

## **CURRICULUM VITAE**

### **NAME**

Martin, Patrick H

### **ADDRESS**

Horticulture and Landscape Architecture  
College of Agricultural Sciences

Shepardson  
Shepardson Building

### **PHONE**

(970) 491-7216

### **EDUCATION**

- 2005 Ph D, Cornell University
- 1998 MS, Yale University-School of Forestry/Environmental Studies
- 1994 BS, St. Andrews University, Scotland
- 1994 MS, St. Andrews University, Scotland

### **SABBATICALS**

(2013) CSU, I was on a six month sabbatical from July through December 2013. I spend one month teaching in Vietnam and only month initiating a new research collaboration in the Jamaica. Jamaican montane forests share many ecological similarities with my main research site in the Dominican Republic. Via new connections, I was invited to work with PIs who have researched in Jamaica for 40 years. We conducted one month of fieldwork and initiated several proposals and synthesis manuscripts.

### **OTHER POSITIONS**

- September 2006 - Present Assistant Professor, Colorado State University.
- 1998 - Present Lecturer, Yale School of Forestry & Environmental Studies.
- January 2006 - May 2006 Adjunct Professor, University of Rhode Island.
- September 2003 - December 2005 Post- Doctoral Fellow, Institute of Ecosystem Studies.
- 1998 - 2002 Teaching Assistant, Cornell University.
- 1996 - 1998 Teaching Assistant, Yale School of Forestry & Environmental Studies.
- June 1997 - August 1997 Researcher, Hubbard Brook Experimental Forest.

### **PUBLISHED WORKS**

#### **Refereed Journal Articles**

- Buechling, A., Martin, P. H., Canham, C. D., Shepperd, W. D., Battaglia, M. A. (in press). Climate drivers of seed production in *Picea engelmannii* and response to warming temperatures in the southern Rocky Mountains. *Journal of Ecology*.
- Martin, P. H., Canham, C. Divergent life-histories, natural disturbance and human land use determine long-term invasion dynamics of forests by exotic invasive tree species: results from a forest simulator. *Ecological Monographs*.
- Martin, P. H., Gannon, B. (2015). Diversity and response of tropical montane floristics to frequent hurricane disturbance in Dominican Republic. *Journal of Tropical Ecology*.
- Crausbay, S. D., Martin, P. H., Kelly, E. F. (2015). Tropical montane vegetation dynamics near the upper cloud belt strongly associated with a shifting ITCZ and fire. *Journal of Ecology*, 103(4), 891–903.
- Salley, S. W., Sleezer, R. O., Bergstrom, R., Martin, P. H., Kelly, E. F. Long-term perspective of the dry boundary for the Great Plains of North America: Implications of climatic variability and climatic change induced temporal and spatial soil moisture patterns on soil genesis and agriculture. *Geoderma*.
- Crausbay, S. D., Martin, P. H. (2014). The role of disturbance in tropical montane forest ecology: re-thinking the stability/fragility paradigm of cloud forests. *Journal of Tropical Ecology*.
- Martin, P. H., Canham, C. Tree species growth response to climatic gradients in the Rocky Mountains. *Ecology*.
- Gannon, B., Martin, P. H. (2014). Reconstructing hurricane disturbance in a tropical montane forest landscape in the Cordillera Central, Dominican Republic: Implications for vegetation patterns and dynamics. *Arctic, Antarctic, and Alpine Research*, 46(4), 767–776.
- Martin, P. H. (2014). Mesoclimatic Patterns Shape the Striking Vegetation Mosaic in the Cordillera Central, Dominican Republic. *Arctic, Antarctic, and Alpine Research*, 46(4), 755–765.
- Martin, P. H. (2012). Patterns of growth, recruitment, mortality and biomass across an altitudinal gradient in a neotropical montane forest, Dominican Republic. *Journal of Tropical Ecology*, 28(5), 483–495.
- (2011). Global warming, elevational ranges and the vulnerability of tropical biota. *Biological Conservation DOI: 10.1016/j.biocon.2010.10.010*.
- Martin, P. H. (2011). Vegetation zonation in a Neotropical montane forest: environment, disturbance and ecotones. *Biotropica*, 43(5), 533–543.
- (2010). Dispersal and recruitment limitation in native versus exotic tree species. *Oikos*, 119, 807–824.
- (2010). Divergence from the growth-survival trade-off and extreme high growth rates drive patterns of exotic tree invasions in closed-canopy forests. *Journal of Ecology*, 98, 778–789.
- (2010). Vegetation zonation in a Neotropical montane forest: environment, disturbance and ecotones. *Biotropica DOI: 10.1111/j.1744- 7429.2010.00735.x*.
- (2009). Why forests appear resistant to exotic plant invasions. *Frontiers in Ecology and the Environment*, 7, 142–149.
- (2008). Fire and vegetation dynamics in high-elevation Neotropical montane forests of the Dominican Republic. *Ambio*, 37, 535–541.
- (2008). Neighbourhood models of the effects of the invasive *Acer platanoides* on tree seedling dynamics. *Journal of Ecology*, 96, 78–90.

- (2007). Tropical montane forest ecotones: climate gradients, natural disturbance, and vegetation zonation in the Cordillera Central, Dominican Republic. *Journal of Biogeography*, 34, 1792-1806.
- (2006). Fires above the clouds: fire history along environmental gradients in the subtropical pine forests of the Cordillera Central, Dominican Republic. *Journal of Tropical Ecology*, 22, 14-Jan.
- (2006). Intact forests provide only weak resistance to a shade-tolerant invasive Norway maple (*Acer platanoides* L). *Journal of Ecology*, 94, 1070-1079.
- (2005). Vegetation-environment relationships in forest ecosystems of the Cordillera Central, Dominican Republic. *Journal of the Torrey Botanical Society*, 132, 293-310.
- (2004). Forty years of tropical forest recovery from agriculture: structure and floristics of secondary and old growth riparian forests in the Dominican Republic. *Biotropica*, 36, 297-317.
- (1999). Norway maple (*Acer platanoides*) invasion of a natural forest stand: the pattern of colonization and understory consequences. *Biological Invasions*, 1, 215-222.

### **Refereed Proceedings or Transactions**

- Martin, P. H., Crausbay, S. D. (2013). *6000 years of high elevation vegetation dynamics in the Cordillera Central, Dominican Republic*. Association for Tropical Biology and Conservation Annual Meeting, San Jose, Costa Rica, June 23-27th..
- Gannon, B., Martin, P. H. (2011). *Hurricane impacts to tropical montane forests in the Cordillera Central, Dominican Republic*. 26th Annual Landscape Ecology Symposium: Sustainability in Dynamic Landscapes Portland, OR, April 3-7.
- Martin, P. H. (2011). *Life-histories, natural disturbance and human land use determine long-term invasion dynamics of forests by exotic invasive tree species*. Proceedings of the Ecological Society of America Annual Meeting, Austin, TX, August 8-12.
- Martin, P. H. (2010). *Saplings dynamics along latitudinal gradients*. Guild of Rocky Mountain Ecologists and Evolutionary Biologists (GREEBs), Pingree Park, Sept 10-12.
- (2010). *Climate change and forest dynamics in the Rocky Mountains*. Ecological Society of America Annual Meeting, Pittsburgh, NM, August 1-6.
- (2009). *Fundamental Sentinel Unit: Organismal measurements in a national network*. The LTER Long Term Ecological Research Network All Scientists Meeting, Estes Park, CO, September 14-16th.
- (2009). *Life-history trade-offs in growth & survivorship drive patterns of exotic tree invasions of closed- canopy forests*. Ecological Society of America Annual Meeting, Albuquerque, NM, August 2-7.
- (2009). *The Fundamental Sentinel Unit: Organismal measurements and DNA barcoding in a national network*. Third International Barcode of Life, Mexico City, November 9-13th.
- (2009). *Using NEON to Measure Adaptation of Vegetation to Changes in Environmental Forcing*. American Geophysical Union Annual Meeting, San Francisco, CA, December 14-18th.
- (2006). *Invasion of northeastern forests by exotic tree species*. Ecological Society of America Annual Meeting, Memphis, TN, August 6-11.

(2003). *Norway maple invasion of forest stands: 4-years of seedling establishment and demography in small gaps and deep shade*. Joint Conference: Weed Science Society of America and the Ecological Society of America on Invasive Plants (IPINAMS), Fort Lauderdale, FL, November 11-15.

### **Book Review**

(2008). *Infectious Disease in Invasion Biology* (pp. 179-204). *Ecology of Infectious Diseases: Effects of Ecosystems on Disease and of Disease on Ecosystems* (eds RS Ostfeld, F Keesing & VT Eviner) Princeton University Press.

### **PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS**

June 2013, "Tropical Montane Forest Ecology", Association for Tropical Biology & Conservation, San Jose, Costa Rica, peer-reviewed/refereed.

June 24, 2013, "Elfin forest dynamics over the past 6,000 years in the cordillera central, Dominican Republic", Association for Tropical Biology & Conservation, San Jose, Costa Rica, peer-reviewed/refereed.

2012, "Demographic determinants of invasiveness: life-histories, biotic resistance, and disturbance drive invasion dynamics of forests by exotic invasive tree species. Syracuse University, Department of Biology Seminar Series, Martin, P.H. Syracuse, NY."

2012, "Martin, P.H. 2012. Towards a Unified Ecology of Tropical Montane Cloud Forests. Ecological Society of America Annual Meeting, Portland, OR, August 6-12th.", peer-reviewed/refereed.

2012, "Salley, S.W., P.H. Martin, A.K. Knapp, and E.F. Kelly. 2012. Soil landscape development in the Shortgrass Steppe Ecosystem: assessing the vulnerability of soils to climate change. Ecological Society of America Annual Meeting, Portland, OR, August 6-12th.", peer-reviewed/refereed.

2012, "The trade-wind inversion, climate-elevation discontinuities, and the tropical-temperate ecotone in the tropical mountains of the Dominican Republic. Vulnerable Islands in the Sky: Science and Management of Tropical Island Alpine & Sub-Alpine Ecosystems, Waimea, HI. Martin, P.H., R.E. Sherman and T.J. Fahey.", peer-reviewed/refereed.

2011, "The role of succession in plant community dynamics. Graduate Degree Program in Ecology, Colorado State University, Martin, P.H. Fort Collins,

CO."

2010, "Martin, P.H. 2010 Colorado State University, Graduate Degree Program in Ecology, Fort Collins, CO. The role of succession in plant community dynamics. Invited Seminar."

2010, "Martin, P.H. 2010. Pan-American Advanced Studies Institute, Global Climate Change and the Ecology and Management of Tropical Montane Ecosystems, Jarabacoa, Dominican Republic. Climate change and the future of forests in the Cordillera Central, Dominican Republic. Invited Seminar, 2010.", peer-reviewed/refereed.

2010, "Martin, P.H. 2010. Saplings dynamics along latitudinal gradients. Guild of Rocky Mountain Ecologists and Evolutionary Biologists (GREEBs), Pingree Park, September 10-12."

2010, "Martin, P.H., C.D. Canham, and J. Murgel. 2010. Climate change and forest dynamics in the Rocky Mountains. Ecological Society of America Annual Meeting, Pittsburgh, NM, August 1-6.", peer-reviewed/refereed.

2009, "Gibson, C., B.H. Kao, and P.H. Martin. 2009. The Fundamental Sentinel Unit: Organismal measurements and DNA barcoding in a national network. Third International Barcode of Life, Mexico City, November 9-13th.", peer-reviewed/refereed.

2009, "Martin, P.H. and C.D. Canham. 2009. Life-history trade-offs in growth & survivorship drive patterns of exotic tree invasions of closed-canopy forests. Ecological Society of America Annual Meeting, Albuquerque, NM, August 2-7.", peer-reviewed/refereed.

2009, "Martin, P.H., B.H. Kao, and C. Gibson. 2009. Using NEON to Measure Adaptation of Vegetation to Changes in Environmental Forcing. American Geophysical Union Annual Meeting, San Francisco, CA, December 14-18th.", peer-reviewed/refereed.

## TEACHING:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
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2016	Spring	HORT799 - Dissertation	18	2
2016	Spring	HORT795 - Independent Study	18	1
2016	Spring	HORT698 - Research	18	15
2016	Spring	LAND698 - Research	5	0
2015	Fall	LAND444 - Ecology of Landscapes	3	22
2015	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	21
2015	Fall	LIFE220 - Fundamentals of Ecology (GT-SC2)	3	119
2015	Fall	HORT795 - Independent Study	18	1
2015	Fall	HORT698 - Research	18	18
2015	Fall	LAND698 - Research	5	0
2015	Summer	HORT698 - Research	18	7
2015	Spring	HORT698 - Research	18	13
2015	Spring	LAND698 - Research	5	0
2014	Fall	LAND444 - Ecology of Landscapes	3	19
2014	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	22
2014	Fall	LIFE220 - Fundamentals of Ecology (GT-SC2)	3	103
2013	Fall	ECOL698 - Research	4	3
2013	Fall	HORT698 - Research	18	10
2013	Fall	LAND698 - Research	5	0
2013	Spring	ECOL698 - Research	18	53
2013	Spring	LAND698 - Research	5	0
2013	Winter	BZ120 - Principles of Plant Biology at Vietnam Forestry University	4	42
2012	Fall	LAND444 - Ecology of Landscapes	3	35
2012	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	24
2012	Fall	LIFE220 - Fundamentals of Ecology (GT-SC2)	3	85
2012	Fall	ECOL698 - Research	18	55
2012	Spring	ECOL571 - Advanced Topics in Ecology	3	14
2012	Spring	ECOL571 - Advanced Topics in Ecology	3	29
2012	Spring	ECOL698 - Research	18	58
2012	Spring	LAND698 - Research	5	0
2011	Fall	LAND444 - Ecology of Landscapes	3	25
2011	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	31
2011	Fall	LIFE220 - Fundamentals of Ecology (GT-SC2)	3	67
2011	Fall	ECOL698 - Research	18	45
2011	Summer	ECOL698 - Research	18	3
2010	Fall	LAND444 - Ecology of Landscapes	3	22
2010	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	32
2010	Fall	LIFE220 - Fundamentals of Ecology (GT-SC2)	3	58
2010	Spring	ECOL698 - Research	18	27
2010	Spring	HORT699 - Thesis	18	4
2009	Fall	HORT698 - Research	18	12
2008	Fall	LAND444 - Ecology of Landscapes	3	22
2008	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	67
2008	Fall	LIFE220 - Fundamentals of Ecology (GT-SC2)	3	33
2008	Spring	ECOL698 - Research	18	27
2007	Fall	LAND444 - Ecology of Landscapes	3	36
2007	Fall	LAND220 - Fundamentals of Ecology (GT-SC2)	3	67
2007	Fall	SOCR220 - Fundamentals of Ecology (GT-SC2)	3	41
2007	Fall	ECOL695 - Independent Study	18	13
2007	Fall	LAND495B - Independent Study: Field Service	4	2
2007	Fall	LAND384 - Supervised College Teaching	5	0

#### Guest Lectures:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2014	Spring	NR578 - Ecology of Disturbed Lands	1	Face to Face
2014	Winter	Forest Ecology	1	Face to Face
2013	Spring	NR578 - Ecology of Disturbed Labds	1	Face to Face

### **EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS**

#### **Presentation**

Ecology of Tropical Montane Cloud Forest. Adult, Vientiane. Number of times program was made: 1. Total number of participants: 30. Percent Responsible: 100%. 1st Quarter 2014.

#### **Short Course**

LIFE 220- Fundamentals of Ecology. Adult. Total number of participants: 32. Percent Responsible: 100%. 1st Quarter 2014.

### **COMMITTEES**

Colorado Forest Restoration Institute, (June 1, 2014 - Present).

Global Change Ecologist Faculty Search Committee, (2011).

Global Change Ecologist Faculty Search Committee, (2010 - 2011).

MLA Faculty Search Committee, (2010).

Social Committee, (2006 - 2010).

Global Change Ecologist Faculty Search Committee, (2011).

Global Change Ecologist Faculty Search Committee, (2010 - 2011).

MLA Faculty Search Committee, (2010).

Social Committee, (2006 - 2010).

Graduate Admissions Committee, (December 2010 - Present).

Advance in Rank and Tenure Committee, (August 2012 - August 2017).

Global Change Ecologist Faculty Search Committee, (2011).

Global Change Ecologist Faculty Search Committee, (2010 - 2011).

MLA Faculty Search Committee, (2010).

Social Committee, (2006 - 2010).

### **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

British Ecological Society. (2014 - Present).

Association for Tropical Biology and Conservation. (2003 - 2014).

Ecological Society of America. (2003 - 2014).

Ecological Society of America. (2005 - 2010).

Association for Tropical Biology and Conservation. (2004 - 2010).

Editor, Journal Editor, Journal of Tropical Ecology. (September 2014 - Present).

Reviewer, Ad Hoc Reviewer, Biotropica. (2012 - Present).

Reviewer, Ad Hoc Reviewer, Ecological Applications. (2012 - Present).

Ecological Society of America, Portland, OR. (2012 - Present).

Reviewer, Ad Hoc Reviewer, Journal of Ecology. (2012 - Present).

Reviewer, Ad Hoc Reviewer, Journal of Tropical Ecology. (2012 - Present).

Member, National Science Foundation. (2012 - Present).

Reviewer, Ad Hoc Reviewer, National Science Foundation. (2012 - Present).

University of Hawaii, Hilo, Waimea, HI. (2012 - Present).

Reviewer, Ad Hoc Reviewer, Biological Invasions. (2011 - Present).

Reviewer, Ad Hoc Reviewer, Biotropica. (2011 - Present).

Reviewer, Ad Hoc Reviewer, Ecology. (2011 - Present).

Member, EPA Science to Achieve Results. (2011 - Present).

Reviewer, Ad Hoc Reviewer, Journal of Ecology. (2011 - Present).

Reviewer, Ad Hoc Reviewer, National Science Foundation. (2011 - Present).

Reviewer, Ad Hoc Reviewer, Ecological Monographs. (2010 - Present).

Reviewer, Ad Hoc Reviewer, Forest Ecology and Management. (2010 - Present).

Reviewer, Ad Hoc Reviewer, Journal of Ecology. (2010 - Present).

Reviewer, Ad Hoc Reviewer, National Science Foundation. (2010 - Present).

Editor, Associate Editor, CloudNet: research coordination network on tropical montane forest ecology. (2013 - 2015).

Member, Advance in Rank and Tenure Committee. (2012 - 2015).

Member, Grad Admissions Committee. (2010 - 2015).

Member, Graduate Degree Program in Ecology. (2006 - 2015).

Member, GDPE Executive Committee. (2011 - 2013).

Member, Geospatial Centroid Advisory Committee. (2011 - 2013).



Member, SoGES Curriculum Committee. (2011 - 2013).

Member, Association for Tropical Biology and Conservation. (2003 - 2013).

Member, Ecological Society of America. (2003 - 2013).

Workshop Organizer, CloudNet: research coordination network on tropical montane forest ecology, Pingree Park, CO. (October 11, 2013 - October 13, 2013).

Global Change Ecologist Faculty Search Committee. (2011).

Global Change Ecologist Faculty Search Committee. (2010 - 2011).

Member, HLA Graduate Admissions Committee. (2010 - 2011).

MLA Faculty Search Committee. (2010).

Member, HLA Graduate Admissions Committee. (2009 - 2010).

Member, Managed Ecosystems Committee. (2006 - 2010).

Social Committee. (2006 - 2010).

Member, Ecological Society of America. (2005 - 2010).

Member, Association for Tropical Biology and Conservation. (2004 - 2010).

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