

CURRICULUM VITAE

Renato Valencia

(Born August 17, 1962, Quito - Ecuador
Married, three children)

PRESENT POSITION

Principal Professor (tropical botany and ecology), School of Biological Sciences, *Pontificia Universidad Católica del Ecuador* (PUCE), *Apartado* 17-01-2184, Quito, Ecuador. Tel. (593-2) 2991 714, rvalencia@puce.edu.ec.

EDUCATION

LICENCIATURA (Biology), Pontificia Universidad Católica del Ecuador, 1988
Ph.D. (Natural sciences), University of Aarhus, Department of Systematic Botany, 1994

SCIENTIFIC RESEARCH

Principal investigator of the following projects:

1995 to date, Population dynamics of Yasuni tree communities in a large Amazonian 50-ha plot. A collaboration between PUCE and STRI.

2005 to date, Developing best practices for seed sourcing of planted and natural regeneration in the neotropics (SEEDSOURCE).

1996 to 01, Conservation status of Ecuadorian endemic plants.

1997–99, Non-timber Forest Plant Products used by the Huaorani Ethnic Group in the Yasuni National Park.

1989–93, Diversity and structure of three Ecuadorian forests at different elevations (Ph.D. thesis)

1988–90, Tropical rain forest species diversity and structure

1986–88, Botanical inventory in a montane cloud forest of Ecuador

TEACHING EXPERIENCE

1999 to date, Principal Professor, Department of Biological Sciences, PUCE. Subjects taught: Evolution of vascular plants (a theoretical course of general botany), Ecology and conservation of tropical plants, Diversity of tropical plants.

1988–90, Teaching assistant, Department of Biological Sciences, PUCE.

1994–99, Associate Profesor, Department of Biological Sciences, PUCE.

Starting in 1994 to the present, I have supervised 10 *licenciado* thesis and 2 doctoral thesis.

ADMINISTRATIVE EXPERIENCE

- I.** Director of the Herbarium QCA (May 1994 to December 2001).
- II.** Director of Science and Technology of the National Science and Technology Foundation FUNDACYT (December 2001 to February 2004). Head of national programs to support scientific research and capacity building. During three months, I was in charged of the Executive Direction of FUNDACYT.
- III.** Director of the School of Biological Sciences, PUCE (July 2004 to July 2006).
- IV.** Vive-Dean, Faculty of Natural Sciences, PUCE (July 2006 to July 2008).

Director and/or PI of the following projects: 1• the Yasuni Forest Dynamics Plot, a collaboration between PUCE, Smithsonian Tropical Research Institute (STRI), and University of Aarhus (Denmark), 1995 to date; 2• Developing best practices for seed sourcing of planted and natural regeneration in the neotropics (SEEDSOURCE, a EU INCO-DC project between nine research institutions), 2005—2009; 3• Conservation status of endemic species, financed by INEFAN/GEF activity 16, 1996—98; 4• Non-timber Forest Plant Products of North West Amazonia: Colombia, Ecuador, and Peru, financed by the European Community (EU INCO-DC, a collaboration between six universities) 1997—99, 5• Building an endangered species program for Ecuador's endemic plant species, financed by: Conservation, Food, and Health Foundation, 1999—2000.

SCIENTIFIC ADVISORY COMMITTEES

- 1• Member of the IUCN Species Survival Commission for North-West South America 1990—2000
- 2• Principal member and Vice-president of the technical commission for evaluation of projects of the Ecuadorian Research Council of Universities and Polytechnic Schools (CONUEP), 1995—1997.
- 3• Scientific Authority of CITES nominated by the Ecuadorian Ministry of Environment, July 2001—to date.

SELECTED PEER REVIEWED PUBLICATIONS:

1. **Valencia R.**, R. Foster, G. Villa, R. Condit, J. C. Svenning, C. Hernandez, K. Romoleroux, E. Losos, E. Magaard & H. Balslev. 2004. Tree species distributions and local habitat variation in the Amazon: a large forest plot in eastern Ecuador. *Journal of Ecology* 92: 214—229.
2. **Valencia R.**, R. Condit, K. Romoleroux, R. Foster, G. Villa Munoz, E. Losos, H. Balslev, J. C. Svenning, & E. Magaard. 2004. Tree species diversity and distribution in a forest plot at Yasuni Nacional Park, Amazonian Ecuador. Pp. 107—118 *in*: E. Losos & E. Leigh, Jr. (eds.): *Forest Diversity and Dynamism*. The University of Chicago Press, Illinois.
3. **Valencia R.**, R. Condit, R. Foster, K. Romoleroux, G. Villa Munoz, J. C. Svenning, E. Magaard, M. Bass, E. C. Losos & H. Balslev. 2004. Yasuni forest dynamics plot, Ecuador. Pp. 609—620 *in*: E. C. Losos & E. Leigh, Jr. (eds.): *Forest Diversity and Dynamism*. The University of Chicago Press, Illinois.
4. **Valencia R.**, Balslev H. & G. Paz y Miño. 1994. High Tree Alpha-Diversity in Amazonian Ecuador. *Biodiversity and Conservation* 3: 21—28.
5. **Valencia R.** 1995. Composition and Structure of a Montane Forest fragment on Eastern Ecuador. Pp. 239—249 *in*: S. Churchill, H. Balslev, E. Forero & J. L. Luteyn (eds.) *Biodiversity and Conservation of Neotropical Montane Forests*. The New York Botanical Garden, New York.
6. Condit R., P. Ashton, S. Bunyavejchewin, H. S. Dattaraja, S. Davies, S. Esufali, C. Ewango, R. Foster, I. A. U. N. Gunatilleke, C. V. S. Gunatilleke, P. Hall, K. E. Harms, T. Hart, C. Hernandez, S. Hubbell, A. Itoh, S. Kiratiprayoon, J. LaFrankie, S. Loo de Lao, J.-R. Makana, Md. Nur Supardi Noor, A. R. Kassim, S. Russo, R. Sukumar, C. Samper, H. S. Suresh, S. Tan, S. Thomas, **R. Valencia**, M. Vallejo, G. Villa. 2006. The importance of demographic niches to tree diversity. *Science* 7: 98-101.
7. Condit R., Pitman N., Leigh Jr. E. G., Chave J., Terborgh J., Foster R., Nuñez P., Aguilar S., **Valencia R.**, Villa R., Muller-Landau H.C., Losos E. & Hubbell S. P. 2002. Beta-Diversity in Tropical Forest Trees. *Science* 295: 666-669.
8. John R., J. W. Dalling, K. E. Harms, J. B. Yavitt, R. F. Stallard, M. Mirabello,

- S. P. Hubbell, **R. Valencia**, H. Navarrete, M. Vallejo & R. B. Foster. 2007. Soil nutrients influence spatial distributions of tropical species. *PNAS* 104 (3): 864–869
9. Queenborough, S. A., D. F. R. P. Burslem, N. C. Garwood & **R. Valencia**. 2007. Determinants of biased sex ratios and inter-sex costs of reproduction in dioecious tropical forest trees. *American Journal of Botany* 94(1): 67–78.
10. Queenborough, S. A., D. F. R. P. Burslem, N. Garwood & **R. Valencia**. 2007. Neighborhood and community interactions determine the spatial pattern of tropical tree seedling survival. *Ecology*, 88 (9): 2248–2258.

OTHER PEER REVIEWED PUBLICATIONS:

11. **Valencia R.**, H. Balslev, W. Palacios, D. Neill, C. Josse & M. Tirado. 1998. Diversity and family composition of trees in different regions of Ecuador: a sample of 18 one-ha plots. Pp. 569–584 *in*: F. Dallmeier & J. Komiskey (eds.): *Forest Biodiversity in North, Central and South America, and the Caribbean: Research and Monitoring*. Man and Biosphere Series 21 The Parthenon Publishing Group, Paris. 768 pp.
12. **Valencia R.**, C. Cerón, W. Palacios & R. Sierra. 1999. *Las formaciones naturales de la Sierra del Ecuador*. Pp. 79–108 *in*: Sierra R. (ed.), *Propuesta Preliminar de un Sistema de Clasificación de la Vegetación para el Ecuador Continental*. Proyecto INEFAN/GEF-BIRF y EcoCiencia, Quito, 194 pp.
13. **Valencia R.** & P. M. Jørgensen 1992. Composition and Structure of a humid montane forest on the Pasochoa volcano, Ecuador. - *Nordic Journal of Botany* 12: 239–247.
14. Balslev H., **R. Valencia**, G. Paz y Miño, H. Christensen & I. Nielsen. 1998. Species Count of Vascular Plants in 1-hectare of humid lowland forest in Amazonian Ecuador. Pp. 584–594 *in*: F. Dallmeier & J. Komiskey (eds.): *Forest Biodiversity in North, Central and South America, and the Caribbean: Research and Monitoring*. Man and Biosphere Series 21 The Parthenon Publishing Group, Paris. 768 pp.
15. Condit R., P. Ashton, H. Balslev, N. Brokaw, S. Bunyavejchewin, G. Chuyong, L. Co, H. S. Dataraja, S. Davies, S. Esufali, C.E.N. Ewango, R. Foster, N. Gunatilleke, S. Gunatilleke, C. Hernández, S. Hubbell, R. John, D. Kenfack, S. Kiratiprayoong, P. Hall, T. Hart, A. Itoh, J. V. LaFrankie, I. Liengola, D. Lagunzad, S. L. de Lao, E. Losos, E. Magaard, J.R. Makana, N. Manokaran, H. Navarrete, S. M. Nur, T. Okhubo, R. Pérez, C. Samper, L. H. Seng, R. Sukumar, J.-S. Svenning, S. Tan, D. Thomas, J. Thompson, M. I. Vallejo, G. Villa, **R. Valencia**, T. Yamzkura & J. K. Zimmerman. 2005. Tropical tree α -diversity: Results from a worldwide network of large plots. *Biol. Skr.* 55: 565–582.
16. Condit, R. S., Leigh, Jr., E. G., Loo de Lao, S., Ashton, M. S., Brokaw, N. V. L., Bunyavejchwin, R., Chuyong, G.B., Co, L., Dattaraja, H.S., Davies, S. J., Esufali, S., Ewango, C.E.N., Foster, R. B., Gunatilleke, N., Gunatilleke, S., Hart, T. H., Hernandez, C., Hubbell, S. P., Itoh, A., John, R., Kanzaki, M., Kenfack, D., S., Kiratiprayoon, LaFrankie, J. V., Lee, H.-S., Liengola, I., Makana, J.-R., Manokaran, N., Navarete, H., Hernandez, C., Ohkugo, T., Perez, R., Pongpattananurak, N., Samper, C., Sri-ngernyuang, K., Sukumar, R., Fun, I.-F., Sureh, H.S., Tan, S., Thomas, Duncan, Thompson, J. D., Vallejo, M. I., Villa, G, **Valencia, R.**, Yamakura, T. and Zimmerman, J. K. 2004. Species-area relationships and diversity measures in the forest dynamics plots. *In*: Losos, Elizabeth C. and Leigh, Jr., Egbert Giles (Ed.), *Tropical forest diversity and dynamism: Findings from a large-scale plot network: 79-89*. Chicago: University of Chicago Press.
17. Duivenvoorden, J.F., A. Duque, J. Cavellier, A. García, C. Grandez, M.J. Macía, H. Romero-Saltos, M. Sánchez & R. Valencia 2005. Density and diversity of plants in relation to soil nutrient reserves in well-drained upland forests in the north-western Amazon basin. *Biol. Skr.* 55: 25–35.
18. Jørgensen P. M., C. Ulloa, **R. Valencia** & J. Madsen. 1995. A floristic Analyses of the High-Andes of Ecuador. Pp. 221–237 *in*: S. Churchill, H. Balslev, E. Forero & J. L. Luteyn (eds.) *Biodiversity and Conservation of Neotropical Montane Forests*. The New York Botanical Garden, New York.

19. John R., J. W. Dalling, K. E. Harms, J. B. Yavitt, R. F. Stallard, M. Mirabello, S. P. Hubbell, **R. Valencia**, H. Navarrete, M. Vallejo & R. B. Foster. 2007. Soil nutrients influence spatial distributions of tropical species. *PNAS* 104 (3): 864–869
20. Leimbeck R., **R. Valencia** & H. Balslev. 2004. Landscape diversity patterns and endemism of Araceae in Ecuador. *Biodiversity and Conservation* (19): 1755--1759.
21. Macía M., Romero-Saltos H. & **Valencia R.** 2001. *Patrones de uso en un bosque primario de la Amazonía ecuatoriana: comparación entre dos comunidades Huaorani*. Pp. 225–250 in: Duivenvoorden J., H. Balslev, J. Cavalier, C. Grandez, H. Tuomisto, & **R. Valencia** (eds.). *Evaluación de Recursos no Maderables en la Amazonía Noroccidental*. INBED, Universitet van Amsterdam, Amsterdam.
22. Muller-Landau, H. C., Condit, R. S., Chave, J., Thomas, S. C., Bohlman, S. A., Bunyavejchewin, S., Davies, S. J., Foster, R. B., Gunatilleke, S., Gunatilleke, N., Harms, K. E., Hart, T., Hubbell, S. P., Itoh, A., Kassim, A. R., LaFrankie, J. V., Lee, H. S., Losos, E., Makana, J.-R., Ohkubo, T., Sukumar, R., Sun, I-F., Nur Supardi, M.N., Tan, S., Thompson, J., **Valencia, R.**, Villa, G., Wills, C., Yamakura, T., Chuyong, G., Dattaraja, H. S., Esufali, S., Hall, P., Hernandez, C., Kenfack, D. and K., Somboon. 2006. Testing metabolic ecology theory for allometric scaling of tree size, growth and mortality in tropical forests. *Ecology Letters* 9(Online).
23. Muller-Landau, H. C., Condit, R. S., Harms, K. E., Marks, C. O., Thomas, S. C., Bunyavejchewin, S., Chuyong, G., Co, L., Davies, S., Foster, R. B., Gunatilleke, S., Gunatilleke, N., Hart, T., Hubbell, S. P., Itoh, A., Kassim, A. R., Kenfack, D., LaFrankie, J. V., Lagunzad, D., Lee, H. S., Losos, E., Makana, J.-R., Ohkubo, T., Samper, C., Sukumar, R., Sun, I-F., Nur Supardi, M. N., Tan, S., Thomas, D., Thompson, J., **Valencia, R.**, Vallejo, M. I., Villa, G., Yamakura, T., Zimmerman, J. K. and D., Handanakere. 2006. Comparing tropical forest tree size distributions with the predictions of metabolic ecology and equilibrium models. *Ecology Letters* 9(0).
24. Paz y Miño G., H. Balslev & **R. Valencia**. 1995. Useful lianas of the Siona-Secoya Indians from Amazonian Ecuador. *Economic Botany* 49(3): 267–275.
25. Pitman NCA, Jorgensen P, Williams RSR, León-Yáñez S & **Valencia R.** 2002. Extinction-rates estimates for a modern neotropical flora. *Conservation Biology*: 1427-1431.
26. Queensboruogh, S., D. F. R. P. Burslem, N. Gargood & **R. Valencia** 2007. Habitat niche partitioning by 16 species of Myristicaceae in Amazonian Ecuador. *Plant Ecol.*
27. Romero-Saltos H., **Valencia R.** & Macía M. 2001. *Patrones de diversidad, distribución y rareza de plantas leñosas en el Parque Nacional Yasuní y la Reserva Etnica Huorani, Amazonía Ecuatoriana*. Pp. 131–162. In: Duivenvoorden J., H. Balslev, J. Cavalier, C. Grandez, H. Tuomisto, & **R. Valencia** (eds.). *Evaluación de Recursos no Maderables en la Amazonía Noroccidental*. INBED, Universitet van Amsterdam, Amsterdam.

EDITED BOOKS:

1. **Valencia R.**, N. Pitman, S. León-Yáñez & P.M. Jørgensen (eds.) 2000. *Libro Rojo de las Plantas Endémicas del Ecuador 2000*. Publicaciones del Herbario de la Pontificia Universidad Católica del Ecuador, Quito, 489 pp.
2. **Valencia R.** & H. Balslev (eds.). 1997. *Estudios sobre Diversidad y Ecología de Plantas*. Publicaciones de la Pontificia Universidad Católica del Ecuador, Quito, 289 pp.
3. Duivenvoorden J., H. Balslev, J. Cavalier, C. Grandez, H. Tuomisto, & **R. Valencia** (eds.). 2001. *Evaluación de Recursos no Maderables en la Amazonía Noroccidental*. INBED, Universitet van Amsterdam, Amsterdam.

SELECTED POPULAR ARTICLES

1. **Valencia R.** 2007. *Posibles efectos del calentamiento global en las plantas ecuatorianas*. Nuestra Ciencia 9: 14–16.
2. **Valencia R.** 2006. *Dinamismo en un bosque tropical*. Suplemento de El Comercio, Pg. 5.
3. **Valencia R.** 2005. *¿Cómo crecen y mueren los árboles en los bosques tropicales?*. Revista Nuestra Ciencia 7: 17–21.
4. **Valencia R.** & León-Yáñez S. 2002. *Plantas únicas del Ecuador que el mundo puede perder*. Revista Desafío 5: 46–49.
5. **Valencia R.** *Tras la Bruma, los bosques nublados esconden una inmensa biodiversidad*. Nuestra Ciencia
6. **Valencia R.** 2000. *Plantas Ecuatorianas: entre la exuberancia y el peligro de extinción*. Ecuador Terra Incognita, 1 (6): 28–31.
7. **Valencia R.** 1998 (summer). Preliminary comparisons between the Yasuni and BCI plots. Inside CTFS, pg. 3, 14.
8. **Valencia R.** 1995 (fall). How do highly diverse Amazonian forests change over time? Inside CTFS, pg. 3.

SEMINARS, INTERNATIONAL SYMPOSIA, AND WORKSHOPS

- 1• 1991, August 19, Turku, Finland. Patterns in the succession of an Andean forest in the Pasochoa volcano, Ecuador. Symposium of Nordic Research in the Neotropic.
- 2• 1993, February 9, Quito, Ecuador. *Diversidad de árboles en un bosque de la Reserva de Producción Faunística Cuyabeno*. I Ecuadorian Botanical Congress.
- 3• 1993, June 22, New York, USA. Composition and structure of a montane forest on eastern Ecuador. Neotropical Montane Forest Symposium.
- 4• 1993, August 14, Bergen, Norway. High tree alpha-diversity in Amazonian Ecuador. Scientific Research in the Neotropics.
- 5• 1994, April 6, Copenhagen, Denmark. Composition and structure of three Ecuadorian forests at different elevations. Course of Tropical ecology, Natural History Museum.
- 6• 1995, May 25, Washington, USA. Altitudinal variation in tree diversity and family composition in one-hectare plots in Ecuador. Measuring and Monitoring the Biological Diversity Symposium.
- 7• 1995, October 19, Quito, Ecuador. *Estudio de 50 ha de bosque tropical en el Parque Nacional Yasuní*. II Ecuadorian Botanical Congress.
- 8• 1996, August 10–13, La Paz, Bolivia. Instructor of the course: Conservation, diversity and ecology of tropical plants, University of San Andrés.
- 9• 1997, August 6, Aarhus, Denmark. Species Distribution of trees in Amazonian forests of Peru and Ecuador. Symposium of Nordic Research in the Neotropic.

- 10• 1998, June 24–26, Quito, Ecuador, organizer of the workshop: "*Taller Regional sobre Palmeras de la Región Amazónica*", sponsored by *Secretaría Pro Tempore, Tratado de Cooperación Amazónica* and the Scientific and Technological Foundation of Ecuador (FUNDACYT).
- 11• 1998, August 2, Washington, USA. Species diversity in a large Amazonian forest plot. Symposium organized by the Center for Tropical Forest Sciences of the Smithsonian Institute.
- 12• 1998, September 8, Prague, Czech Republic, Species composition and forest structure of trees in a large Amazonian forest plot.
- 13• 2000, June 2, Singapore, Life forms diversity in the Yasuni Forest Dynamics Plot, Yasuni National Park and Biosphere Reserve.
- 14• 2001, March 26–28, Lima, Perú, "*Conservación de Ecosistemas Transfronterizos y Especies Amenazadas*". Workshop organized by the Andean Community to prepare the Regional Strategy for the Biodiversity of the Tropical Andean Countries.
- 15• 2001, June 26–28, Quito, Ecuador, "*Conservación ex situ*". Workshop organized by the Andean Community to prepare the Regional Strategy for the Biodiversity of the Tropical Andean Countries.
- 16• 2001, July 19 to August 11, Indian Institute of Science, Bangalore, India, Workshop: Spatial patterns and habitat associations of tropical trees.
- 17• 2001, September 11--24, British Museum of Natural History, London and Bonn Botanical Garden, Germany. *Seminar: Diversity and forest structure in different habitats of the Yasuni Forest Dynamics Plot.*
- 18• 2001, December 7--15, Ecuadorian Member of a Mision of the Inter American Bank of Development (BID) to study the system of science and innovation developed in Chile and Uruguay.
- 19• 2002, September, Conventions Center of Cartagena: Latin American Congress of Botany, Speaker in a Round Table about Red Books and Endangered Plants.
- 20• 2003, September 7–25, Harvard Forest, USA, Analytical Workshop III: Forest Dynamics in Large Census Plots: Population Change, Growth, and Mortality.
- 21• 2003, 25–28 August, *Universidad Técnica de Loja*, Loja, Ecuadorian Congress of Botany, invited speaker: Diversity of trees in tropical forests with a special emphasis in an Amazonian forest.
- 22• 2005 August, Smithsonian Tropical Research Institute, Panamá, Analytical Workshop V: Forest Dynamics in Large Census Plots: Population Change, Growth, and Mortality.
- 23• 2006 June 19–24, Smithsonian Tropical Research Institute-CTFS, Panamá, Workshop: Strategic meetings, plant trait working group.
- 24• 2007 **September 10–14**, National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, USA, Principal Investigators Workshop: database management and future directions of science in large forest plots.
- 25• 2007 November 4 –7, Third Annual TEAM Network Science Meeting, invited speaker: Diversity and dynamics in a large forest plot in Amazonian Ecuador.