International Society for Ethnobiology, Montpellier, France.

2010 'Past collections offer clues to the future of Himalayan rhododendrons'. Poster at the 2nd Global Change and the World's Mountains conference, Perth, Scotland.

Research experience

2016 Mt. Meili, China and Langtang Himal, Nepal

Ecological and ethnobotanical fieldwork at 8 mountain summits with methodology of the Global Observation Research Initiative in Alpine Environments (GLORIA) to track the effects of climate change on alpine plant communities and local ethnobotanical traditions. Collection and curation of botanical specimens; installation of and analysis of data from temperature loggers.

2009 – 2013 Mt. Yulong, Lijiang County, China

Ph.D. fieldwork: ecological & ethnoecological research on phenology of montane plants; ethnobotany with local communities; collection of botanical, entomological, and plant DNA specimens; experimental work on pollination, temperature, and phenology.

2009 – 2013 Deqen, Weixi and Shangrila Counties, China

Ecological and ethnobotanical fieldwork at 11 mountain summits with GLORIA methods to track the effects of climate change on alpine plant communities and local ethnobotanical traditions.

2003 Ilam, Nepal

Linguistic and sociolinguistic documentation of indigenous minority language Bantawa Rai.

Research funding

Current

2016 – 2017 ‘Climate Change in the high Himalaya: effects on alpine vegetation and ethnobotany’ National Geographic Committee for Research and Exploration (PI) \$35,322.

In review

‘Climate change across borders: transboundary patterns in Himalayan alpine vegetation and ethnobotany impacts’ National Geographic Committee for Research and Exploration (PI) \$35,720.

‘Himalayan alpine vegetation under climate change: observing directional shifts in plant communities’ Eppley Foundation (PI) \$27,500.

Recent

2013 ‘A comparative ethnobotany of rhododendrons in northwest Yunnan, China’ Garden Club of America Anne S. Chatham Fellowship in Medicinal Botany (PI) \$4,000.

2012 – 2013 ‘Climate-driven change in Himalayan Rhododendron phenology’ University of Missouri - St. Louis Biology Department Raven Fellowship (Dissertation Fellow) \$9,500.

2008 – 2011 ‘Biodiversity Conservation and Sustainable Development in Southwest China’ National Science Foundation Interdisciplinary Graduate Education & Research Traineeship (Trainee) \$160,000 (total amount to RH across tuition reimbursement, stipend and research grants).

2011 ‘Climate driven phenological change in Himalayan rhododendrons’ The Explorers Club (PI) \$1,000.

2010 ‘Climate change impacts on distribution, phenology and pollination of *Rhododendron*’ University of Missouri TransWorld Airlines Scholarship (research and merit scholarship) (PI) \$7,000.

2009 – 2010 ‘Climate change impacts on phenology of Himalayan *Rhododendron* species’ Whitney Harris World Ecology Center (PI) \$7,000.

Teaching and mentoring experience

University of Missouri - St. Louis

Member of the graduate faculty; committee member for Rinchen Namgay (Biology Dept., 2016 –)

Guest lectures for ‘Global Climate Change’ (Biology Dept., 2014 & 2015).

Co-taught workshop ‘Statistical Analysis in R’ (2014).

Mentored undergraduate research in climate change ecology (2010 & 2011).

Teaching Assistant (lab and lecture) for ‘General Biology’ (Biology Dept., 2009 & 2010).

Missouri Botanical Garden

Mentored undergraduate, graduate, and public volunteers in ethnobiology and climate change research projects (2015 – 2017).

Taught workshop ‘R for ethnobotanical data analysis’ (2017).

Mentored National Science Foundation Research Experience for Undergraduates (NSF REU) students in ethnobotany and ecology projects (2014 & 2016).

Guest lectures for NSF REU seminar series (2015 & 2016).

Universidad Nacional Mayor de San Marcos, Peru

Taught ‘Estadística avanzada en etno-ecología cuantitativa y el uso de R’ shortcourse (2017).

Universidad Mayor de San Andrés, Bolivia

Taught ‘Advanced quantitative methods for ethnoecology using R’ shortcourse (2016).

Washington University in St. Louis

Co-organizer for ‘Ethnobiology Journal Club’ (Biology/Anthropology Depts., 2014 – 2017).

Guest lectures for ‘Plants and People’ (Biology/Anthropology Depts., 2011 & 2015).

St. Louis University

Guest lectures for ‘Ethnobiology’ (Biology Dept., 2012, 2014 & 2017).

Tribhuvan University & Manaslu Conservation Area, Nepal

Led ‘Monitoring climate impacts on mountain vegetation’ classroom & field-based training (2016).

Lae Technical University, Papua New Guinea

Co-taught ‘Traditional ecological knowledge and landscape stewardship’ field course (2015).

Lijiang Alpine Botanic Garden, Yunnan, China:

Mentored undergraduates in ecological and ethnobotanical field research (2010 – 2012).

Swarthmore College:

Teaching Assistant (lab and discussion) for ‘Field methods’ (Linguistics Dept., 2004).

Teaching Assistant (discussion and field) for ‘Marine biology’ (Biology Dept., 2003).

Invited talks

2017 Scientist Lecture Series, Holden Arboretum.

2015 Royal Botanic Garden Edinburgh.

2015 First Tibetan Plateau Symposium, Washington University in St. Louis.

2014 Fourth St. Louis Ecology, Evolution and Conservation Retreat, Southern Illinois University.

Invited talks, continued

- 2014 Biology Departmental Seminar, St. Louis University.
- 2013 Lijiang Alpine Botanic Garden – Chinese Academy of Sciences.
- 2012 Strait Mac Users Group, Port Angeles, WA.
- 2011 Science Cafe, Academy of Science St. Louis.
- 2010 Lijiang Alpine Botanic Garden – Chinese Academy of Sciences.

Professional

Committee membership

- Richard Evans Schultes Award Committee, Society for Economic Botany (2016 & 2017)
- Executive Committee, Whitney R. Harris World Ecology Center (2013 – 2015)

Grant review

- National Geographic Society Committee for Research and Exploration (2014 – 2017)
- Whitney R. Harris World Ecology Center (2014 & 2015)
- University of Missouri Research Board (2014)

Peer review

American Journal of Botany; Alpine Botany; Annals of Botany; Arctic, Antarctic and Alpine Research; Journal of Biogeography; Biological Conservation; Climatic Change; Climate Research; Ecography; Journal of Ecology; Economic Botany; Environment and History; Journal of Ethnobiology and Ethnomedicine; Global Change Biology; Human Ecology; Novon; Oecologia; PLOS One; Sustainability.

Society membership

- Association for Nepal and Himalayan Studies
- Botanical Society of America
- Ecological Society of America
- Explorers Club
- Society of Ethnobiology
- Society for Economic Botany