

Alexandra G. Ponette-González, Ph.D.

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Research Interests

My primary research interest involves understanding how global environmental change (land-use and land-cover change and climatic variability) alters the structure, function, and distribution of terrestrial ecosystems. I focus on hydrologic and biogeochemical cycling and vegetation dynamics, primarily in high-elevation tropical landscapes.

Education

- Ph.D. Ecosystem Ecology, Yale School of Forestry & Environmental Studies, 2009
Dissertation: *Land Cover Effects on Water Fluxes and Atmospheric Deposition across a Mexican Tropical Montane Landscape*
Advisors: Lisa M. Curran & Kathleen C. Weathers
- M.A. Geography, University of Texas at Austin, 2002
Thesis: *Living on the Margin: An Economic Analysis of Traditional Shade Coffee Cultivation by the Huastec Maya of Northeastern Mexico*
Advisor: William E. Doolittle
- B.A. Psychology with honors (Magna Cum Laude), United States International University, Mexico City, 1997

Professional Employment

- Fall 2011- *Assistant Professor*, Department of Geography, University of North Texas
- 2009-2011 National Science Foundation *Minority Postdoctoral Research Fellow*, Department of Geography and the Environment, University of Texas at Austin, Austin, TX.
Advisor: Kenneth Young
- 2003-2004 *Teaching Fellow*, Yale School of Forestry & Environmental Studies
Conservation and Development in Amazonia
Species and Ecosystem Conservation
- 2000-2002 *Teaching Assistant*, Department of Geography, University of Texas at Austin
Introduction to Physical Geography
Introduction to Human Geography
- 2002 *Graduate Research Assistant*, Department of Geography, University of Texas at Austin
Advisor: Dr. Rodrigo Sierra
- 1999-2000 *Coordinator of Media Relations and Grant Writer*, Sierra Gorda Ecological Group, Querétaro, Mexico

1998-1999 *Intern*, Center for World Indigenous Studies, Jalisco, Mexico

1996 *Intern*, Mexican Center of Environmental Law, Mexico City, Mexico

Publications in Peer-Reviewed Journals/Books

In review

Carlson, K., L.M. Curran, P. Raymond, **A.G. Ponette-González**, K.A. Brauman. Oil palm land use alters stream ecosystem function: A Kalimantan case study using high frequency measurements of temperature, sediments and metabolism. *Biogeosciences* (In review).

de Souza, P.A., **A.G. Ponette-González**, W.Z. de Mello, K.C. Weathers, and I.A. Santos. Atmospheric organic and inorganic nitrogen inputs to coastal urban and montane Atlantic Forest sites in southeastern Brazil. *Atmospheric Research* (In review).

Published or in press

Ponette-González, A.G., E. Marín-Spiotta, K.A. Brauman, K.A. Farley, K.C. Weathers, and K.R. Young. In press. Hydrologic connectivity in the high-elevation tropics: heterogeneous responses to land change. *BioScience*.

Fry, M.J., D.H. Hoeninghaus, **A.G. Ponette-González**, R. Thompson, and T.W. La Point. 2012. Fracking vs. Faucets: Balancing energy needs and water sustainability at urban frontiers. Viewpoint in *Environmental Science & Technology* 46: 7444-7445.

Ponette-González, A.G., and J.E. Byrnes. 2011. Sustainable science? Reducing the carbon impact of scientific mega-meetings. *Ethnobiology Letters* 2: 65-71.

Weathers, K.C., **A.G. Ponette-González***. 2011. Atmospheric Deposition. In: Levia, D.F., Carlyle-Moses, D.E., and Tanaka, T. (Eds.), *Forest Hydrology and Biogeochemistry: Synthesis of Past Research and Future Directions*. Ecological Studies Series, No. 216, Springer-Verlag, Heidelberg, Germany.

*No distinction made between first and second authors.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. 2010. Tropical land-cover change alters biogeochemical inputs to ecosystems in a Mexican montane landscape. *Ecological Applications* 20: 1820-1837.

Ponette-González, A.G., and M. Fry. 2010. Pig pandemic: Industrial hog farming in eastern Mexico. *Land Use Policy* 27: 1107-1110.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. 2010. Water inputs across a tropical montane landscape in Veracruz, Mexico: synergistic effects of land cover, rain and fog seasonality, and interannual precipitation variability. *Global Change Biology* 16: 946-963.

Ponette-González, A.G. 2007. 2001: A household analysis of Huastec Maya agriculture and land use at the height of the coffee crisis. *Human Ecology* 35: 289-301.

In preparation

Ponette-González, A.G., L.M. Curran, and K.C. Weathers. Biomass burning signatures in rainwater across East Asia. For submission to *Biogeochemistry*.

Ponette-González, A.G., K.C. Weathers, G. Piñeiro, W. Zamboni de Mello, Donna Schwede, D. Carnelos, P.A. de Souza, B. Steele, Y. Perroni, and L. Curran. Atmospheric deposition footprint of Latin American cities. For submission to *Annals of the Association of American Geographers*.

Weathers, K.C., **A.G. Ponette-González**. Fog, clouds, and the maintenance of ecosystems: Mist connections? For submission to *Ecosystems*.

Non Peer-Reviewed Publications

Pittman A., K. Carlson, L.M. Curran, and **A.G. Ponette-González**. In press. NASA satellite data used to produce nuanced land-cover maps and models of oil palm expansion across Indonesia. *Earth Observer*.

Weathers, K.C., A.E. Elliott, and **A.G. Ponette-González**. 2008. North American Wet Deposition Mapping Project Final Report. Commission for Environmental Cooperation, Montreal, Canada.

Ponette, A. 2004. Coffee, Cattle, and Colonialism: Historical effects of markets and agricultural policies on cloud forests in central Veracruz, Mexico. *Tropical Resources Institute Bulletin* 23: 37-44.

Research Grants & Fellowships

PI, *University of North Texas* Research Initiation Grant. Sensitivity of a tropical treeline forest to ENSO in the Andean-Amazon Basin, Peru, \$7,000 (2011).

Senior Personnel, *National Aeronautics and Space Administration (NASA)*. Socio-economic and political drivers of oil palm expansion in Indonesia, \$58,881 (2011-2014).

PI, *National Science Foundation*. US-Mexico Collaborative Research: Afforestation effects on nitrogen cycling in Mexico's eastern highlands, \$46,705 (2011-2014).

PI, *National Geographic Society Committee for Research and Exploration*. Tropical treelines and global change in the Andes, \$20,000, (2010).

PI, *Geo-Informatics and Space Technology Development Agency*. Spatial patterns of tropical montane forest cover across national park boundaries in the northern Peruvian Andes. THEOS satellite image data grant (2009).

PI, *LPDAAC*, Land cover effects on water fluxes and atmospheric deposition across a Mexican tropical montane landscape". ASTER data grant (2009).

PI, *National Science Foundation* Minority Postdoctoral Research Fellowship. Pattern and process of tree invasion and establishment in high-elevation tropical grasslands: land-use legacies and forest recovery in the equatorial Andes \$120,000 (2009-2011).

PI, *National Aeronautics and Space Administration* (NASA), Graduate Student Research Fellowship (NNX07AK37H). Goddard Space Flight Center, \$84,000 (2006-2009).

National Science Foundation, Doctoral Dissertation Improvement Grant (DEB-0608184), \$12,000 (2006-2008).

U.S. Department of Education, Fulbright-Hayes Doctoral Dissertation Research Award (P022A050039), \$17,334 (2005).

Compton Foundation Research Fellowship, \$10,000 (2005).

Smithsonian Institution, Conservation GIS Fellowship (2004).

Yale Institute of Biospheric Studies, Graduate Research Fellowship, \$5,000 (2004).

Ford Foundation, Predoctoral Diversity Fellowship, \$54,000 (2003-2004).

Yale Institute of Biospheric Studies, Field Ecology Award, \$300 (2003).

Tinker Foundation, Field Research Grant, \$1,500 (2001, 2003).

Yale Tropical Resources Institute, Graduate Research Fellowship, \$2,500 (2003).

Yale School of Forestry and Environmental Studies, Graduate School Fellowship (2002-2009).

University of Texas, International Education Fee Scholarship, \$600 (2001, 2002).

University of Texas, COLA/LLILAS Field Research Grant, \$630 (2001).

University of Texas, E.D. Farmer Fellowship, \$6,000 (2001).

University of Texas, Donald D. Brand Predissertation Fellowship, \$1,000 (2000).

McArthur-Hewlett-Ford Foundation, Graduate Fellowship in the Social Sciences, \$10,800 (2000-2002).

Invited Seminars

Ponette-González, A.G. “Many ways to be a catchment scientists: Perspectives from different lives in catchment science.” *Gordon Research Seminar*, Andover, NH, 15-16 June 2013.

Ponette-González, A.G. “Linking Land Cover and Ecosystem Function.” Seminar Series, Department of Geochemistry, *Universidade Federal Fluminense*, Rio de Janeiro, Brazil, 19 November 2012.

Ponette-González, A.G. “Linking Land Cover and Ecosystem Function”. Seminar Series, Department of Geography, *Oklahoma University*, Norman, OK, 9 November 2012.

Ponette-González, A.G. “Cambio de Uso de Suelo y Bordes Ecológicos”. Seminar Series, *Museo de Historia Natural*, Lima, Peru, 28 June 2011.

Ponette-González, A.G. “Tropical Mountain Water Towers in Transition”. Seminar Series, Department of Geography, *University of North Texas*, Denton, TX, 12 November 2010.

Ponette-González, A.G. “Boundaries and Biogeochemistry”. Field Notes Lecture Series, Department of Geography, *Central Washington University*, Ellensburg, WA, 28 November 2010.

Ponette-González, A.G. “From the Atmosphere to Ecosystems: Tropical land-cover effects on water and biogeochemical fluxes in eastern Mexico”. Seminar Series, Department of Integrative Biology, *University of Texas at San Antonio*, San Antonio, TX, 9 February 2010.

Ponette-González, A.G. “Water, nutrient, and pollutant inputs to a complex mountain watershed in Mexico”. Colloquium series, Department of Geography and the Environment, *University of Texas at Austin*, Austin, TX, 2 October 2009.

Ponette-González, A.G. “Ecosystem and biodiversity response to climate change in the Andes”. *Adapting to a world without glaciers: realities, challenges and actions*, Lima, Peru, 8 July 2009.

Ponette-González, A.G. “Environmental conservation across a human-modified tropical montane landscape in central Veracruz, Mexico”. Applied Biodiversity Seminar Series, *Texas A&M University*, College Station, TX, 6 October 2008.

Awards & Invited Symposiums

Stable Isotopes in the Paleoenvironment Workshop, Kansas State University, Manhattan, KS, 22-28 May 2011.

Women Evolving the Biological Sciences (WEBS), Pack Forest Conference Center, WA, 24-27 October 2010.

Dissertation Initiative for the Advancement of Climate Change Research (DISCCRS) V Symposium, Saguaro Lake Ranch Resort, AZ, 13-20 March 2010.

Pan-American Advanced Studies Institute (PASI), Interdisciplinary Studies on Global Climate Change and the Ecology and Management of Tropical Montane Ecosystems, Dominican Republic, 6-14 March 2010.

Research Presentations (asterisk denotes graduate student)

Ponette-González, A.G., K.C. Weathers, G. Piñeiro, W.Z. de Mello, P.A. de Souza, B. Steele, D. Carnelos, and Y. Perroni. “The atmospheric deposition footprint of Latin American cities.” Paper presented at the *Association of American Geographers Annual Meeting*, Los Angeles, California, 9-13 April 2013.

*Griffith, K., **A.G. Ponette-González**, and L.M. Curran. “Spatio-temporal variability in atmospheric wet deposition across Borneo: biomass burning, ENSO, and urbanization.” Poster presented at the *Southwestern Division of the Association of American Geographers Meeting*, Las Cruces, NM, 25-27 October 2012.

Carlson, K.M., L.M. Curran, **A.G. Ponette-González**, J.H. Jones, and D. Ratnasari. Effects of oil palm plantations on freshwater streams in Indonesian Borneo. Poster presented at the *NASA LCLUC Science Team Meeting*, Rockville, MD, 2-5 April 2012.

Ponette-González, A.G., H.A. Ewing, K.R. Young, and R.C. Ferring. “Land-use legacies in the Andes: fire, grazing, and soil chemistry across treeline.” Paper presented at the *Association of American Geographers Annual Meeting*, New York City, New York, 24-28 February 2012.

Fry, M.J., and **A.G. Ponette-González**. “Field mapping tropical treelines in Peru.” Paper presented at the *Conference of Latin Americanist Geographers Meeting*, Mérida, Yucatán, México, 11-13 January 2012.

Ponette-González, A.G., and K.R. Young. “Seedling regeneration above a tropical treeline in northern Peru.” Paper presented at the *Southwestern Division of the Association of American Geographers Meeting*, Austin, TX, 10-11 November 2011.

Ponette-González, A.G., K.C. Weathers, and A.M. Lindsey. “Estimates of wet deposition across North America: challenges and opportunities of merging data across nations.” Paper presented at the *National Atmospheric Deposition Program 2011 Technical Committee Meeting*, Providence, RI, 25-28 October 2011.

Ponette-González, A.G., Lisa M. Curran, and Kathleen C. Weathers. “Land-cover and precipitation variability effects on water and atmospheric inputs to tropical forest landscapes.” Poster presented at the *NASA Carbon Cycle & Ecosystems Joint Science Workshop*, Alexandria, VA, 3-7 October 2011.

Ponette-González, A.G., and K.R. Young. “Stable Boundaries: Woody plant encroachment and soil chemistry above treeline in the northern Peruvian Andes.” Paper presented at the *Association of American Geographers Meeting*, Seattle, WA, 12-16 April 2011.

Young, K.R., J. Postigo, B. León, **A.G. Ponette-González**, and D. Silva. “Implications of global change for high Andean biodiversity and land cover: Examples from Peru.” *Global Land Project Open Science Meeting*, Tempe, AZ, 16-19 October 2010.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Nutrient and pollutant redistribution after land-cover change: evidence from eastern Mexico.” Paper presented at the *Association of American Geographers Meeting*, Washington D.C., 14-18 April 2010.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Effects of tropical land-cover change on spatial patterns of atmospheric deposition and throughfall ion fluxes to montane ecosystems in eastern Mexico.” Poster presented at *Society for the Advancement of Chicanos and Native Americans in Science Meeting*, Dallas, TX, 15-17 October 2009.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Synergistic effects of land cover type, rain and fog seasonality, and climatic extremes on water inputs to a tropical mountain landscape in eastern Mexico.” Paper presented at the *2nd International Conference on Forests and Water in a Changing Environment*, Raleigh, NC, 14-16 September 2009.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Land cover, rain and fog seasonality, and interannual precipitation variability alter water inputs across a tropical montane landscape in Veracruz, Mexico.” Paper presented at the *Conference of Latin Americanist Geographers Meeting*, Granada, Nicaragua, 7-9 January 2009.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Land use change effects on water fluxes and atmospheric deposition across a Mexican tropical montane landscape.” Dissertation research presented at the *NASA Graduate Student Researchers Program Symposium*, Greenbelt, MD, 24-26 September 2008.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Spatiotemporal effects of land use/land cover type on water and atmospheric inputs across a Mexican tropical montane landscape.” Poster presented at the *Association of American Geographers Meeting*, Boston, MA, 15-19 April 2008.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Spatial and temporal effects of land cover type on water atmospheric inputs across a tropical montane landscape.” Poster presented at the *NASA Graduate Student Researchers Program Symposium*, Greenbelt, MD, 19-21 September 2007.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Coffee, cattle, and cloud forests: Land cover effects on rain and fog water fluxes across a human-inhabited landscape”. Poster presented at the *Ecological Society of America Meeting*, Mérida, Yucatán, MX, 9-12 January 2006.

Ponette-González, A.G., K.C. Weathers, and L.M. Curran. “Land cover effects on water fluxes and atmospheric deposition across a Mexican tropical montane landscape”. Research presented at the *Conference of Latin Americanist Geographers Meeting*, Morelia, Michoacán, MX, 26-28 October 2005.

Ponette-González, A.G. “Costs and benefits of Huastec coffee cultivation: role of land availability in household economic decisions”. Paper presented at the *Association of American Geographers Centennial Meeting*, Philadelphia, PA, 14-19 March 2004.

Ponette-González, A.G. “Shade coffee plantations: Are they economically sustainable?” Paper presented at the *Southwestern Division of the Association of American Geographers Meeting*, Ft. Worth, TX, 14-17 November 2001.

Conferences/Workshops Attended

Gordon Research Conference, Andover, NH 17-21 June 2009.

Association of American Geographers Meeting, Las Vegas, NV, 22-27 March 2009.

“U.S.-Mexico Acid Rain Workshop” coordinated by the North American Commission for Environmental Cooperation (NACEC), Mexico City, MX, 03 August 2007.

Association of Tropical Biology Meeting, Morelia, Michoacán, MX, 15-19 July 2007.

Conference of Latin Americanist Geographers Meeting, Colorado Springs, CO, 31 May-3 June 2007.

First Annual Congress of the Mexican Ecological Scientific Society, Morelia, Michoacán, MX, 26-30 November 2006.

Ecological Society of America’s 88th Annual Meeting, Workshop “The Role of Scientists in the International Coffee Crisis”, Savannah, GA, 3 August 2003.

Synergistic Activities

- *Board Member*, Conference of Latin Americanist Geographers, 2010-2013.
- *Session organizer and chair*, Association of American Geographers Annual Meeting, 2010-2011, 2013.
- *Session organizer and chair*, Ethnobiology Conference, 2013.
- *Session organizer and chair*, Southwestern Division of the Association of American Geographers Annual Meeting, 2011.
- *Adhoc reviewer for NSF*: Dynamics of Coupled Human and Natural Systems (early career panelist 2010, panelist 2012), Geography and Spatial Sciences, Office of International Science and Engineering (2010).
- *Adhoc reviewer for Biodiversity and Conservation, Biogeochemistry, Biotropica, British Journal of Applied Science and Technology Ecología en Bolivia, Ecosphere, Environmental Research Letters, Environmental Science & Technology, Journal of Geophysical Research-Biogeosciences, Land Degradation & Development, Environmental Monitoring and Assessment, The Southwestern Geographer, Ecological Studies (Springer), and Fundamentals of Ecosystem Science (Elsevier).*
- *Reviewer for DISCCRS*, Association of American Geographers Latin American Specialty Group.

- *Member* of the Society for Advancement of Chicanos and Native Americans in Science (SACNAS), Association for Women in Science, St. Louis Chapter.
- *Secretary*, Ecological Society of America Mexico Chapter, 2006-2008.
- *Conference Organizer*, 20th Annual Doctoral Student Conference, Yale School of Forestry and Environmental Studies, New Haven, Connecticut, 2004.
- *Conference Organizer*, Environmental Forum, United States International University.

PROFESSIONAL AFFILIATIONS

2000-present	Association of American Geographers
2005-present	Conference of Latin Americanist Geographers
2009-present	Society for the Advancement of Chicanos & Native Americans in Science
2005-2011	Ecological Society of America

LANGUAGES

English (bilingual from birth) - fluent in speaking, reading, and writing

Spanish (bilingual from birth) - fluent in speaking, reading, and writing

French – fluent in speaking, intermediate reading and writing skills