

Naia Morueta-Holme



Personal data	Born December 24 th 1985, Barcelona, Spain Citizen of Spain and Denmark
Work address	Department of Integrative Biology, University of California Berkeley, 3040 VLSB, Berkeley, CA 94720-3140, USA – tel (+1) 510-701-4390 – email: morueta-holme@berkeley.edu Website: www.naiamoruetaholme.wordpress.org
Education	2008 – 2014 PhD Biology, Aarhus University. Supervisors: Professor Jens-Chr. Svenning, Professor Henrik Balslev & Dr. Richard Condit Dissertation title: “Geography of plants in the New World” 2008 – 2011 Honors MSc Biology, Aarhus University. 2005 – 2008 BSc Biology, Copenhagen University.
Relevant positions	2014 – Post-Doctoral Fellow at University of California - Berkeley. PI: David Ackerly 2015 – Invited member of Early Career Committee, International Biogeography Society 2011 – 2012 News editor of the Danish web portal on evolution, www.evolution.dk 2009 – 2010 Teaching assistant in “Multivariate Analysis of Biological Data”, “Applied Statistics”, “Tropical Ecosystems, Management and Development”, and “Plants, field course”, Aarhus University 2007 Field assistant at Habitat Vision consultancy. National Monitoring and Assessment Programme for the Aquatic and Terrestrial Environment 2005 – 2014 Volunteer at the environmental NGO Forests of the World. Board member 2007 – 2011 and 2012 – 2013
Working groups	2008 – Core member, NCEAS Botanical Information and Ecology Network (BIEN) 2014 – Member, Terrestrial Biodiversity and Climate Change Collaborative (TBC3) 2014 – Member, “Big ecological questions: diverse data, new methods”, Berkeley Initiative in Global Change Biology
Honors & awards	2015 Winner of PhD Cup 2015 for written science communication (Danish national competition) 2011 EliteForsk travel award (300,000 DKK)
Research grants	2013 Villum Foundation Post-Doctoral Fellowship (1.3 million DKK or ~230,000 USD) 2012 Fiedlers Fond travel grant (13,800 DKK) 2010 Aarhus University Research Foundation travel grant (42,000 DKK) Etatsraad C.G. Filtenborg’s travel grant (10,000 DKK) Finn Ejlersens Mindefond travel grant (7,500 DKK)
Field work	2013 Field work in Peru (4 weeks) as part of the Andes to Amazon transect project GEM-CHAMBASA lead by Yadvinder Malhi, Brian Enquist and Greg Asner 2012 Leading field work in Ecuador (4 weeks) for assessing potential vegetation changes on Chimborazo the past 210 years 2009 Field work in Colombia (4 weeks) as part of the PALMS project lead by Henrik Balslev financed by the 7 th EU Framework Programme

Research stays	2011	Department of Ecology & Evolutionary Biology. University of Arizona (USA) 5 weeks. Host: Brian Enquist
	2010	Department of Ecology & Evolutionary Biology. University of Arizona (USA) 7 weeks. Host: Brian Enquist
	2010 – 2011	Center for Tropical Forest Science. Smithsonian Tropical Research Institute (Panama) 9 weeks. Host: Richard Condit

Publications

Published 4 first-author publications (one in Ecology Letters, IF: 17.95, one in PNAS, IF: 9.81) and 9 co-authored (one in PNAS). Additional 1 first-author and 3 co-authored publications in review.

13. **Morueta-Holme N**, Engemann K, Sandoval-Acuña P, Jonas JD, Segnitz RM, Svenning J-C (early view) Strong upslope shifts in Chimborazo's vegetation over two centuries after Humboldt. PNAS.

12. Moreno-Amat E, Mateo RG, Nieto-Lugilde D, **Morueta-Holme N**, Svenning J-C, García-Amorena I, (2015) Impact of model complexity on cross-temporal transferability in Maxent species distribution models: an assessment using palaeobotanical data. Ecological Modelling 312: 308-317. doi:10.1016/j.ecolmodel.2015.05.035

11. Blonder B, Nogués-Bravo D, Borregaard MK, Donoghue II JC, Jørgensen PM, Kraft NJB, Lessard JP, **Morueta-Holme N**, Sandel B, Svenning JC, Violle C, Rahbek C, Enquist BJ (2015) Environmental disequilibrium and filtering in community assembly. Ecology 96: 972-985. doi:10.1890/14-0589.1

10. Engemann K, Enquist BJ, Sandel B, Boyle B, Jørgensen PM, **Morueta-Holme N**, Peet RK, Violle C, Svenning JC (2015) Limited sampling hampers "big data" estimation of species richness in a tropical biodiversity hotspot. Ecology and Evolution 5(3): 807-820. doi: 10.1002/ece3.1405

9. Šimov á I, Violle C, Kraft NJB, Storch D, Svenning J-C, Boyle B, Donoghue II JC, Jørgensen PM, McGill BJ, **Morueta-Holme N**, Peet RK, Wiser SK, Piel W, Regetz J, Schildhauer M, Thiers BM, Enquist BJ (2014) Shifts in trait means and variances in North American tree assemblages: species richness patterns are loosely related to the functional space. Ecography 38: 649-658. doi:10.1111/ecog.00867

8. Lamanna CA, Blonder B, Violle C, Kraft NJB, Sandel B, Šimov á I, Donoghue II JC, Svenning J-C, McGill BJ, Boyle B, Buzzard V, Dolins S, Jørgensen PM, Marcuse-Kubitza A, **Morueta-Holme N**, Peet RK, Piel WH, Regetz J, Schildhauer M, Spencer N, Thiers BM, Wiser SK, Enquist BJ (2014) Functional trait space and the latitudinal diversity gradient. PNAS 111(38) 13745-13750. doi: 10.1073/pnas.1317722111

7. **Morueta-Holme N**, Enquist B, McGill BJ, Boyle B, Jørgensen PM, Ott JE, Peet BK, Šimov á I, Sloat L, Thiers B, Violle C, Wiser S, Dolins S, Donoghue II JC, Kraft NJB, Regetz J, Schildhauer M, Spencer N, Svenning JC (2013) Habitat area and climate variability determine geographic variation in plant species range sizes across the New World. Ecology Letters 16(12) 1446-1454. doi:10.1111/ele.12184

6. Farji-Brener AG, **Morueta-Holme N**, Chinchilla F, Willink B, Ocampo N, Bruner G (2012) Leaf-cutting ants as road engineers: the width of trails at branching points in *Atta cephalotes*. Insect Soc 59: 389-394. doi:10.1007/s00040-012-0231-0

5. **Morueta-Holme N**, Fløjgaard C, Svenning JC (2010) Climate change risks and conservation implications for a threatened small-range mammal species. PLoS ONE 5(4): e10360. doi:10.1371/journal.pone.0010360

4. **Morueta-Holme N**, Normand S, Fløjgaard C, Skov F, Svenning JC (2010) Who comes, who disappears? / Hvad kommer, hvad forsvinder? KFT's konferencemagasin (ed. Lars Moseholm): p. 40-41 (in Danish)

3. Fløjgaard C, **Morueta-Holme N**, Normand S, Svenning JC, Skov F (2010) A tool for management of nature in change / Værktøj til forvaltning af natur i forandring. KFT's konferencemagasin (ed. Lars Moseholm): p. 42-43 (in Danish)

2. Svenning JC, Fløjgaard C, **Morueta-Holme N**, Lenoir J, Normand S, Skov F (2009) Big moving day for biodiversity? A macroecological assessment of the scope for assisted colonization as a conservation strategy under global warming. *IOP Conf Ser: Earth Environ Sci* 8: 012017

1. Fløjgaard C, **Morueta-Holme N**, Skov F, Madsen AB, Svenning JC (2009) Potential 21st century changes to the mammal fauna of Denmark – implications of climate change, land-use, and invasive species. *IOP Conf Ser: Earth Environ Sci* 8: 012016

Reviewer for: *Biological Conservation, Ecology Letters, PloS One, Global Ecology and Biogeography, Scandinavian Journal of Forest Research*

Conference presentations

Morueta-Holme N, Ackerly DD, Heller N (via Blonder B) (2015) Big Data to the rescue? Ongoing efforts to infuse climate change predictions into conservation management. *ESA 100th Annual Meeting*, Baltimore, Maryland, USA

Morueta-Holme N, Blonder B, Sandel B, McGill BJ, Enquist BJ, Svenning JC (2015) Networks to infer species associations from occurrence data – opportunity or cautionary tale? (Poster & Flash talk) *International Biogeography Society 7th Biennial Meeting*, Bayreuth, Germany

Šimov I, Sandel B, Violle C, Svenning JC, Donoghue II JC, Boyle B, **Morueta-Holme N**, Kraft NJB, McGill BJ, Enquist BJ (2015) Functional traits and global productivity gradient: can we predict ecosystem processes using plant assemblage composition? (Poster) *International Biogeography Society 7th Biennial Meeting*, Bayreuth, Germany

Morueta-Holme N, Sandel B, McGill B, Jørgensen PM, Kraft NJB, Ott J, Peet RK, Šimov I, Violle C, Donoghue II JC, Enquist BJ, Svenning JC (2014) Geographic variation in the factors controlling plant species ranges across the New World. *ESA 99th Annual Meeting*, Sacramento, California, USA

Morueta-Holme N (2014) Safeguarding biodiversity for the future – how can we integrate climate change predictions into conservation? *North America Congress for Conservation Biology: Challenging conservation Boundaries*, Missoula, Montana, USA

Morueta-Holme N, Sandel B, Šimov I, McGill B, Boyle B, Condit R, Dolins S, Donoghue II JC, Enquist B, Jørgensen P, Kraft NJB, Marcuse-Kubitza A, Ott J, Piel W, Peet RK, Regetz J, Schildhauer M, Spencer N, Thiers B, Violle C, Wiser S, Svenning JC (2013) Geographic variation in the relative importance of range-limiting factors for the New World flora. *11th INTECOL Congress, Ecology: Into the next 100 years*, London, United Kingdom

Moreno-Amat E, Mateo RG, Nieto-Lugilde D, **Morueta-Holme N**, Alberdi I, Garcia-Amorena I, Svenning JC (2013) Aplicación de la Paleoecología en la reducción de las incertidumbres de los modelos de distribución de especies en la Península Ibérica. *XI Congreso Nacional de la Asociación Española de Ecología Terrestre*, Pamplona-Iruña, Spain

Morueta-Holme N, Enquist B, McGill BJ, Boyle B, Jørgensen PM, Ott JE, Peet RK, Šimov I, Sloat L, Thiers B, Violle C, Wiser S, Dolins S, Donoghue II JC, Kraft NJB, Regetz J, Schildhauer M, Spencer N, Svenning JC (2013) Climate variability and area determine geographic variation in plant species range sizes across two continents. *7th Annual Meeting of the Specialist Group on Macroecology of the Gesellschaft für Ökologie*, Göttingen, Germany

Morueta-Holme N, Engemann-Jensen K, Sandoval-Acuña P, Jonas JD, Svenning JC (2013) In the footsteps of Humboldt – elevation shifts of Chimborazo’s vegetation over 210 years. *International Biogeography Society 6th Biennial Meeting*, Miami, Florida, USA

Donoghue II JC, **Morueta-Holme N**, Boyle B, Sloat LL, Enquist BJ, McGill BJ, Svenning JC, the BIEN Working Group (2013) Quantifying the fundamental unit of biogeography: assessing different methods to measure geographic range size and why it matters (Poster). *International Biogeography Society 6th Biennial Meeting*, Miami, Florida, USA

Engemann-Jensen K, **Morueta-Holme N**, Dobrin B, Enquist BJ, Svenning JC (2013) Correlation of plant growth form, diversity and climate (Poster). *International Biogeography Society 6th Biennial Meeting*, Miami, Florida, USA

Enquist BJ, Boyle B, Donoghue II JC, Thiers BM, Jørgensen PM, McGill BJ, Svenning JC, Condit R, **Morueta-Holme N**, Sloat L, Peet RK, the BIEN Working Group (2013) The commonness and distribution of rarity: Quantifying the botanical diversity of all plant species in the Americas. *International Biogeography Society 6th Biennial Meeting*, Miami, Florida, USA

Blonder B, Nogués-Bravo D, Rahbek C, Enquist BJ, Boyle B, Donoghue II JC, Condit R, Peet RK, Dolins S, Schildhauer M, Thiers BM, McGill BJ, Jørgensen PM, Narro M, Regetz J, Violle C, Šimová I, Sloat L, Piel W, Kraft NJB, Svenning JC, **Morueta-Holme N**, Spencer N, Wiser SK, Ott JE, Dobrin B, Andelmann S, Engemann-Jensen K (2013) Assembly of plant communities in climate space (Poster). *International Biogeography Society 6th Biennial Meeting*, Miami, Florida, USA

Morueta-Holme N, Enquist BJ, McGill BJ, Svenning JC (2012) Patterns and processes behind the range size distributions of the New World plants. *ESA 97th Annual Meeting*, Portland, Oregon, USA

Enquist BJ, Boyle B, Donoghue II JC, Thiers BM, Jørgensen PM, McGill BJ, Svenning JC, Condit R, **Morueta-Holme N**, Sloat L, the BIEN Working Group (2012) The commonness and distribution of rarity: Quantifying the botanical diversity of all plant species in the Americas. *ESA 97th Annual Meeting*, Portland, Oregon, USA

Morueta-Holme N (2011) The role of long-term dispersal history for species distributions. *12th EEF Congress*, Ávila, Spain

Fløjgaard C, **Morueta-Holme N**, Skov F, Madsen AB, Svenning JC (2009) Potential 21st century changes to the mammal fauna of Denmark (Poster). *7th Annual GBIF Science Symposium*, Copenhagen, Denmark

Morueta-Holme N, Fløjgaard C, Svenning JC (2009) Climate change risks and conservation possibilities for a threatened European endemic mammal (Iberian desman, *Galemys pyrenaicus*) (Poster). *Beyond Kyoto*, Aarhus, Denmark

Selected guest talks

"The relevance of the Golden Age explorations for conservation under climate change", Colloquium in Ecology, Evolution and Conservation, San Francisco State University, 15.09.20

"Big Data for Big Questions – the Botanical Information & Ecology Network", Berkeley Initiative for Climate Change Biology workshop: Big ecological questions, diverse data, new methods. University of California – Berkeley, 31.10.2014

"Geography of plants in the New World – from Humboldt to the age of Big Data", Department of Biological and Environmental Sciences, University of Gothenburg, Sweden, 25.03.2014

"Patterns and processes behind the range size distribution of the New World plants", Biogeography and Macroecology course, Aarhus University, Denmark, 30.08.2013

"Plant range sizes in the New World & the chase of Humboldt up Chimborazo", Environmental Change Institute, Oxford University, United Kingdom, 27.08.2013

"Geographic variation in range limiting factors of the New World flora", Enquist & Harte lab meeting, Rocky Mountain Biological Laboratory, Colorado, USA, 17.07.2013

"In the footsteps of Humboldt – elevation shifts of Chimborazo's vegetation over 210 years", Integrative Ecology & Evolution Mini-Symposium, Aarhus University, Denmark, 05.02.2013

"Patterns and processes behind the range size distribution of the New World plants", Biogeography and Macroecology course, Aarhus University, Denmark, 30.08.2012

"Patterns and processes behind the range size distribution of the New World plants", Integrative Biology, UC Berkeley, USA, 03.05.2012

"Patterns and processes behind the range size distribution of the New World plants", Department of Global Ecology, Carnegie Institution for Science, Stanford, USA, 04.05.2012

"Determinants of plant species distributions – relative roles of climate, soil & dispersal history", Biogeography and Macroecology course, Aarhus University, 02.09.2011

"Inferring the role of history in biogeography", Center for Tropical Paleocology and Archaeology, Smithsonian Tropical Research Institute, Panama, 02.12.2010

"An introduction to species distribution modelling: with examples from a singular creature", Department of Ecology & Evolutionary Biology, University of Arizona, Tucson, USA, 03.11.2010

Public outreach

"Dine fodspor afgør fremtidens natur", PhD Cup 2015 Final, national TV DR2, Denmark, 04.2015

"Kan man forudsige fremtidens natur? Klimaændringernes konsekvenser for flora og fauna", Folkeuniversitetet, Denmark, 08.11.2012

"Nature in a warmer world – how to predict the future in biology", Tucson high school, Tucson, USA, 31.10.2011

"Naturen i en varmere verden - hvordan laver man fremtidsforskning i biologi?", Det Rullende Universitet, Gymnasierne, Erhvervsskolerne Aars, and Tørring gymnasium, Denmark, 16.04.2010, 22.04.2010

"GIS, Biodiversitet og Klimaændringer", Biologilærerdag, Aarhus University, Denmark, 07.11.2008

Media coverage

Web: "Voldsomme forandringer i plantevæksten på et af verdens højeste bjerge", videnskab.dk, 15.09.2015

Web: "Humboldts Berg" zeigt Klimawandel-Folgen, scinexx.de, 15.09.2015

Press/web: "Un dibujo de Humboldt de hace 200 años prueba el cambio climático", El País, 14.09.2015 (covered by > 25 international outlets)

Web: "Upslope migration of tropical plants due to climate change", phys.org, sciencedaily.org, 14.09.2015

Web: "Global opvarmning giver tropiske planter ny adresse", dr.dk, 14.09.2015

Web: "Biolog: Big Data forbedrer naturbeskyttelsen", dr.dk, 18.04.2015

Press: "Planterne fortæller om klimaændringerne", Dagbladet Information, 03.2014

Web: "Danske træer er mere forskellige end dem i junglen", videnskab.dk, 17.09.2014

Web: "Vores træer er mere forskelligartede end tropernes", dr.dk, 16.09.2014

Web: "Danske forskere kortlægger Amerikas sjældne planter", videnskab.dk, 18.10.2013

Web: "World's first mapping of America's rare plants", sciencedaily.com, nytimes.com, earthsky.org, and others, 17.10.2013

Radio: "I Humboldts fodspor", documentary, Videnskabens Verden, DR P1, 29.01.2013

Web: "Tv-angsflytning skal redde den iberiske desman", videnskab.dk, 3.12.2010

Web: "Il trasloco del desman, profugo ambientale assistito dall'estinzione da global warming", greenreport.it, 10.5.2010

Web: "Climate change and conservation of the Pyrenean desman", suite101.com, 1.5.2010

Language skills

Fluent in conversing, reading and writing Danish, Spanish, English and Catalan
Advanced level in oral and written French and oral Norwegian

Interests

My research interests span through general ecology, but especially on what drives diversity patterns and the distribution of species at the macroecological scale. I use ecoinformatic approaches to discern the effects of climate and other factors on biodiversity to improve predictions of the consequences of future environmental change. Currently, I am exploring how we can use this knowledge for science-based biodiversity conservation in practice, bringing together my scientific background and my experience from eight years of involvement at an environmental NGO.

Besides my research and volunteer work, I have a strong music interest, having played classical piano for many years I enjoy hiking, rock climbing, dancing tango, travelling and getting to know foreign languages and cultures.