Dawson M. White – *Curriculum Vitae*

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Education

2019 Ph.D., Biological Sciences, University of Illinois at Chicago, Thesis: "Biogeography, Diversification, and Domestication in the Coca Family (Erythroxylaceae)

2011 B.S., Biological Sciences with Botany Concentration, Colorado State University

Appointments

2023–2024 Postdoctoral Research Fellow, Harvard University Herbaria

2021–2022 Postdoctoral Research Fellow, National Science Foundation (host: Field Museum): https://www.nsf.gov/awardsearch/showAward?AWD_ID=2010821

2019–2020 Postdoctoral Research Fellow, Grainger Bioinformatics Center, Field Museum

2019 Program Instructor, Pinhead Institute

2016–2018 Teaching Assistant, University of Illinois at Chicago

2012–2019 Research Associate, Negaunee Integrative Research Center, Field Museum

2012–2017 Graduate Research Fellow, National Science Foundation

2012–2013 Teaching Assistant, University of Illinois at Chicago

2010 Botanical Technician, Denali National Park and Preserve

2009–2011 Herbarium Assistant, Colorado State University

2009 Research Assistant, Knapp Lab, Colorado State University

Grants

2022 *The origins and evolution of the coca crops part II: Genome resequencing of key clades.* Grainger Bioinformatics Center. $10,000

2021 *Genomic resources for the Coca family II: Genomes for 61 species representing global diversity.* Iridian Genomes. $122,000

2021 *Genomic resources for the Coca family I: The first genome of the coca crop and close relatives* (co-PI). Iridian Genomes. $10,000

2021 *Global phylogenomics of a symbolic Arctic-Alpine shrub.* Polar Studies Fund, Field Museum. $14,000

2020 *Old specimens, new results: Museum genomics and 'species spectral signatures' of the Coca family inform systematics and domestication.* Postdoctoral Research Fellowship in Biology, Interdisciplinary Research Using Biological Collections, National Science Foundation, $138,000

2020 *Genome resequencing of an Enigmatic Arctic-Alpine Genus, Mountain-Avens (Dryas spp., Rosaceae).* Grainger Bioinformatics Center, Field Museum. $6,000

2017 *How fast are species disappearing? Reevaluating microendemism in the Centinelan extinction hypothesis*. Field Dreams Grant (co-PI), Field Museum. $5,000

2016 *Origins of the Divine Leaf of Immortality: anthropological and evolutionary perspectives on*

the domestication of coca. Chancellor's Graduate Research Fellowship, University of Illinois at Chicago, $4,000

2016 *Systematics of "Coca" Clade and the Origins of Coca.* Mini-ARTS Award, Society of Systematic Biologists, $1,000

2016 *Unlocking herbarium genetic resources with target-capture NGS sequencing.* Graduate Student Research Award, American Society of Plant Taxonomists, $700

2015 *Origins of the Divine Leaf of Immortality: anthropological and evolutionary perspectives on the domestication of coca.* Chancellor's Graduate Research Award, University of Illinois at Chicago. $4,000

2015 *Enhancing the Field Museum's* Erythroxylum Collection, Museum Collections Spending Fund Grant, Field Museum, $3,600

2015 *Evaluating drivers of Neotropical plant biodiversity through analysis of biome shifts and diversification in the Coca family (Erythroxylaceae).* Provost's Award, University of Illinois at Chicago, $2,500

2015 *Why are there so many species in the Neotropics? Evaluating effects of biome shifts on diversification in a model system, the Coca family (Erythroxylaceae).* Elmer Hadley Award, University of Illinois at Chicago, $2,250

2014 *Molecular analysis of the domestication of coca (*Erythroxylum *spp.).* Elmer Hadley Award, University of Illinois at Chicago, $3,000

2014 *Systematics, evolution, and biogeography of neotropical* Erythroxylum *(Erythroxylaceae); Field Work in montane and lowland rainforest of western Amazon.* Bodmer International Travel Award, University of Illinois at Chicago, $1,200

2014 *Phylogenetics of "Coca" Clade and the Origins of Coca.* DNA Discovery Center Spending Award, Field Museum, $5,000

2012 *Systematics, Evolution, and Ecology of* Erythroxylum*, section* Archerythroxylum *O.E. Schulz.* Graduate Research Fellowship, National Science Foundation, $132,000

Awards

2019 Award for Excellence in Teaching, University of Illinois at Chicago

2019 Award for Research Achievement, University of Illinois at Chicago

2018 Research Photography Award, Department of Biological Sciences, University of Illinois at Chicago

Publications

Conzelman, C.S.*, White, D.M.*, *In Press*. The botanical science and cultural value of Coca leaf in South America, in: Gootenberg, P. (Ed.), Roadmaps to Regulation: Coca, Cocaine, and Derivatives. The Beckley Foundation, Oxford. *Available at:* https://www.researchgate.net/publication/334771368_The_Botanical_Science_and_Cultural_Value_of_Coca_Leaf_in_South_America

Jara-Muñoz, O.A.*, White, D.M.*, Rivera-Díaz, O., 2022. Morphological and Molecular Evidence Support Elevating *Erythroxylum macrophyllum* var. *savannarum* (Erythroxylaceae) to Specific Status. Systematic Botany 47, 467–476. https://doi.org/10.1600/036364422X16512572274990

Pitman, N.C.A.*, White, D.M.*, Andino, J.E.G., Couvreur, T.L.P., Fortier, R.P., Zapata, J.N., Cornejo, X., Clark, J.L., Feeley, K.J., Johnston, M.K., Lozinguez, A., Rivas-Torres, G., 2022. Rediscovery of *Gasteranthus extinctus* L.E. Skog & L.P. Kvist (Gesneriaceae) at multiple sites in western Ecuador. PhytoKeys 194, 33–46. https://doi.org/10.3897/phytokeys.194.79638

White, D.M., Meinhard, L., Bailey, B., Pirro, S., 2022a. The complete genome sequences of 56 *Erythroxylum* species. Biodiversity Genomes, November. https://doi.org/10.56179/001c.40336

White, D.M., Meinhardt, L., Bailey, B., Pirro, S., 2022b. The complete genome sequences of *Erythroxylum coca* and *Erythroxylum novogranatense*. Biodiversity Genomes, October. https://doi.org/10.56179/001c.39776

White, D.M., Pirro, S., 2022. The complete genome sequences of three species of Mountain Avens (*Dryas*, Rosaceae). Biodiversity Genomes, November. https://doi.org/10.56179/001c.40366

Stasinski, L.*, White, D.M.*, Nelson, P.R., Ree, R.H., Meireles, J.E., 2021. Reading light: leaf spectra capture fine-scale diversity of closely related, hybridizing arctic shrubs. New Phytologist 232, 2283–2294. https://doi.org/10.1111/nph.17731

White, D.M., Huang, J.-P., Orlando A, J.-M., Madriñán, S., Ree, R.H., Mason-Gamer, R.J., 2021. The Origins of Coca: Museum Genomics Reveals Multiple Independent Domestications from Progenitor *Erythroxylum gracilipes*. Systematic Biology 70, 1–13. https://doi.org/10.1111/nph.17731

White, D.M., 2020. A new variety of *Erythroxylum ulei* from the Cordillera Escalera of Peru (*Archerythroxylum*, Erythroxylaceae). Phytotaxa 449, 279–286. https://doi.org/10.11646/phytotaxa.449.3.6

White, D.M., Islam, M.B., Mason-Gamer, R.J., 2019. Phylogenetic inference in section *Archerythroxylum* informs taxonomy, biogeography, and the domestication of coca (*Erythroxylum* species). Am. J. Bot. 106, 154–165. https://doi.org/10.1002/ajb2.1224

*Authors contributed equally to the work; I have been first author or co-first author on every publication.

Invited Seminars

2022 *Collections-based phylogenomics and spectral classification of the coca clade.* Organismal and Evolutionary Biology Seminar. Harvard University, USA.

2022 *Diversificación y sistemas de cruzamiento del género de la coca (*Erythroxylum*) en la región Caribe*. Simposio Internacional en Ecología, Evolución, y Sostenibilidad del Caribe. Universidad Nacional de Colombia de La Paz, Colombia.

2022 *The natural history of coca (*Erythroxylum *spp.): Collections-based phylogenomics and spectral classification*. A. Watson-Armour Seminar Series. Field Museum, Chicago, USA.

2020 *Evolution in high resolution: genomics and leaf reflectance spectrometry*. Board of Trustees. Field Museum, Chicago, USA.

Contributed Presentations and Posters

2022 *Biodiversidad florística y conservación en regiones del occidente Ecuatoriano*. Presentation. (Co-author). XI Congreso Colombiano de Botánica.

2022 *Evaluating the utility of leaf reflectance spectroscopy for taxonomic classification of plant herbarium specimens*. Presentation. ASCEND Symposium (spectralbiology.org)

2018 *Phylogeographic analysis of the domestication of coca (*Erythroxylum *spp.).* Presentation. Botanical Society of America Conference.

2018 *Revisiting a hot-spot of plant extinction in coastal Ecuador.* Presentation. Field Museum Women's Board.

2017 *The origins of Coca: identifying progenitors of a South American shrub (*Erythroxylum *spp.)* Presentation. Evolution Conference.

2016 *Phylogenetic relationships of Triticeae estimated from the chloroplast genome and 123*

nuclear loci. Presentation (Co-author). Botanical Society of America Conference.

2015 *Diversification and diversity gradients in the Coca family of flowering plants*. Presentation. University of Illinois at Chicago.

2015 *Biome shifts and diversification in the Coca family of flowering plants (Erythroxylaceae)*. Poster. University of Illinois at Chicago.

2015 *Genetic Analysis of the Domestication of Coca.* Presentation. University of Illinois at Chicago.

2013 *Old specimens, new results: Preliminary analysis of Coca domestication from intrageneric relationships of Neotropical* Erythroxylum. Poster. Botanical Society of America Conference.

Conservation Tools and Reports

White, D.M., Pitman, N.C.A. Pitman, J.E.G. Andino, T.L.P. Couvreur, R.P.Fortier, J.N. Zapata, X. Cornejo, J.L. Clark, G. Rivas-Torres. Website. *Centinela is still ALIVE.* bit.ly/vivacentinela

Lyon, P. & D.M. White, & J. Huggins. 2009. *Rare plant status, survey, and monitoring – San Juan Public Lands 2009*. Prepared for San Juan Public Lands. Colorado Natural Heritage Program, Colorado State University, Fort Collins.

Lyon, P. & D.M. White. 2009. *Vegetation of Keystone Gorge: Plant communities and species.* Prepared for The Nature Conservancy. Colorado Natural Heritage Program, Colorado State University, Fort Collins.

Lyon, P. & D.M. White. 2009. *Rare Plant Survey of Dominguez Wilderness and Dominguez - Escalante National Conservation Area, 2009.* Prepared for the Bureau of Land Management. Colorado Natural Heritage Program, Colorado State University, Fort Collins.

Field work

2022 Colombia. Coca diversity and domestication.

2021 Ecuador. *Erythroxylum* collection & floristics of Cerro Centinela.

2021 Colorado, USA. *Dryas* phylogenomics.

2019 Alaska, USA. *Dryas* phylogenomics, spectral reflectance and drone-sensed spectral vegetation inventories)

2015 Colombia. *Erythroxylum* phylogenomics.

2014 Peru *Erythroxylum* phylogenomics.

2012 Guatemala. Personal collecting.

2010 Denali National Park and Preserve, Alaska, USA. Central Alaska Network Long-term Vegetation Monitoring Project.

2009 Colorado, USA. Colorado Natural Heritage Program, Western Slope Rare Plants Monitoring and Conservation Project.

2008 Cuzco and Madre de Dios, Peru. Botanical Research Institute of Texas, Andes to Amazon Biodiversity Project.

2007 Madre de Dios, Peru. Botanical Research Institute of Texas, Andes to Amazon Biodiversity Project.

Teaching

2022 Guest Lecturer, OEB 59: Plants and Human Affairs, Harvard University

2019 Instructor, Pinhead Institute

2016–2018 Course Instructor, Foundations of Genetics Laboratory, University of Illinois at Chicago

2016–2018 Guest Lecturer, BIOS 430: Evolution, University of Illinois at Chicago

2012–2013 Teaching Assistant, Biology of Populations and Communities, University of Illinois at Chicago

2011 Botany Instructor, Watershed Education Program, Telluride Institute

2009 Botany Instructor, Watershed Education Program, Telluride Institute

Mentorship

Undergraduate interns: Hamza Alkhawam (2018), Mohammed Alkhawam (2018), Autumn Morgan-Jones (2017-2018), Ana Buralli (2017), Jessica Walsh (2016–2017), Scott Leleika (2013–2014), Nyssa Van Ness (2013–2015)

Current Society Memberships

Botanical Society of America
International Society for Phylogenetic Nomenclature
Society of Herbarium Curators

Languages

Native English, fluent Spanish.

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