

**Alina Freire-Fierro, PhD**

Collection Manager, Botany Department  
Academy of Natural Sciences, Drexel University, Philadelphia PA 19103, U.S.A.

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Google Scholar: <http://scholar.google.com/citations?user=JZxCyugAAAAJ&hl=en>

Research Gate: [https://www.researchgate.net/profile/Alina\\_Freire-Fierro](https://www.researchgate.net/profile/Alina_Freire-Fierro)

LinkedIn: [www.linkedin.com/in/AlinaFreireFierro](http://www.linkedin.com/in/AlinaFreireFierro)

Born in Ecuador; US Citizen

**Education**

Ph.D., Environmental Science, Biology Department, Drexel University, 2015

M. Sc., Department of Biology, University of Missouri-St. Louis, St. Louis, USA, 1998

M. em C., Biociências Institute, São Paulo University. Brazil, 1992

B.S. in Biological Sciences, Biology Department, Catholic University. Ecuador, 1989

*Ph.D Thesis*: Systematics of *Monnina* (Polygalaceae) (English)

*Advisor*: Dr. Walter F. Bien, Drexel University

*Master's Thesis* (1998): Revision of *Aciotis* (Melastomataceae) (English)

*Advisor*: Dr. Susanne Renner

*Master's Thesis* (1992): Estudos taxonômicos dos subgêneros de *Monnina* Ruiz & Pav. (Polygalaceae), baseados em espécies equatorianas e brasileiras (Portuguese)

*Advisor*: Dr. Ana Maria Giulietti

*Research Interests*: Evolutionary ecology, plant systematics

**Research Experience**

Collection Manager, Botany Department, Academy of Natural Sciences, Philadelphia, 2006-Present

Co-PI, NSF Project on Virtual Types at the Academy of Natural Sciences Herbarium, NSF Grant #0545170, 2006-2008

Research Specialist and Latin American Research Visitors' Liaison, Missouri Botanical Garden, 2002-2006

Assistant Coordinator of the project "Floristic Inventory and Rescue of native plants from Oleoductos de Crudos Pesados." Ecuadorian National Herbarium-Entrix-OCP. Quito, Ecuador, 2001

Adjunct Researcher of the project "Botanical Studies of the Ecuadorian Mountain Forest," QCA Herbarium, Catholic University, Quito, Ecuador, 1989

Assistant Researcher of the project "Botanical Studies of the Ecuadorian Mountain Forest," QCA Herbarium, Catholic University, Quito, Ecuador, 1988

Herbarium Assistant at the QCA Herbarium, Catholic University, Quito, Ecuador, 1984-1988

**Teaching Experience**

Adjunct Professor, Current Topics in Biology-BIOL 101-Botany, Philadelphia University, Philadelphia, 2015

Teacher of General Botany, and Flora of Ecuador. Ecotourism Majors, Catholic University and San Francisco University, Quito, Ecuador, 1999-2000

Teacher of General Botany, Biology Department, Catholic University, Quito, Ecuador, 1995

Assistant Professor of the courses: Taxonomy of Vascular Plants, and Systematics and Taxonomy of Angiosperms,  
Biology Department, Catholic University, Quito, Ecuador, 1992

### Field Experience

Ecuador, cloud forest, Central Ecuador; Peru, cloud forest and lomas vegetation, Northern and Central Peru, 2012  
Mexico, cloud forest of Central and Western Mexico; Taiwan, lowlands and highlands; Panama, cloud forests,  
2011  
Chile, Dry vegetation and cloud forest, 2010  
Colombia, montane forests, 2009  
USA, New Jersey (Pine Barrens), Pennsylvania (Poconos), Utah, 2008-Present  
Uruguay, dry forest and wetlands, 2008  
Argentina, Subtropical habitats, cerrado vegetation, 2007  
Austria, Vienna, Serpentine vegetation, 2005  
Ecuador, several ecosystems, as the teacher of several college courses, and as a researcher at the Ecuadorian  
National Herbarium, 1999-2001  
Ecuador, páramo and Andean forests at the Antisana Ecological Reserve and Llanganates National Park, 1998-  
1999  
Costa Rica, all ecosystem types, as part of the OTS Course on Plant Systematics. Two months, 1996  
Bolivia, volunteer work at Noel Kempf National Park. One week, 1994  
Brazil, Caatinga, Cerrados and Campos Rupestres, 1990-1992  
Brazil, Campos Rupestres, Serra do Cipó, Grão Mogol. Monthly visits as part of my studies on *Monnina*  
(Polygalaceae), 1989-90  
Ecuador, páramo, montane forest, dry interandean forests, as part of the project Botanical Studies of the Shrubby  
species of Ecuadorian Mountain Forests, 1986-1989  
Ecuador, all ecosystems, as part of field trips during undergraduate studies, 1982-1986

### Publications (\* Indexed publication)

1. \*Freire-Fierro, A. 2015. Saxifragaceae, In: Catálogo de las Plantas Vasculares de Bolivia. Monographs of Systematic Botany, pp. 1197. Missouri Botanical Garden. St. Louis, USA.
2. \*Freire-Fierro, A. 2015. Polygalaceae, In: Catálogo de las Plantas Vasculares de Bolivia. Monographs of Systematic Botany. Missouri Botanical Garden, pp. 1105-1110. St. Louis, USA.
3. \*Freire-Fierro, A. 2015. Hydrangeaceae, In: Catálogo de las Plantas Vasculares de Bolivia. Monographs of Systematic Botany, pp. 723-724. Missouri Botanical Garden. St. Louis, USA.
4. \*Freire-Fierro, A. 2015. Crassulaceae, In: Catálogo de las Plantas Vasculares de Bolivia. Monographs of Systematic Botany, pp. 532-534. Missouri Botanical Garden. St. Louis, USA.
5. Freire-Fierro, A. In Press. Grossulariaceae for the Catalogue of Vascular Plants from Colombia.
6. Freire-Fierro, A. In Press. *Monnina* (Polygalaceae) for the Catalogue of Vascular Plants from Colombia.
7. \*Freire-Fierro, A. and J.F. Pastore. 2013. *Monnina goiana* (Polygalaceae), a Well-known but Misidentified Brazilian species. Systematic Botany 38(1): 1-5.
8. \*Mathias, E.C., and A. Freire-Fierro. 2011. Howard Page Wood, 1924-2010 [Obituary]. TAXON 60: 297.
9. Freire-Fierro, 2011. Polygalaceae. Pp. 740-745 in: León-Yáñez, S., R. Valencia, N. Pitman, L. Endara, C. Ulloa Ulloa and H. Navarrete. Libro rojo de las plantas endémicas del Ecuador. 2<sup>nd</sup>. Ed. Publicaciones del Herbario QCA, Pontificia Universidad Católica del Ecuador.
10. Freire-Fierro, A. 2011. Grossulariaceae. *Libro rojo de las plantas endémicas del Ecuador, II Edition* Herbario QCA, Pontificia Universidad Católica del Ecuador, Quito.
11. Freire-Fierro, A. 2011. Saxifragaceae. *Libro rojo de las plantas endémicas del Ecuador, II Edition* Herbario QCA, Pontificia Universidad Católica del Ecuador, Quito.
12. Freire-Fierro, A. 2011. Polygalaceae. *Libro rojo de las plantas endémicas del Ecuador, II Edition* Herbario QCA, Pontificia Universidad Católica del Ecuador, Quito.
13. Freire-Fierro, A. 2011. *Monnina* (Polygalaceae), In Idárraga Piedrahita, A., R. del C. Ortiz, R. Callejas Posada & M. Merello, 2011, (eds. Vol. II). Flora de Antioquia: Catálogo de las Plantas Vasculares del Departamento de Antioquia (Colombia).

14. Freire-Fierro, A. 2011. Hydrangeaceae, In Idárraga Piedrahita, A., R. del C. Ortiz, R. Callejas Posada & M. Merello, 2011, (eds. Vol. II). Flora de Antioquia: Catálogo de las Plantas Vasculares del Departamento de Antioquia (Colombia).
15. Freire-Fierro, A. 2011. Saxifragaceae, In Idárraga Piedrahita, A., R. del C. Ortiz, R. Callejas Posada & M. Merello, 2011, (eds. Vol. II). Flora de Antioquia: Catálogo de las Plantas Vasculares del Departamento de Antioquia (Colombia).
16. \*and A. Landale. 2011. Lectotypification of Thomas Nuttall's names applied to North American *Polygala*. Journal of the Botanical Research Institute of Texas 5 (1): 106-109.
17. \*Freire-Fierro, A. y F. Pastore. 2008. Polygalaceae. En: Zuloaga, F., O. Morrone, y M. J. Belgrano (eds.). Catálogo de las Plantas Vasculares del Cono Sur. Monographs of Systematic Botany 107. Missouri Botanical Garden. St. Louis, USA.
18. \*Freire-Fierro, A. 2008. Crassulaceae. En: Zuloaga, F., O. Morrone, y M. J. Belgrano (eds.). Catálogo de las Plantas Vasculares del Cono Sur. Monographs of Systematic Botany 107. Missouri Botanical Garden. St. Louis, USA.
19. \*Freire-Fierro, A. 2008. Filadelfia y la Botánica en Norteamérica. Bol. Soc. Argent. Bot. 43 (1-2): 179-187.
20. \*Romoleroux, K. & A. Freire-Fierro. 2004. 117 C. Escalloniaceae. In: G. Harling and L. Andersson (eds.), Flora of Ecuador 73: 67-84.
21. \*Freire-Fierro, A. 2004. 115. Crassulaceae. In: G. Harling and L. Andersson (eds.), Flora of Ecuador 73: 3-16.
22. \*Freire-Fierro, A. 2004. 117 A. Saxifragaceae. In: G. Harling and L. Andersson (eds.), Flora of Ecuador 73: 17-24.
23. \*Freire-Fierro, A. 2004. 117 B. Grossulariaceae. In: G. Harling and L. Andersson (eds.), Flora of Ecuador 73: 41-66.
24. \*Freire-Fierro, A. 2004. 117 D. Hydrangeaceae. In: G. Harling and L. Andersson (eds.), Flora of Ecuador 73:25-40.
25. \*Freire-Fierro, A. 2004. 117 E. Phyllonomaceae. In: G. Harling and L. Andersson (eds.), Flora of Ecuador 73:85-86.
26. Freire-Fierro, A. 2004. *Botánica Sistemática Ecuatoriana*. Missouri Botanical Garden, FUNDACYT, QCNE, RLB and FUNBOTANICA. Murray Print, St. Louis. 209 pp.
27. \*Freire-Fierro, A., D. Fernández y C. Quintana. 2002. Usos de Melastomataceae en el Ecuador. *Sida* 20(1) 233—260.
28. Freire-Fierro, A. y D. Neill (eds). 2002. *La Botánica en el Nuevo Milenio*, Memorias del III Congreso Ecuatoriano de Botánica. Herbario Nacional del Ecuador and FUNBOTANICA.
29. \*Freire-Fierro, A. 2002. A new species of *Ribes*, notes and a key of the Ecuadorian Species. *Systematic Botany* 27(1): 14--19.
30. \*Freire-Fierro, A. 2002. Proposal to conserve *Ribes leptostachyum* Benth. against *Ribes leptostachyum* Decne. *Taxon* 51(1): 195.
31. \*Freire-Fierro, A. 2002. Revision of *Aciotis* (Melastomataceae). *Systematic Botany Monographs* 62: 1--99 pp.
32. \*Freire-Fierro, A. 2001. *Aciotis*, Melastomataceae. In: Flora of the Venezuelan Guayana, Vol. 6: 270-276. *Monographs in Systematic Botany of the Missouri Botanical Garden*.
33. \*Freire-Fierro, A. 2001. Two new species of *Aciotis* (Melastomataceae). *Novon* 11(2): 166-170.
34. Vargas, H., D. Neill, M. Asanza, A. Freire-Fierro y E. Narváez. 2001. *Flora y Vegetación del Parque Nacional Llanganates*. EcoCiencia-Herbario Nacional del Ecuador/GEF.
35. Freire-Fierro, A. 2000. Grossulariaceae. Page 214 In: Valencia, R., N. Pitman, S. León-Yáñez & P. M. Jørgensen (eds.) *Libro rojo de las plantas endémicas del Ecuador 2000*. Herbario QCA, Pontificia Universidad Católica del Ecuador, Quito.
36. Freire-Fierro, A. 2000. Polygalaceae. Pages 392-393 In: Valencia, R., N. Pitman, S. León-Yáñez & P. M. Jørgensen (eds.) *Libro rojo de las plantas endémicas del Ecuador 2000*. Herbario QCA, Pontificia Universidad Católica del Ecuador, Quito.
37. Asanza, M., A. Freire-Fierro, D. Neill, S. Sandoval y J. C. Welling (eds.) 2000. *Resúmenes del III Congreso Ecuatoriano de Botánica*. FUNBOTANICA y Herbario Nacional del Ecuador QCNE. Imprenta Hojas y Signos. Quito.

38. Freire-Fierro, A. y M. Asanza (eds). 1999. *VIII Boletín de FUNBOTANICA*. FUNBOTANICA. Imprenta Hojas y Signos. Quito.
39. Freire-Fierro, A., C. Josse y D. Neill (eds). 1999. *VII Boletín de FUNBOTANICA*. FUNBOTANICA. Imprenta Hojas y Signos. Quito.
40. \*Freire-Fierro, A. 1999. Crassulaceae In: Jørgensen, P. M. & S. León (eds.). Catalogue of the Vascular Plants of Ecuador. *Monographs on Systematic Botany from the Missouri Botanical Garden* 75: 413-414.
41. \*Freire-Fierro, A. 1999. Grossulariaceae In: Jørgensen, P. M. & S. León (eds.). Catalogue of the Vascular Plants of Ecuador. *Monographs on Systematic Botany from the Missouri Botanical Garden* 75: 507-508.
42. \*Freire-Fierro, A. 1999. Hydrangeaceae In: Jørgensen, P. M. & S. León (eds.). Catalogue of the Vascular Plants of Ecuador. *Monographs on Systematic Botany from the Missouri Botanical Garden* 75: 514.
43. \*Freire-Fierro, A. 1999. Saxifragaceae In: Jørgensen, P. M. & S. León (eds.). Catalogue of the Vascular Plants of Ecuador. *Monographs on Systematic Botany from the Missouri Botanical Garden* 75: 891.
44. \*Freire-Fierro, A. 1998. Revision of *Aciotis* (Melastomataceae). *Am. J. Bot. (Suppl.)* 85 (6): 129.
45. \*Freire-Fierro, A. 1998. Two new species of *Ribes* (Grossulariaceae) from South America. *Novon* 4: 354-358.
46. \*Freire-Fierro, A. 1995. Book Review of *Amazonian Ethnobotanical Dictionary*, published by James Ducke & Rodolfo Vásquez. *Economic Botany* 49 (1): 111.
47. Freire-Fierro, A., P. Naranjo, et al. 1995. 270 *Plantas medicinales Iberoamericanas*, In Gupta, M. (ed.). Convenio Adrés Bello, Bogotá.
48. Freire-Fierro, A. 1995. Especies medicinales sudamericanas de Polygalaceae. In: Naranjo, P. & R. Escaleras (eds.): *La medicina tradicional en el Ecuador*, Memorias de las Primeras Jornadas Ecuatorianas de Etnomedicina Andina. Biblioteca Ecuatoriana de Ciencias. Vol. 2. Corporación Editora Nacional, Quito.
49. Ríos, M., A. Freire-Fierro, & K. Romoleroux (eds). 1995. *II Boletín de FUNBOTANICA*. Quito.
50. Freire-Fierro, A. 1993. The genus *Ribes* (Grossulariaceae) in Ecuador. In: Balslev, H. (ed.). Neotropical Montane Forests, Biodiversity and Conservation. *AAU Reports* 31.
51. Freire-Fierro, A., & R. Valencia (eds). 1993. *I Boletín de FUNBOTANICA*, Directorio de miembros y colaboradores. Quito.

### Funding Received

Freire-Fierro, A. Origin and Diversification of *Monnina* (Polygalaceae). Bentham-Moxon Award, Kew Gardens. \$3,790 Awarded 2011

Freire-Fierro, A. Origin and Diversification of *Monnina* (Polygalaceae). IAPT Fellowships. \$1,000. Awarded 2011

Freire-Fierro, A. Origin and Diversification of *Monnina* (Polygalaceae). ASPT Fellowships. \$850 Awarded 2011

### Reviewer

Boletín Latinoamericano de Etnobotánica  
Brittonia  
Flora Fanerogámica do Estado de São Paulo  
Lundellia  
Novon

Phytotaxa  
Sida  
Taxon  
International Code of Botanical Nomenclature,  
Spanish edition

### Distinctions and Fellowships

President, XII Latin American Botanical Congress, Quito, Ecuador, October, 2015-2018

President, Association for Latin American Botanists, 2015-2018

Research Associate, Ecuadorian National Herbarium, 2014-Present

Superior Council, Association for Latin American Botanists, 2011-2014

Research Student Associate, Smithsonian Institution, USA, 2011-2015

Research Associate, Missouri Botanical Garden, St. Louis, USA, 2006-Present  
Graduate Fellowship from the Science and Technology Ecuadorian Foundation (FUNDACYT). Ecuador, 1995-1998  
Master's Graduation "Cum Laude", São Paulo University, Brazil, 1989  
Graduate Fellowship from the Latin American Botanical Network. Brazil, 1989-92  
Undergraduate Studentship from Catholic University, Ecuador, 1984-1998

### **Synergistic Activities**

Steering Committee Member, Membership Chapter, Consortium of Northeastern Herbaria, USA-Canada.  
Corresponding Secretary, Philadelphia Botanical Club, 2008-2014  
Creator/Administrator of the Discussion list, Anuncios Botánicos,  
<http://espanol.groups.yahoo.com/group/Anunciosbotanicos/> , 2004-Present  
Administration/Content Compilation of a webpage about Polygalaceae. [www.neotropicos.net/Polygalaceae](http://www.neotropicos.net/Polygalaceae) , 2002-Present  
Co-Organizer of the Third Ecuadorian Botanical Congress, Quito, October 25 to 27, 2000  
Representative for Ecuador for the Latin American Botanical Association (ALB), 1998-2002  
Executive Director of the Ecuadorian Foundation for Research and Development of Botany, FUNBOTANICA, Ecuador, 1999-2002  
President of the Ecuadorian Foundation for Research and Development of Botany, FUNBOTANICA, Ecuador, 1995

### **Society Memberships**

Philadelphia Botanical Club , 2006-Present  
International Association for Plant Taxonomy, 1998-Present  
American Society of Plant Taxonomy, 1997-Present  
Association for Latin American Botanists, ALB, 1987-Present  
Ecuadorian Foundation for Research and Development of Botany, FUNBOTANICA, 1998-Present  
Sigma Xi, The Scientific Research Society, 2011-2012  
Botanical Society of America, 1997-1998  
Association for Tropical Biology, 1998-1998  
Brazilian Botanical Society, 1989-1992

### **Workshops Attended**

Kew Herbarium Techniques, August, Brooklin Botanic Garden, New York, USA, 2012  
Georeferencing. Appalachian State University, South Carolina, USA, 2012  
Integrated Pest Management for Museums, Libraries and Archives, March 31--May 9. Online Worskhop, 2008  
Plant Systematics, Organization for Tropical Studies. June to August. Costa Rica, 1996  
Botanical Diversity in Tropical Forests, European Summer School, Aarhus University. July. Denmark, 1993  
Theory and Methods in Vegetal Taxonomy, Latin American Botanical Network. November. Argentina, 1991  
Latin American and Caribbean Botanical Workshop, Smithsonian Institution. July to August. USA, 1989

### **Meetings Attended**

Guest Speaker, XIV Congreso Nacional de Botánica, Trujillo, Peru, 2012  
Global Plants Initiative, 5<sup>th</sup> Annual Meeting, Madrid, Spain, 2012  
Global Plants Initiative, 4<sup>th</sup> Annual Meeting, Panama City, Panama, 2011  
XIII Congreso Latinoamericano de Botánica, La Serena, Chile, 2010  
BSA Meetings, Snow Bird, Utah, USA, 2009  
LAPI Meetings, Buenos Aires, Argentina, 2008  
Guest Speaker, XXXI Jornadas Argentinas de Botánica, September, Corrientes, Argentina, 2007  
AAAS Meetings, February, St. Louis, USA, 2006

XVII International Botanical Congress, July, Vienna, Austria, 2005  
VIII Congreso Latinoamericano de Botánica, Cartagena de Indias, October, Colombia, 2002  
Co-Organizer, III Congreso Ecuatoriano de Botánica, October, Quito, Ecuador (Co-organizer), 2000  
XVI International Botanical Congress, August, St. Louis, USA, 1999  
VII Congreso Latinoamericano de Botánica, Latin American Botanical Association, Latin American Botanical Network, Mexican Botanical Society, October, México, 1998  
American Institute of Biological Sciences (AIBS) Meetings, American Society of Plant Taxonomists, Baltimore, August, USA, 1998  
VI Congreso Latinoamericano de Botánica, Latin American Botanical Association, October, Mar del Plata, Argentina, 1994  
XLIII Congreso Brasileiro de Botánica, Sociedad Brasileira de Botánica, Universidad Federal de Sergipe, January, Aracajú, Brazil, 1992  
XLII Congreso Brasileiro de Botánica, Sociedad Brasileira de Botánica, Universidad Federal de Goiás, January, Goiás, Brazil, 1991  
XLI Congreso Brasileiro de Botánica, Sociedad Brasileira de Botánica, Universidad Federal do Ceará, January, Fortaleza, Brazil, 1990

Fluent in Spanish (Native language), Portuguese, and English.

**Hobbies**

Martial arts (Aikido, Shindo Muso Ryu, Muay Thai Kickboxing, Krav Maga), outdoor activities, community activism).