

C. E. Timothy Paine

Current Position

Postdoctoral Researcher
Institut für Evolutionsbiologie und Umweltwissenschaften
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Research Interests

Community structure, species coexistence, species range limits, diversity

Publications

Peer-reviewed articles

- Paine, CET**, C Baraloto, J Chave, B Hérault and F Jabot. In prep. Functional trait distributions reveal mechanisms of community assembly in tropical rain forests.
- Paine, CET**, C Stahl, E Courtois, S Patiño, C Sarmiento and C Baraloto. In prep. Functional explanations for variation in bark thickness in tropical rain forest trees.
- Baraloto, C, **CET Paine**, L Poorter, J Beauchene, D Bonal, J Chave, A-M Domenach, B Hérault, S Patino, and J-C Roggy. In preparation. Decoupled leaf and stem economics in rainforest trees.
- Zalamea, P-C, P Heuret, F Munoz, **CET Paine**, C Sarmiento, D Sabatier, and PR Stevenson. In review. Continental-scale patterns of Cecropia phenology: Evidence from herbarium specimens. *Journal of Ecology*.
- Sarmiento, C, S Patiño, **CET Paine**, J Beauchêne, A Thibaut and C Baraloto. In review. Within-individual variation in tropical tree wood density. *American Journal of Botany*.
- Gagnon, PR, HA Passmore, WJ Platt, JA Myers, **CET Paine**, and KE Harms. In review. Does pyrogenicity protect burning plants? *Ecology*.
- Gonzalez, M, A Roger E Courtois, F Jabot, N Norden, **CET Paine**, C Baraloto, C Thébaud and J Chave. 2010. Shifts in species and phylogenetic diversity between sapling and tree communities indicate negative density-dependence in a lowland rain forest. *Journal of Ecology*. 98: 137-146.

- Baraloto, C, **CET Paine**, S Patiño, D. Bonal, B. Hérault and J. Chave. 2010. Functional trait variation and sampling strategies in species-rich communities. *Functional Ecology*. 24: 208-216.
- Courtois, E, **CET Paine**, P-A Blandinières, D. Stein, J-M Bessière, E Houël, C Baraloto, J Chave. 2009. Diversity of the volatile organic compounds emitted by 55 species of tropical trees: A survey in French Guiana. *Journal of Chemical Ecology*. 35: 1349-1362.
- Paine, CET** and KE Harms. 2009. What shapes tropical seedling community structure? Seed dispersal versus environmental conditions. *Oecologia*. 160: 19-150.
- Paine, CET**, KE Harms, and J Ramos. 2009. Water availability increases seedling performance and diversity in a tropical forest. *Journal of Tropical Ecology*. 25: 171-180.
- Paine, CET**, KE Harms, SA Schnitzer, and WP Carson. 2008. Weak competition among tropical tree seedlings: implications for species coexistence. *Biotropica*. 40:432-440.
- Terborgh, J, G Nuñez, N. Pitman, F Cornejo, P Alvarez, V Swamy, B Pringle, and **CET Paine**. 2008. Tree recruitment in an “empty” forest. *Ecology*. 89:1757-1768. (Cover article)
- Paine, CET**, and H Beck. 2007. Seed predation by Neotropical rainforest mammals increases diversity in seedling recruitment. *Ecology*. 88:3076-3087.
- Harms, KE and **CET Paine**. 2003. Regeneración de árboles tropicales e implicaciones para el manejo de bosques naturales. *Ecosistemas* 2003/3.

Book

- Paine, CET** 2007. Seedling recruitment in a tropical rain forest: Ecological factors that maintain diversity and shape community structure. 80 pp. VDM Verlag Dr. Müller, Saarbrücken, Germany. ISBN: 978-3-8364-2926-9

Website

- Paine, CET** and P Alvarez. Manuplants.org. Photos detailing the flowers, fruit, seeds, and seedlings of 967 species of trees from Southeastern Peru. <http://manuplants.org>

Education

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|-----------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2002-2007 | Ph.D. | Department of Biological Sciences
Louisiana State University
Baton Rouge, Louisiana USA
Title of dissertation: Ecological factors affecting the diversity of tropical tree seedlings |
| 2005 | | Likelihood Methods in Forest Ecology
Cary Institute for Ecosystem Studies
Millbrook, New York USA |
| 1995-1999 | B.A. | Departments of Biology and Earth Sciences
Dartmouth College |

Hanover, New Hampshire USA

Title of honors thesis: Holocene water quality and climate fluctuations in the New World District, Montana

1999 Dartmouth Field Course in Tropical Ecology
Costa Rica and Jamaica

Grants and Awards

2009	CNRS Amazonie grant, Co-PI with Chris Baraloto	€ 9,000
2008	CNRS Amazonie grant, Co-PI with Natalia Norden	€ 5,660
2007	Daisy and William Luke Botany Teaching Assistant Award	\$ 500
2004	OAS LASPAU Fellowship	\$ 2,500
2003	Sigma Xi Grant-in-Aid of Research	\$ 1,000
2002	LSU Board of Regents Graduate Fellowship and enhancement	\$ 23,000 for 4 years
1999	Undergraduate Thesis with Honors ‘Holocene water quality and climate fluctuations in the New World District, Montana’	

Research Experience

2010 – Present Postdoctoral Researcher, Institut für Evolutionsbiologie und Umweltwissenschaften, University of Zurich, Switzerland

2008 – 2009 Postdoctoral Researcher with the BRIDGE Project, Kourou, French Guiana

2003 – 2007 Manu National Park and Los Amigos Biological Station, Peru. Dissertation research: ‘Ecological factors affecting the diversity of tropical tree seedlings’

2002 Brownsberg Nature Park, Surinam. Initiated a vegetation-monitoring program, emphasizing the fruiting phenology of canopy trees.

2000 Museo de Historia Natural, Santa Cruz, Bolivia. Collected, identified, and accessioned botanical specimens in Parque Nacional Noel Kempff Mercado

Teaching Experience

2007 Plant Taxonomy (Biol 4041)

2006 Mycology (Biol 4054)

Presentations

2008 ESA Annual Meeting. Milwaukee, Wisconsin. ‘Quantifying habitat filtering in the forests of French Guiana using functional traits’

2008 ATBC Annual Meeting. Paramaribo, Suriname. ‘Water availability, seedling performance, and diversity in a tropical forest’

2007 ESA Annual Meeting. San Jose, California. ‘What shapes tropical seedling community structure? Seed dispersal versus environmental conditions’

2006 ESA Annual Meeting. Memphis, Tennessee. ‘Predation, more than water availability, limits seedling recruitment’

- 2005 ESA Annual Meeting. Montreal, Quebec. 'Restricted zones of influence limit competition among seedlings of a tropical tree'
- 2005 Museum of Natural Science, Louisiana State University. Baton Rouge, Louisiana. 'Mammals, not competition, affect seedling recruitment'

Professional Activities

Reviewer for Actualidades Biológicas, American Journal of Botany, Ecological Research, Ecology, Evolutionary Ecology, Journal of Ecology, Journal of Tropical Ecology, Journal of Vegetation Science, National Science Foundation, Oecologia

Professional Memberships

Ecological Society of America
Association for Tropical Biology and Conservation
Sigma Xi – The Scientific Research Society

Languages

Native: English
Fluent: French, Spanish, R, HTML, PHP, MySQL
Studying: Portuguese, German, C